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REFLECTIVE PRACTICE USING VIDEO-RECORDED CLASSROOM  
OBSERVATIONS

By  
Angela Latham Greer

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

Gardner-Webb University  
2023

## Approval Page

This dissertation was submitted by Angela Latham Greer under the direction of the persons listed below. It was submitted to the Gardner-Webb University College 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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## **Abstract**

### **REFLECTIVE PRACTICE USING VIDEO-RECORDED CLASSROOM**

**OBSERVATIONS.** Greer, Angela Latham, 2023: Dissertation, Gardner-Webb University.

This study was prompted by a desire to understand the relationship between reflective practice using classroom instructional video observations and teacher perception of effectiveness. This was a mixed methods study in which quantitative data were collected from a pre- and post-survey using a Likert scale and qualitative data from weekly pre- and post-reflection questions and a final reflection question. This study involved data collection from 19 volunteer teachers from a rural middle school serving students in Grades 6-8. Effective teachers are those who use self-reflection to deepen their understanding of how their instructional practices affect student learning, make improvements to their practices, and plan more productive learning opportunities for their students (Scales, 2008). Key findings in the study are in line with the current body of research on reflective practice and the characteristics of effective teachers (Disu, 2017; Farrell, 2015; Larrivee, 2008; Stronge, 2018). As a result of the study, participants became more observant of their students' needs and how their actions and instructional practices affect student learning and recognized new strategies to improve learning experiences.

*Keywords:* reflective practice, self-reflection, teacher effectiveness, video observation

## Table of Contents

	<b>Page</b>
Chapter 1: Introduction .....	1
Introduction .....	1
Background .....	1
Problem Statement .....	3
Purpose of the Study .....	7
Research Questions .....	8
Theoretical Framework .....	8
Significance of the Study .....	9
Nature of the Study .....	10
Definitions .....	12
Assumptions .....	12
Scope .....	13
Delimitations .....	14
Limitations .....	14
Summary .....	15
Chapter 2: Literature Review .....	16
Introduction .....	16
Qualities and Characteristics of Reflective Practice .....	17
Dewey’s Characteristics of Reflective Practice .....	20
Schön’s Reflection-in-Action and Reflection-on-Action .....	22
Impact on the Learning Environment .....	26
Types of Reflective Practice .....	30
Effective Teachers .....	32
Adult Learning Theory .....	34
Fundamentals of Professional Development .....	36
Video Observations as a Reflective Tool .....	39
Summary .....	44
Chapter 3: Methodology .....	46
Restatement of the Problem .....	46
Research Questions .....	46
Methodology .....	47
Research Context and Participants .....	48
Instrument and Procedures .....	49
Stage 1 .....	50
Stage 2 .....	51
Stage 3 .....	52
Analysis of Data .....	52
Ethical Procedures .....	54
Summary .....	55
Chapter 4: Results .....	57
Introduction .....	57
Overview of Participants and Methodology .....	57
Pre- and Post-Survey Description and Results .....	59
Research Question 1: In What Ways Does Reflecting on Classroom	

Instructional Recordings Affect Teacher Perception of Effectiveness? .....	61
Research Question 2: To What Extent Does Reflecting on Classroom Instructional Recordings Affect Teacher Perception of Effectiveness? .....	75
Summary .....	79
Chapter 5: Discussion .....	80
Discussion .....	80
Summary of Pre- and Post-Survey Results .....	83
Research Question 1 Findings: In What Ways Does Reflecting on Classroom Instructional Recordings Affect Teacher Perception of Effectiveness? .....	83
Research Question 2 Findings: To What Extent Does Reflecting on Classroom Instructional Recordings Affect Teacher Perception of Effectiveness? .....	86
Summary of Findings .....	88
Limitations and Delimitations of the Study .....	91
Recommendations for Further Research.....	92
Implications for Practice .....	95
Recommendations for Systematic Implementation .....	97
Conclusion .....	100
References .....	102
Appendices	
A Email for Volunteer Participation.....	112
B Permission to Use Larrivee's Tool for Assessing Development as a Reflective Practitioner Survey .....	114
C Adapted Pre-Assessment .....	116
D Weekly Video Reflection Questions.....	118
E Adapted Post-Assessment.....	120
F Final Reflection Response .....	122
G Pre- and Post-Survey Analysis .....	124
H Video 1 Data .....	127
I Video 2 Data .....	131
J Video 3 Data .....	135
K Video 4 Data .....	139
L Video 5 Data .....	144
M Video 6 Data .....	148
N Final Reflection Response Data .....	152
Tables	
1 Pre-and Post-Survey Data.....	60
2 Video 1.....	62
3 Video 2.....	64
4 Video 3.....	66
5 Video 4.....	68
6 Video 5.....	70
7 Video 6.....	72
8 Final Reflection.....	78
9 Weekly Reflective Journal.....	95

## **Chapter 1: Introduction**

### **Introduction**

There are many variables that affect a school's learning environment such as length of the day, technology, number of resources, and instructional programs, but the most influential variable on student success is teacher effectiveness (Varlas, 2009). Effective teachers create an atmosphere that centers around students, fosters creative thinking, and increases student understanding of subject content (Stronge, 2018). Such teachers demonstrate their passion for learning and genuine care for their students (Stronge, 2018). Effective teachers are professionals who surpass teaching expectations by monitoring and adjusting their instructional methods as the needs arise while staying focused on their students' needs (Whitaker, 2004). According to Wong and Wong (2018), effective teachers have positive expectations for student success, excel in classroom management, and design lessons for mastery. Since we learn what to do from effective teachers and what not to do from ineffective teachers, it is imperative to provide all students with exceptional learning experiences from highly effective teachers (Whitaker, 2004).

### **Background**

In recent years, the focus on having highly qualified teachers in every classroom has shifted to center on providing highly effective teachers who will promote advancements in instruction and learning opportunities for our students (Barry, 2010). Motallebzadeh et al. (2018) stated that effective teachers differentiate their instruction based on students' aptitude and interest, motivate their students using challenging but attainable expectations, and incorporate classroom discussions that require higher-level

thinking. Today, teachers must be able to identify the needs of their students and adjust their instructional practices to respond to those individual needs (Farrell, 2015).

According to Gene Carter, ASCD Executive Director, defining teacher effectiveness requires a conceptual shift that results in focusing on the act of learning (Varlas, 2009). The definition should include the teacher's impact on classrooms, schools, and colleagues as well as contributions to student outcomes (Varlas, 2009). Characteristics of an effective teacher include having high expectations for students and self, using multiple and diverse resources to plan learning opportunities, and collaborating with colleagues, administration, and other influential individuals to ensure the success of all students, especially those with special needs or a high risk of failure (Goe et al., 2008).

Wong and Wong (2018) suggested that effective teachers focus on their students rather than the subject they teach, design lessons for mastery, excel in classroom management, and believe their students can achieve set goals if provided differentiated instruction and guidance. Since effective teachers focus on teaching their students, they develop detailed plans that are designed to increase student performance (Wong & Wong, 2018). Such teachers set instructional goals for their students that are supported by knowledge and training that will enable students to obtain success (Stronge, 2018). Farrell (2015) referred to effective teachers as those who have a deep understanding of their curriculum, are able to productively manage student behavior, and implement superior instructional practices. These teachers are keenly aware of the learning styles, strengths, and weaknesses of their students and are always focused on their students' learning (Barry, 2010). Effective teachers are those who use self-reflective opportunities



to improve student learning (Ko et al., 2013). Oxford University Department of Education defines effective teachers as those who have clear instructional goals, are knowledgeable about curriculum and teaching strategies, communicate expectations, include practices to enrich and clarify content, know their students' abilities and needs, provide strategies to teach and practice meta-cognition, provide appropriate feedback, and accept responsibility for student success (Ko et al., 2013). Effective teachers who incorporate reflective practice strategies are better equipped to recognize important events that happened during a lesson, justify the reasons for those events, acknowledge there are alternate ways to respond to those events, incorporate new methods of teaching, and avoid past practices that were not successful (McGregor & Cartwright, 2011). Through the use of reflective practice, teachers are able to identify and incorporate learning opportunities that focus on the needs of students and curriculum requirements (Connelly et al., 2020).

Teachers who demonstrate effectiveness are those who demonstrate a superior understanding of their subject matter, create organized and focused lessons, use purposeful questioning to provide an engaging and challenging learning environment, and employ competent assessments of learning (Ko et al., 2013). In conclusion, effective teachers demonstrate their joy of teaching, strive to make a difference in their students' lives, inspire students to want to learn, have a positive outlook, devote themselves to student success, invite constructive criticism in order to grow as a professional, embrace change that will result in improvement, and reflect on their teaching (Lam, 2014).

### **Problem Statement**

Ko et al. (2013) suggested the most influential factor on student achievement is

not the amount of money a school spends on educational materials or the student-teacher ratio, but rather it is having a highly effective teacher. As teachers implement greater instructional practices, student understanding increases (Barry, 2010). According to research conducted by Varlas (2009), students who are provided learning experiences from highly effective teachers for 3 consecutive years score significantly higher on achievement tests than those having less effective teachers; therefore, teacher effectiveness is the most important school-based factor in student success. Research conducted by Stronge (2018) suggested that students who have highly effective teachers are better equipped to succeed as an adult because they explore higher education experiences, save for their future, and live in better areas. According to Stronge (2018), effective teachers demonstrate the ability to produce greater advances in student achievement than less effective teachers. They also concluded that effective teachers possess the ability to envision instructional goals for their students and tap into their knowledge and educational training to ensure students achieve success regardless of the level of heterogeneity in the classroom (Stronge, 2018).

Ko et al. (2013) suggested that students from impoverished families make more educational gains by having an effective teacher because they provide students with learning opportunities that promote mastery of subject matter. Effective teachers are consistent in their classroom management, actively engage students during a lesson, are enthusiastic in their teaching, promote a learning environment that is positive and inviting, and have a deep understanding of their content (Ko et al., 2013). According to Varlas (2009), research indicates that effective teachers use instructional practices that promote student well-being and advance student academics. Effective teachers design

and implement lessons that center around students' active involvement and reinforce desired behaviors through positive reinforcement (MacSuga-Gage et al., 2012). By using their instructional time efficiently, sequencing information, and minimizing downtime, effective teachers establish productive classroom management abilities (MacSuga-Gage et al., 2012). They focus on increasing active engagement which decreases opportunities for challenging behaviors (MacSuga-Gage et al., 2012).

Not only do effective teachers provide exceptional academic instruction, but they also use superior classroom management skills to promote a positive learning environment (MacSuga-Gage et al., 2012). Such teachers implement strategies and feedback to reinforce appropriate behaviors and correct inappropriate behaviors (MacSuga-Gage et al., 2012). The effectiveness of a teacher depends on their ability to create and execute classroom expectations that establish and reinforce a constructive atmosphere (MacSuga-Gage et al., 2012). Students who have effective teachers develop a deeper conceptual understanding of content and can think more abstractly than their peers taught by less effective teachers (Ko et al., 2013). Effective teachers encourage their students to engage in positive behavior in and outside of class and build relationships that foster the concept that learning continues throughout one's life (Ko et al., 2013). In order to prepare students for college, the workforce, and 21<sup>st</sup> century life, it is essential to ensure that all students are taught by effective teachers (Barry, 2010).

According to Habib (2017), reflective practice is a way for teachers to increase effectiveness because it positively affects their ability to evaluate their instructional practices. Gupta (2019) concluded in their research that reflective practice helps teachers compare their pedagogy to their actual practice in order to determine areas in need of

improvement to better meet the needs of their students. Reflective practice gives teachers the opportunity to build effectiveness through the exploration and self-evaluation of their instruction to plan future lessons (Gupta, 2019). Habib stated that reflective practice reveals assumptions and misconceptions about instructional practices and helps teachers to identify areas that need improvement.

Additionally, Shoffner (2008) concluded that reflective practice aids in a teacher's ability to identify their assumptions that prevent instructional growth. When one analyzes their instructional beliefs and practices through the reflective process, they begin to plan new, more effective ways to present instruction to their students (Gupta, 2019). Habib (2017) noted that by routinely participating in reflective practices, teachers become more open to improving their instruction, resulting in becoming more effective teachers. Focusing on incorporating reflective practice fosters a deeper understanding of individual teaching styles, which leads to the incorporation of better learning experiences for students (Gupta, 2019). Teachers who regularly participate in reflective practice have a heightened sense of how their behaviors and practices affect their students (Disu, 2017). Reflective practice motivates teachers to recognize the areas in which they excel and areas in need of improvement, which will create more effective learning opportunities (Disu, 2017). By critically observing one's instructional practices and analyzing student achievement data, teachers can make changes that will positively affect student learning (Aldahmash et al., 2017). Through data-focused reflections, one will either reinforce current practices or reject them and engage in new more effective practices (Farrell & Ives, 2014).

## **Purpose of the Study**

Through the incorporation of reflective practice, teachers are able to identify their instructional strengths and weaknesses and incorporate new strategies that promote student learning (Connelly et al., 2020). According to Danielson (2009), when teachers reflect, they realize what they should do and why it is essential for effective instruction. Teachers who are reflective can monitor what they are doing and what changes need to be put into place to ensure productive learning experiences for their students. Dewey also emphasized that effective teachers approach their reflection with a sense of wonder, curiosity, and excitement (Carter et al., 2009).

Reflection enables teachers to think more deeply and holistically about an issue, leading to greater insight and learning, connects the rational decision-making process, challenges individuals to be honest about the relationship between what they say and what they do, creates opportunities to seriously consider the implications of a past or future action, and acts as a safeguard against making impulsive decisions. (Preskill & Torres, 1999, p. 57)

Since people learn from reflecting on experiences, the employment of reflective practice will enable teachers to monitor their progress, which will assist them in transcending from novice to experienced educator (Stefano et al., 2014). Critical reflection results in a paradigm shift that leads to professional growth and the ability to better serve students (Connelly et al., 2020). Due to the focus on teacher effectiveness, the purpose of this study was to examine the relationship between reflective practice and teacher perception of effectiveness.

## **Research Questions**

This study measured the relationship between reflective practice and teacher perception of effectiveness through video observations. Participants completed a pre- and post-survey to assess their use of the reflective practice, videoed one lesson per week, responded to pre-reflection questions, reflected on the video observation, responded to post-video reflection questions, and completed a final reflection question. The objective of this study was to answer the following research questions:

1. In what ways does reflecting on classroom instructional recordings affect teacher perception of effectiveness?
2. To what extent does reflecting on classroom instructional recordings affect teacher perception of effectiveness?

## **Theoretical Framework**

This mixed methods study explored the extent to which reflective practice impacts teacher effectiveness and is based on constructivist theory. The works of Schön uphold the concept of constructivism because he promoted reflective practice as a means to formulate new knowledge (Kumari, 2014). Reflective practice supports constructivism through teacher analysis of classroom data to gain a better understanding of their instructional practices (Kumari, 2014). Dewey promoted the use of reflection as a tool that will direct a teacher's future actions in order to enhance and improve learning opportunities for students (Carter et al., 2009). Musolino and Mostrom's (2005) research cited Dewey as saying reflective thinking will increase a teacher's professional abilities, which will in turn positively affect student learning. Finlay (2008) stated that Schön referred to reflective practice as the practice by which a person recognizes the extent of

their cognitive abilities and uses their experiences to develop deeper understandings. Reflecting provides an opportunity for teachers to look back on their actions and teaching techniques and determine necessary changes to improve the learning experience in the future (Finlay, 2008). Scales (2008) also supported the constructivist model in that his research stated that in order to improve, teachers must think about, analyze, and evaluate their professional practice. He included in his book that “good teachers” reflect on their practice and as a result, they evaluate what they do and use self-critical evaluation to make changes to future learning opportunities they provide to their students (Scales, 2008). The process of critical reflection assists in the self-examination of instructional practices that lead to the implementation of new strategies to better meet the needs of students (Connelly et al., 2020). The inclusion of reflection can be a powerful tool for improved teacher development (Connelly et al., 2020). Reflection is not the only means of improved teacher effectiveness but is an essential and critical competency of forward-thinking teachers (Farrell, 2015). This study investigated the significance of reflective practice on teacher perception of effectiveness through the works of key researchers and studies related to reflective practice.

### **Significance of the Study**

Research indicates levels of effectiveness are determining factors of a teacher’s ability and dedication; therefore, it is essential to employ strategies that will increase effectiveness. The significance of this study is to explore the relationship between the implementation of reflective practice through classroom video observations and teacher effectiveness. Using the reflective practice of observing one’s classroom videos requires teachers to critically observe their teaching style and how students respond to the learning

experience (Stuhlman et al., 2017). Teachers receive insightful information about their teaching practices and how their students respond to their practices by watching and reflecting on their video-recorded lessons (Mosley Wetzel et al., 2017). “When observing their own practice, teachers are able to test and compare the hidden aspects of teaching such as philosophy, principles, and theories” (Farrell & Macapinlac, 2021, p. 2). Self-reflection using video-recorded lessons provides teachers with the opportunity to analyze their practices, making necessary changes to increase effectiveness (Hollingsworth & Clarke, 2017).

Athletic teams use video observations as a teaching tool to improve performance (Carson, 2008). Wong and Wong (2018) stated that the first few weeks of implementation are difficult, but once the benefits are noticed, it becomes a powerful tool. Jeff Irwin, the University of Pittsburg’s assistant athletic director, stated that using video observation will result in the needed changes in technique that will promote better results (Wong & Wong, 2018). Carson (2008) stated that the use of reflective practice using video helps coaches evaluate performance. According to research conducted by Alammari (2018), the use of video-recorded lessons gives the teacher a chance to reflect on the lesson, identify areas in need of improvement, and make plans to implement the improvements.

### **Nature of the Study**

This study was conducted in a middle school serving students in Grades 6-8 who live in five small rural communities. This is a new school that consolidates two smaller middle schools that were closed. It is a school that offers students personal, one-to-one interaction with teachers, staff, coaches, and classmates while providing many learning



opportunities found in a larger school. The student enrolment is 636, which consists of 66% Caucasian, 18% African American, 1.4% Asian, 10% Hispanic, 3% two or more races, and 1% American Indian students. The student population is comprised of 70% of students receiving free or reduced lunch, 18% students with disabilities, and 14% participating in gifted and talented programs. There are 48 teachers, and the student-teacher ratio is 13 to 1. The teacher population is comprised of 10 English, 10 math, six science, six social studies, five special education, and 11 elective teachers. This is a mobile one-to-one technology school in which both teachers and students are surrounded by an abundance of technology benefits. The school is in a small school district comprised of three elementary schools, one middle school, and one high school with a district student population of 2,603.

During this study, teachers in Grades 6-8 began by completing Larrivee's (2008) Tool for Assessing Development as a Reflective Practitioner survey as a pre-assessment to determine their knowledge and implementation of reflective practice. The survey collected quantitative data in that it uses a Likert scale. Participating teachers then videoed one lesson per week for a total of 6 weeks, answered two pre-video observation questions, watched the video, answered three post-video observation questions, and responded to a final reflection question. Participating teachers addressed the following pre-video observation questions:

- What do you anticipate as the strengths of this lesson?
- How do you anticipate students will react to the lesson?

The post-video observation questions participants were asked to answer were

- What do you think were the strengths of this lesson?

- How did students react to this lesson?
- What would you do differently if you taught this lesson again, and how will this affect future lessons?

The final reflection question participants were asked to answer was

- How has participating in the video reflections affected your effectiveness as a teacher?

I collected teacher responses to the reflection questions and coded responses to identify themes from participants. The study concluded with a survey on reflective practice as a post-survey and a final reflection question with participating teachers. I analyzed the collected data to determine if teacher perception of effectiveness is affected by participating in the reflective practice using classroom video observations.

## **Definitions**

### ***Effective Teacher***

One who engages all students and provides a learning environment where all students can learn (Ko et al., 2013).

### ***Reflective Practice***

The ability to reflect on one's actions so as to engage in a process of continuous learning (Watkins, 2018).

## **Assumptions**

The following were assumptions of the study:

- There was a relationship between using reflective practice and teacher perception of effectiveness.
- Teachers would volunteer to participate in the study.

- Participating teachers would respond to the pre- and post-survey honestly as to not elevate their score of using reflective practice.
- Participating teachers would submit their responses to the pre- and post-survey.
- Participating teachers would video one lesson per week and complete the reflection pre- and post-video reflection questions.
- Participating teachers would respond to the pre- and post-video reflection questions honestly.
- Participating teachers would have equal access to video equipment and the required technology to conduct the study.
- Participating teachers would submit all required responses within the 6-week period.
- Participating teachers would respond to the final reflection question honestly.

### **Scope**

The scope of this study involved volunteers from a group of 10 English, 10 math, six science, six social studies, five special education, and 11 elective teachers. The study was conducted over a 6-week period in which teachers completed a pre- and post-survey, recorded one lesson per week, submitted pre- and post-reflective responses to questions for each video, and completed a final reflection question. All teachers received an email inviting them to volunteer to participate in the study. The study was comprised of three stages:

- Stage 1: Participants were asked to complete a pre-survey on reflective practice using an adaptation of Larrivee's (2008) Tool for Assessing

Development as a Reflective Practitioner.

- Stage 2: Participants were asked to video a lesson and complete pre- and post-video observation questions for a total of six videos.
- Stage 3: Participants were asked to respond to a final reflection question and complete the post-survey on reflective practice using an adaptation of Larrivee's (2008) Tool for Assessing Development as a Reflective Practitioner.

### **Delimitations**

- For this study, teachers were asked to participate on a voluntary basis in order to prevent them from feeling pressured to participate.
- It was convenient for participants to submit their responses to the pre- and post-survey, weekly video reflection questions, and the final reflection question because I am present and employed at the research site.
- Video equipment is accessible to all participating teachers; however, they could also use their personal cell phones to record their weekly videos.
- Videos were viewed by the teacher who recorded them.
- The sample size of 48 teachers provided a wide variety of volunteer participation.

### **Limitations**

- The sample size consisted of 48 teachers in a rural school who participated on a voluntary basis.
- Since the study depended on voluntary participation, there was a possibility of low participation.

- The data were collected over a 6-week period in three different grade levels and across all subject areas.
- Using a short collection date range may have produced limited results.
- Bias may have occurred due to my presence and current employment at the school in which the study was conducted.

## **Summary**

This study focused on the extent to which reflecting on one's classroom instructional videos impacts teachers' perception of effectiveness. Teacher effectiveness is the most influential factor in student learning (Goldhaber, 2015). Strategies such as completing a pre- and post-survey on reflective practice, participating in self-reflection by responding to pre-video observation questions and post-video observation questions using classroom instructional video data, and answering a final reflection question were used to determine the relationship between reflective practice and teacher perception of effectiveness. Chapter 2 reviews literature and other studies pertaining to reflective practice such as qualities and characteristics of reflective practitioners, Dewey's characteristics of reflective practice, Schön's reflection-in-action and reflection-on-action, the impact on the learning environment, types of reflective practice, teacher effectiveness, adult learning theory, fundamentals of professional development, and the use of video observations as a reflective tool.

## **Chapter 2: Literature Review**

### **Introduction**

Dewey (1933) stated that learning occurs only after we reflect on our experiences. Reflective practice is a crucial part of improving one's performance (Balls et al., 2011). Mathew et al. (2017) referred to reflective practice as an act of considering a past action or experience in order to take part in the action of perpetual learning. Reflecting on an experience leads to critical evaluations of one's actions and therefore changes in behavior which will in turn begin to reshape our actions (Shoffner, 2008). Participation in reflective thinking leads to the acknowledgment of difficult and uncomfortable situations that have the potential to lead to self-realization (Larrivee, 2008). Alammari (2018) referred to reflection as a process in which extensive self-examination leads to the identification of areas that need improvement. Connelly et al. (2020) referred to reflective practice as a means to improve effectiveness in that it helps teachers to be more attentive to the needs of their students and develop new instructional practices that address those needs. The use of reflective practice using classroom video observations influences teacher effectiveness by providing opportunities to be more analytical of their current instructional practices, determine areas in need of improvement, and plan future instructional practices that will be more beneficial for students (Knight, 2014). The focus of the literature review is concentrated in the following areas: qualities and characteristics of reflective practitioners, Dewey's characteristics of reflective practice, Schön's reflection-in-action and reflection-on-action, the impact on the learning environment, types of reflective practice, teacher effectiveness, adult learning theory, fundamentals of professional development, and the use of video observations as a reflective tool.

## **Qualities and Characteristics of Reflective Practice**

When one participates in reflective practice, they are able to learn from experiences and obtain insightful information about themselves and their practices (Finlay, 2008). Habib (2017) referred to reflective practice as the intentional evaluation of the integral components of one's actions, beliefs, practices, and abilities that lead to the evolution of effectiveness. Reflective teachers devote time to analyzing their instructional methods by looking back in order to move forward (Gupta, 2019). Reflective practice requires a person to become self-aware and to deeply evaluate how they respond to situations (Finlay, 2008). Habib also added that reflection incorporates the deliberateness of making choices and conclusions about a change in one's actions. Reflection takes place the moment a teacher steps back and considers their actions and the consequences of those actions on learning opportunities in their classrooms (Gupta, 2019). According to Balls et al. (2011), reflection begins with an honest evaluation of one's performance followed by a commitment to ongoing improvement, which is the most effective form of professional development. Boud et al. (1985) indicated that reflection is an essential human activity where one recalls an experience, processes it, and evaluates it so learning can occur. Reflective teachers are acutely aware of how their practices affect student learning and when to incorporate new instructional strategies to enhance learning opportunities in the classroom (Cirocki & Farrell, 2017). Participation in reflective practice guides effective planning through the intentional recollection and examination of experiences (Mathew et al., 2017). The goal of reflective practice is to observe and improve practice continuously (Finlay, 2008). This constant progress toward a goal is what prevents one from staying in the same routine (Balls et al., 2011). An

emphasis should be placed on the inference that reflection should be intellectually unsettling, and the outcome must include a change in practice (Benade, 2015). Shoffner (2008) referred to reflection as a time for teachers to question why they have certain educational beliefs, how those beliefs guide their instructional practices, how they affect student achievement, and what they need to do differently in future lessons. Authentic reflection demands a repetitive cycle of examining obscure and complicated events to produce changes in one's "beliefs and assumptions" (Shoffner, 2008). Being a reflective practitioner involves constantly assessing current teaching methods and classroom experiences and making the necessary changes that will improve the learning environment for students (Cirocki & Farrell, 2017). Reflection provides a means to transform and enhance what we do and how we live through the awareness of the necessity to change and improve (Shoffner, 2008).

Dewey (1933) referenced the characteristics of a reflective teacher as one who constantly examines their pedagogy and its underlying foundation and how it affects their practices. Raines and Shadiow (1995) added to Dewey's reflective practice theory by stating that being reflective requires following a process of intentional scrutiny of the connection between what is occurring and how it will affect the learning environment.

Zeichner and Liston (2013) defined a reflective teacher as one who

- thinks about their instructional practices and determines what needs to be changed,
- questions their educational beliefs and conjectures that are embedded in their classroom practices,
- is aware of the required curriculum and student diversity,



- is involved in curriculum planning and participates in school-wide improvement, and
- seeks opportunities to advance in professional knowledge.

Teachers who participate in reflective practices are able to identify and repeat best practices and avoid ineffective practices (Danielson, 2009). When teachers participate in reflective practice, they examine their beliefs compared to the instructional strategies they use to determine what was successful and what needs to be altered for future planning (Farrell, 2015). Brookfield (2017) inferred that the continuous cycle of self-observation and evaluation leads to the understanding of actions and reactions in both teachers and students. Reflective teachers become more cognizant of their actions and assumptions and how they affect student learning (Farrell & Ives, 2014). Maksimović and Osmanović (2019) contributed to the research on reflective practice by stating that it results in being more aware of potential issues in order to make logical decisions and take responsibility for those decisions. Zeichner and Liston (1996, 2013) identified rapid reflection, repair, review, research, and retheorizing/reformulating as the five levels where reflection occurs during teaching. Finlay (2008) elaborated on Zeichner and Liston's (2013) levels of reflection by adding:

- Rapid reflection occurs in the moment and becomes a routine action by the teacher.
- Repair occurs when the teacher analyses how students respond to the learning environment and determines needed changes.
- Review occurs when the teacher participates in an inner dialogue, peer conversations, or journaling about their teaching practices.

- Research occurs when the teacher seeks out information to help form new beliefs or confirm current beliefs.
- Retheorizing and reformulating occur when the teacher uses the research to shape future instructional practices.

As teachers reflect on their practices, they are able to identify the educational, social, and political foundations that embedded their teaching (Grant & Zeichner, 1984). Teachers who consistently reflect on their actions are able to use rational thinking to solve problems and increase effectiveness (Aldahmash et al., 2017). Being reflective results in teachers who use practices rooted in research, constantly analyze their practices from student perspectives, and make changes that have positive consequences (Maksimović & Osmanović, 2019). Fook (2015) suggested that the transformation from ineffective to effective teaching is a result of a shift in beliefs and practices through reflective practice. Erasmus (2012) suggested that reflecting on a professional level depends on the ability of one to contemplate their classroom practices, consider the learning goals they set, and if student achievement matches their goals. Gupta (2019) referred to a reflective teacher as one who has the desire and conviction to cross-examine their beliefs and practices in order to foster new and improved learning experiences for their students. When reflective practice becomes an automatic process, teachers will habitually assess their practices, apply other possible experiences to enhance student learning opportunities, as well as share those ideas with other teachers (Disu, 2017).

### **Dewey's Characteristics of Reflective Practice**

Dewey maintains a significant role in identifying reflection as a particularly distinct form of thinking that grows from uncertainty pertaining to an experience that

encourages purposeful analysis and problem-solving (Finlay, 2008). His definition of reflective thought has been cited by countless researchers as the “active, persistent, and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it and the further conclusions to which it tends” (Dewey, 1933, p. 8). Benade (2015) credited Dewey for the promotion of reflection as a means to challenge the mind so that one’s beliefs become uncertain. This type of reflection creates a change in how one thinks and reacts (Balls et al., 2011). Dewey (1933) stated that reflection frees a person from emotional and mundane actions and allows them to purposefully plan with end goals in mind, initiate the plans, and be confident about their actions and beliefs. By thinking about a certain experience, a person can link the factual events with how they felt, which leads to improvements for future experiences (Dewey, 1933). Finlay (2008) stated Dewey inferred that during the reflective process, one will brainstorm to develop assumptions, which leads to the formation of an action plan so one can experiment with new ideas. Through the practice of reflection, one is able to focus action intentionally on problem-solving (Musolino & Mostrom, 2005). When one uses their creativity and imagination to explore innovative possibilities, they are practicing Dewey’s beliefs on reflective thinking (Finlay, 2008). The propensity to solve a particular problem is the heart of reflective practice (Musolino & Mostrom, 2005).

Dewey (2018) referred to reflection as a process that can be difficult and humbling because it demands one to surpass being content and reach a level of uncomfortableness that is necessary for change to occur. Reflective thinking causes a person to question their beliefs and search out information that will either support or contradict their beliefs (Dewey, 2018). Learning from experience requires both a

retrospective as well as a futuristic approach to determine what elements of that experience were successful and what needs to be altered for future success (Dewey, 1916). Reflection builds new experiences based on the results or consequences of past experiences (Dewey, 2018).

Dewey proposed that there are three requirements that must be present prior to reflection: open-mindedness, responsibility, and wholeheartedness (Grant & Zeichner, 1984). Open-mindedness refers to the propensity to be objective to multiple views, focus on new possibilities, as well as accept that there may be a flaw in our beliefs (Grant & Zeichner, 1984). Responsibility involves being prepared to accept the results of actions especially when they contradict one's belief system (Grant & Zeichner, 1984). Dewey's wholeheartedness requires open-mindedness and responsibility to be intricate elements of a reflective teacher and presupposes that being reflective must result in an active role in furthering one's education as a teacher (Grant & Zeichner, 1984). Reflective thinking, according to Dewey, is distinctively different than "merely thinking," and it has several characteristics; it is deliberate with an ending in mind, its foundation is based on one's beliefs, and the dedication to confirm beliefs or deny and alter those beliefs (Musolino & Mostrom, 2005). Consequently, Dewey's concept of reflective thinking referred to clearly connected thoughts that are reflexive in that they are interrelated and focused on continuous forward motion (Musolino & Mostrom, 2005). In conclusion, Dewey stressed the necessity for teachers to devote time to question their actions and beliefs in order to support student achievement (Carter et al., 2009).

### **Schön's Reflection-in-Action and Reflection-on-Action**

Like Dewey, Donald Schön is synonymous in the field of reflective practice;

however, his concept focuses on the professional aspect of reflection as being a critical component that enhances one's ability in a specific area (Finlay, 2008). According to Schön, teachers should become facilitators of student learning rather than simply presenting information (Rolfe, 2014). The status as a professional is achieved through the implementation of Schön's work (Finlay, 2008). As a result, teachers were enlightened on the necessity to learn from their experiences thus evolving into reflective practitioners (Finlay, 2008). Schön claimed that learning from reflection occurs by how one makes decisions and actions based on experiences (Musolino & Mostrom, 2005). According to Schön, reflection occurs when one is willing to experience uncertainty and connects that to prior knowledge in order to develop a new understanding that will promote change (Finlay, 2008).

The practitioner allows himself to experience surprise, puzzlement, or confusion in a situation which he finds uncertain or unique, reflecting on prior understanding in order to carry out an experiment which serves to generate both a new understanding and change in the situation. (Schön, 1983, p. 68)

Schön greatly contributed to the promotion of reflective practice through the concepts of reflection-in-action and reflection-on-action (Finlay, 2008). He differentiated between the two by specifying that reflection-in-action occurs while teaching a lesson and reflection-on-action takes place post-lesson (Finlay, 2008). Teachers who relate their pedagogy to instructional practices and strategies are able to actively participate in reflection-in-action, reflection-on-action, and reflection-for-action (Farrell & Macapinlac, 2021). Schön emphatically declared that these types of reflection should be included in professional development opportunities for inexperienced teachers to improve their

professional practice (Musolino & Mostrom, 2005). The routine incorporation of reflective practice can bridge theory and practice by presenting clear evidence of one's actions that will lead to corrections of any misconceptions (Fook, 2015).

Raines and Shadiow (1995) expanded on Schön's reflection-in-action by stating that it is spontaneous in that it gives the teacher a chance to react and respond to a situation while in the act of teaching thus solving problems on an as-needed basis. During that moment, teachers are receiving cues from students and determining how to move forward by making necessary adjustments to the learning experience (Finlay, 2008). Effective teachers actively engage in reflective practice while they teach to monitor and adjust their instructional strategies as needed (Carter et al., 2009). Schön (1983) suggested that reflection-in-action allows a person to become a researcher through experimentation to create new practices in the moment while monitoring and adjusting to present deeper learning experiences. However, reflection-in-action can be difficult due to time constraints and situations outside the teacher's control (Larrivee, 2008).

Reflection-on-action occurs after the fact when the teacher looks back on the lesson and determines strengths, weaknesses, and alternate courses of action (Musolino & Mostrom, 2005). When teachers participate in reflection-on-action, they think about the lesson they taught and how students responded to the lesson and determine how to make future lessons more productive and successful (Finlay, 2008). This process requires more time to study what the teacher and learner are doing during a lesson and to develop new strategies based on areas of need and best practices (Benade, 2015). Engagement in reflection-on-action amplifies personal and professional growth through the synthesis of previous events in order to improve future practices (Schön, 1987). Raines and Shadiow

(1995) cited Schön's reflection-on-action as a means to elevate reflection to a level that encourages teachers to restructure their practices to foster more productive student learning.

Both types of reflection require teachers to monitor and adapt their practices through the construction of new knowledge (Finlay, 2008). The active participation in reflection-in-action and reflection-on-action creates a cycle of ongoing improvement of teaching and learning as represented in the steps below (Scales, 2008, p. 12).

- Teaching and Learning session: "Reflection-in-action"
  - Observing yourself
  - Monitoring
  - Writing notes immediately on completion of the session
- "Reflection-on-action"
  - Time to ponder (mull over)
    - What happened?
    - Why did things happen?
    - How does it relate to theory?
    - What have I learned?
    - What can I use in future planning?
- Planning the next session
  - What can I incorporate from my reflections?
  - Shall I try something new?
  - What works with these learners on this course?
- Teaching and learning session "Reflection-in-action"

- Observing yourself
- Monitoring
- Writing notes immediately on completion of the session

Schön ascertained that habitual participation in reflective practice enhances expertise through the ability to instinctively make changes in action (Finlay, 2008). Simply thinking about an experience is insufficient; not until one analyzes their actions, formulates a new course of action, and follows through do we actually learn from an experience (Scales, 2008).

### **Impact on the Learning Environment**

Reflective practice impacts the classroom environment by providing teachers with opportunities to question longstanding beliefs and challenge their students (Larrivee, 2000, 2008). Mathew et al. (2017) referred to reflective practice as a repetitive process; it begins with an analysis of what has happened that leads to the evaluation of areas of strengths and weaknesses, thus developing into the necessary changes that bring about improvements, and the process repeats with the next experience. Scales (2008) stated in his research that the most important quality of an effective teacher is being able to reflect on what was taught, why certain instructional practices were used, and how students responded, and then improving on future practices. Farrell (2015) stated that the following are the advantages of reflective practice:

- prevents impetuous and unexceptional practices
- increases teacher confidence
- helps teachers to make decisions based on collected data
- helps teachers to question their assumptions



- helps teachers to identify areas in need of improvement
- helps teachers to view themselves as professionals
- is beneficial for experienced and new teachers

Through the incorporation of reflective practice, teachers gain an in-depth understanding of actual events in the classroom, thus guiding more effective learning opportunities for students (Curtis & Carter, 2008). Participating in reflective practice empowers teachers to question their pedagogy and gives them opportunities to positively affect their lesson planning, curricular alignment, student behavior, and implementation of new learning experiences (Aldahmash et al., 2017). According to Habib (2017), the use of reflection results in teachers confronting their current practices to help improve future teaching. Reflecting on classroom lessons provides teachers time to process their instructional abilities, analyze what they need to improve, and begin to implement those changes (Musolino & Mostrom, 2005). Reflection gives teachers a chance to look back on their lessons and ascertain ways to improve future learning opportunities for students (Gibson & Purdy, 2012). Teachers become more cognizant of student understanding and more adequately meet their needs (Scales, 2008). Slade et al. (2019) conducted a study on preservice teachers to determine the impact of reflective practice that demonstrated a positive correlation between the incorporation of reflective practice on student learning. They found that reflective practice leads to the growth of curricular comprehension, practices, and aptitude of student teachers through the examination of practices in actual classroom settings (Slade et al., 2019). Carter et al. (2009) suggested that reflective practice helps teachers to notice and enjoy the amazing things children do as well as the instrumental ways their teacher supports learning. Farrell and Ives (2014) conducted a

study that examined the correlation between teacher beliefs and instructional practices. They concluded that teachers who participate in reflective practice can create and recreate their pedagogy in order to give students highly effective learning experiences (Farrell & Ives, 2014). This study also validated that the inclusion of reflective practice provided factual data to assist in future practices rather than relying on beliefs (Farrell & Ives, 2014). The conclusion of the study indicated that reflection through verbal and written communication as well as observations leads to the discovery and refinement of beliefs and classroom practices (Farrell & Ives, 2014). The practice of analytical reflection helps teachers to deepen their understanding of how their practices affect student achievement and leads to being able to make more informed decisions on instructional planning (Farrell & Ives, 2014). In a study conducted by Regan et al. (2020), participants refeed to the reflection process as a way of seeing themselves and their practices through a new lens and then applying that to new practices. Regan et al. added that reflective conversations generate awareness of prior instructional practices that will give way to the refinement of student-focused lesson design and implementation. By participating in reflective practice, teachers become more deliberate in planning and incorporating strategies that will promote increased effectiveness (Curtis & Carter, 2008). When teachers participate in reflective practice, they become more self-reliant, their instructional practices will become more effective, and they will be better equipped to tackle future obstacles (Maksimović & Osmanović, 2019). Alammari (2018) conducted a study to determine the relationship between reflective practice and teacher performance. The data from Alammari's study concluded that reflective practice:

- encourages teachers to analyze what happens in their classroom and determine

their strengths and aspects that need to be improved

- encourages teachers to incorporate new instructional practices
- helps teachers identify ways to integrate their beliefs and practices into their educational philosophy
- makes them more attentive to the needs of their students when they develop, implement, and refine learning experiences.

Gupta (2019) concluded that when a teacher analyzes their instructional beliefs and practices, they will start to plan and implement more effective lessons as they move forward. Participation in reflective practice gives teachers a chance to scrutinize their instructional practices, analyze student achievement data, and develop new practices to increase student achievement (Disu, 2017). Connelly et al. (2020) ascertained that the impact of reflective practice helps teachers become more aware of their teaching practices, classroom management, and their influence on students. Through this process, they become better at equipping students with skills to better prepare them for academic and social situations (Connelly et al., 2020). Ultimately, the goal of reflective practice is to focus on self-improvement that will bring about needed changes in teaching practices, resulting in more beneficial experiences for students (Connelly et al., 2020). Reflective practice can positively affect the professionalism of teachers by targeting unexamined beliefs and what can be done to bring about change in classrooms that will result in school-wide change (Fook, 2015). Teachers who engage in reflective practice are able to challenge their educational beliefs; make necessary changes based on the needs of their students; and confront the uncertainty, anxiety, and constant changes in educational institutions (Zafar, 2017).

## **Types of Reflective Practice**

Exclusively relying on experience does not result in effective teaching, rather the intentional reflection on experience is what brings about improvement (Mathew et al., 2017). Through the incorporation of reflective practice, teachers can analyze all aspects of a teaching experience to gain a deeper understanding of that experience in order to create more meaningful future experiences (Mathew et al., 2017). By using reflective practice, teachers are able to gauge their effectiveness and find ways to provide their students with valuable learning opportunities (Maksimović & Osmanović, 2019). Several ways in which teachers can participate in reflective practice include reflective journaling, collaboration with peers and mentors, video-recorded lessons, and post-observation conferences (Mathew et al., 2017).

The use of reflective journals allows teachers to write about what happened or occurred in a particular lesson by detailing one's feelings and reactions (Mathew et al., 2017). Using writing as a reflective tool helps teachers to identify the relationship between their instructional practices and the level of student learning as well as to determine the positive and negative aspects of the learning experience (Cirocki & Farrell, 2017). Reflective journaling gives teachers opportunities to write down their thoughts and possibilities of improvement to try during another lesson (Cirocki & Farrell, 2017). The use of reflective journaling can assist in building teacher effectiveness by helping teachers to reflect on the events of a particular lesson and lead them to plan new learning experiences for students that will deepen their understanding (Mathew et al., 2017). Collaboration with peers allows teachers time to share ideas on particular experiences and gather new strategies to incorporate into future practices (Mathew et al., 2017). This type

of collaboration can present a more comfortable and secure setting in which teachers can learn from each other's experiences because everyone is on the same level (Mathew et al., 2017). Drago-Severson (2008) concluded that peer collaboration is a way for teachers to discuss thoughts, feelings, beliefs, and ideas that can lead to learning from each other's experiences, thus influencing positive changes in future instructional practices. Cirocki and Farrell (2017) included collaborative blogging as a means of reflective practice that uses social media to share ideas across a broader range of teachers. Through the use of blogging, teachers can share their thoughts, feelings, and classroom experiences and receive feedback from other teachers, which can result in gaining new knowledge, strategies, and instructional practices (Cirocki & Farrell, 2017). Blogging is peer collaboration on a much larger level because it reaches teachers over a wider range. The incorporation of video-recorded lessons as a reflective practice strategy provides teachers with an exact recollection of events of a particular moment (Mathew et al., 2017). The use of video observation is a common occurrence among athletes who want to improve their performance (Carson, 2008). Viewing a video-recorded lesson gives factual details that are easily overlooked or forgotten when using memories as a reflective tool (Mathew et al., 2017). A video supplies teachers with evidence of what went well during the lesson and what areas require improvement (Alammari, 2018). Post-observation conferences occur after a mentor, peer, or administrator observes a lesson and then meets with the teacher to discuss and reflect on the events of that lesson (Cirocki & Farrell, 2017). During this time, the teacher receives feedback on the observed lesson and participates in a reflective conversation with the observer (Cirocki & Farrell, 2017). Conferences rely on the observer asking thought-provoking questions that lend to productive conversations to

broaden the teacher's view and practices (Cirocki & Farrell, 2017). The teacher is able to take critical information from the discussion and apply that to future lessons (Cirocki & Farrell, 2017).

Through the engagement of reflective practice, teachers embark on an endeavor that gives them insight into their instructional practices and leads them on a journey of improvement and future success (Cirocki & Farrell, 2017). This type of reflective journey is connected with the advancement of a teacher's knowledge base, encourages the development of new personal and professional goals, and positively affects the connection between theoretical concepts and actual practice (Mathew et al., 2017). Gathering and analyzing information on teaching practices produces opportunities to apply new strategies in future lessons that will result in more productive learning experiences for students (Mathew et al., 2017).

### **Effective Teachers**

Reflective practice is an essential factor that affects a teacher's level of effectiveness (Maksimović & Osmanović, 2019). Teachers who participate in reflective practice are driven to analyze and improve learning experiences for their students (Disu, 2017). When a teacher incorporates reflective practice into their routine, they are able to identify their strengths and weaknesses, which aids in their personal and professional growth (Kirpalani, 2017). In doing this, they are able to provide their students with a more beneficial educational environment (Kirpalani, 2017). According to Gupta (2019), effective teachers use reflective practice to gather data and guide their instructional strategies, helping their students better understand the curriculum. The use of reflective practice enables teachers to focus on the needs of their students and to be receptive to

making the necessary changes to their instruction, thus increasing effectiveness (Connelly et al., 2020). Reflective practice presents opportunities to gain a better understanding of practices, the ability to determine the effectiveness of those practices on student learning, and the chance to employ strategies that will produce more productive learning experiences (Gupta 2019). Motallebzadeh et al. (2018) conducted a study on the relationship between reflective practice and teacher effectiveness in which English foreign language teachers completed an inventory and questionnaire on their reflective practice. Their findings suggested that the use of reflective practice increased teacher perception of their abilities and improved their interaction with students (Motallebzadeh et al., 2018). The data of this study suggested a positive correlation between the use of reflective practice and effective teaching (Motallebzadeh et al., 2018). In order to improve teacher effectiveness, one must be willing to examine their practices and make needed changes that will lead to higher student performance (Mathew et al., 2017). Effectiveness depends on the propensity of teachers to recognize and respond to problematic situations in their instructional pedagogy and classroom environment (Mathew et al., 2017). Connelly et al. (2020) conducted a study on early childhood teachers' use of reflective practice to guide their teaching and student learning. In this study, Connelly et al. identified the following themes in reflective practice:

- Planning – teachers use reflective practice to guide their instructional plans.
- Curriculum management – to determine what is necessary for learning as well as what needs to be changed.
- Adaptation – teachers analyze how students react to the lesson and alter their teaching practices to increase student learning.

- Relationship building – helped teachers to better comprehend student needs and develops ways to help them thrive.
- Professional growth – teachers become more cognizant of areas in which they need to improve on a professional level.

Connelly et al. included in their findings that participating teachers reported that reflective practice was used as an instrument to ascertain their effectiveness, execute needed changes, monitor those changes, and participate in the constant revision of practices to encourage productive learning experiences.

The use of reflective practice encourages teachers to be driven to make personal and professional changes through the analysis of how their students respond to learning opportunities (Disu, 2017). It is essential for teachers to examine and reflect on the data they collect pertaining to their classroom practices to develop as effective teachers (Alammari, 2018). Effective teachers use reflective practice to continuously monitor and adjust their instructional practices based on the needs of their students (Connelly et al., 2020).

### **Adult Learning Theory**

Learning requires changes in practice, understanding, perspective, and behavior (Knowles et al., 2005). In order for learning to transpire, there has to be a shift in thinking and reasoning or a shift of intrinsic inclinations (Knowles et al., 2005). Adult learning is based on practical needs and is more intrinsic in nature (Knowles et al., 2005). Adults are more open to learning when they can identify a personal and professional need that is directly related to their current life circumstances (Knowles et al., 2005). The adult learning theory is based on the following:



- incentive to learn is based on one's needs and interests
- learning is directly related to real-world situations
- learning is rooted in experience
- adults need to feel that they have control over what they need to learn
- learning needs are affected by age and experience

Adult learning opportunities are successful when they address the needs of the learners and help the learners attain personal and professional goals (Knowles, 1974). When planning adult learning sessions, it is imperative to match the intended goal to the learners' knowledge base and individual learning styles, determine what is fundamentally needed, and then broaden the learning goals (Knowles et al., 2005).

An essential component of the adult learning theory is andragogy, which is defined as the practice of facilitating adult learning (Knowles et al., 2005). The goal of andragogy is to develop self-directed learners (Knowles, 1977). According to Knowles et al., (2005), the andragogical model includes the following conjectures:

- Adults need to be able to relate the learning experience to a personal or professional situation.
- Adults need to have autonomy pertaining to what they need to learn.
- Adults enter learning opportunities with various degrees of experience.
- Adults are more inclined to learn if it has a positive effect on their personal or professional life.
- Adults are most affected by intrinsic motivations.

When using the andragogical model, the learning opportunity must address what is most relevant and beneficial to the learners as well as the professional organization (Knowles,

1970). According to Knowles et al. (2005), essential components of this model include

- establishing the needs of the learners
- formulating a plan to meet the needs of the learners
- putting in place conditions to encourage learning to occur
- preparing for the learning experience with adequate supplies and strategies
- assessing the results of the learning experience and determining if there are needs that were not met

The nucleus of the andragogical model is to develop and implement learning experiences that fuse the needs of the learner with the needs of the organization in order to bring about needed changes (Knowles et al., 2005).

Drago-Severson (2008) added to how adults learn by stating that it is essential to be able to identify if a learner's way of knowing falls in the category of instrumental, socializing, or self-authorizing. Learners who fall in the instrumental category are able to perceive events in a tangible manner (Drago-Severson, 2008). Those who identify with the socializing way of knowing have a natural tendency to reflect, comprehend abstract concepts, and contemplate the point of view of others (Drago-Severson, 2008). The self-authoring category includes adults who view experiences and opportunities intrinsically but also have difficulty accepting that others might have conflicting viewpoints (Drago-Severson, 2008). Drago-Severson emphasized that a learner's way of knowing dictates how one determines their obligations and place within an organization and how they assess their effectiveness.

### **Fundamentals of Professional Development**

Professional development provides opportunities for teachers to increase their

knowledge base and bring about improvements to student learning experiences (Person, 2020). Professional development is defined as the ongoing educational events that provide continual learning and growth for teachers throughout their careers (Person, 2020). Ajani (2020) ascertained that the effectiveness of teachers depends on their access to professional development opportunities on a regular basis. In order for professional development to be better received by teachers, they must be able to see the relationship between what is being presented and how it will affect their instructional practices (Woodland, 2019). To ensure the effectiveness of a professional development opportunity, there needs to be a collaboration between administration and teachers to identify their needs as well as the needs of the school (Woodland, 2019). Professional development is most successful when it correlates to the current curriculum that is being implemented by teachers (Woodland, 2019).

According to Drago-Severson (2008), professional and personal growth is supported by the following components of pillars of practice:

- Working with teams encourages personal and professional learning, increases cooperation with others, and promotes positive change.
- Giving teachers leadership opportunities helps them to become stakeholders who support change within the organization.
- Teachers who meet with peers to discuss curriculum and student achievement are more likely to consider the perspectives of others.
- Providing teachers with mentoring or coaching sessions increases the likelihood of setting and achieving new personal and professional goals.

These practices reinforce adult development by providing several modes to foster

personal and professional growth and contribute to opportunities for reflection (Drago-Severson, 2008). Drago-Severson and Blum-DeStefano (2018a) shared that the most influential factor in successful school reform and increased teacher effectiveness is providing adult learning experiences in which teachers and faculty can share thoughts, practices, beliefs, and assumptions. Learning through professional development opportunities is a continuous measure that directly impacts educational structures (Drago-Severson & Blum-DeStefano, 2018b). School administrators can create an environment that is conducive to learning by determining the individual and collective needs of teachers and the school, encouraging collaboration, and putting in place norms for professional development (Drago-Severson & Blum-DeStefano, 2018b).

Most educators want to engage in professional development that will help them gain a deeper understanding of their curriculum, increase their effectiveness, learn new ways to present information to students, and increase student achievement (Aguilar, 2013). Through coaching sessions, teachers are better equipped with the ability to analyze their beliefs, practices, and student achievement to plan and implement more effective classroom practices (Aguilar, 2013). Coaching is an ongoing process that involves establishing professional relationships between an educator and a coach in which goals are set; a plan is devised to help reach those goals; and at agreed-upon points, the plan and the goals are assessed to determine if the goals are being met or if the plan needs adjustments (Aguilar, 2013). According to research conducted by Aguilar (2013), coaching surpasses other forms of professional development because it addresses all aspects of teaching, both personally and professionally, that result in increased teacher effectiveness. Aguilar also pointed out that there is a positive correlation between

participating in coaching sessions and teacher use and application of data to guide instructional practices. Aguilar's research also indicated that coaching increases participation in reflective practice which facilitates growth as an effective teacher. Participating in reflective practice using video-recorded classroom lessons has become a pivotal component to expedite constructive coaching conversations (Aguilar, 2013). Using coaching as a modality for professional development contributes to all involved stakeholders to better facilitate the achievement of professional goals and school reform that targets the needs of students (Aguilar, 2013). By incorporating the coaching process, teachers are able to reflect on their strengths and areas of need in order to set goals directed around improving learning opportunities for students (O'Neill & Conzemius, 2006). A reflective coaching session can provide a comfortable atmosphere that invites a conversation between the teacher and the coach about current instructional practices and ways to improve, thus leading to more effective practices (Aguilar, 2013).

### **Video Observations as a Reflective Tool**

Video playback is a common practice among athletes who want to improve their performance (Carson, 2008). By using the same practice for improvement as athletes, teachers can observe, evaluate, and strategize how to improve their performance (Carson, 2008). Knight (2014) suggested that when introducing video observation as a reflective tool, it is essential to use the following guidelines:

- create an environment that ensures comfort so teachers are open to the process
- incorporate voluntary participation and do not pressure teachers to become involved
- refrain from using video observations as an evaluation tool by administrators

Watching one's own video of their classroom practices lends to a greater likelihood of engaging in reflective practice (Mercado & Baecher, 2014). Self-reflection through video observations gives teachers the opportunity to see their teaching practices from their students' perspectives (Knight, 2014). Carson (2008) pointed out in his study that video analysis helps teachers identify their strengths and weaknesses. Knight (2014) stated that it is difficult for teachers to be cognizant of their instructional practices because of their daily routine, their habits, and the tendency to look for ways that reinforce their beliefs. According to Knight, video observations allow teachers to step back from the routine of everything involved in the day-to-day operations of teaching that causes them to be desensitized due to repetition and experience their instruction from the standpoint of their students. Video observations can also break through the need to look for data that justifies beliefs that prevent us from discovering the reason students are not achieving at the level that they should (Knight, 2014). Knight also included in his research that teachers stated that they were astonished at what their video observations showed them about their instruction and the learning opportunities they were providing their students, which helped them adjust their future lessons to better meet the needs of their students. Therefore, using video observations as a reflection tool provides teachers with a realization of what their teaching looks like and opportunities to monitor and adjust their instructional practices (Knight, 2014). When a teacher can see their actions during a lesson, they develop a deeper understanding of their practices and areas that need improvement (Pellegrino & Gerber, 2012). As a result of using video reflection, teachers are able to critically look at what was successful as well as unsuccessful and identify what improvements they need to make in subsequential lessons (Knight, 2014). Video

reflections help teachers make changes to their future instruction such as incorporating more student affirmation, adding learning opportunities that promote active student involvement, and having clearer expectations (Knight, 2014).

Tripp and Rich (2012) stated in their study that through video analysis, participants were able to compare what they saw to what they remembered about their teaching practices. According to Tripp and Rich, by observing video-recorded lessons, teachers could

- identify the effects of their educational beliefs on their classroom instruction
- better understand and voice their conjecture about teaching and student learning
- note events that occurred during the lesson that they did not recall from memory
- determine what aspects of their lesson were successful and what requires alterations

Once teachers were able to observe their videos, they could no longer ignore the need for improvement and had a positive shift in their desire to change (Tripp & Rich, 2012).

Teachers in this study also stated that this experience provided them with more feedback and encouraged them to develop more effective instructional strategies than methods such as administrative and peer observations and professional development sessions (Tripp & Rich, 2012). Mercado and Baecher (2014) concluded in their research that video reflections are a catalyst for change due to the insight through personal experiences. Video reflections support the cycle of reflective practice in that they can point out the need for change, give teachers opportunities to plan new instructional

strategies, put those new ideas into practice, and then watch the new video and evaluate if the changes were successful (Tripp & Rich, 2012).

Calandra and Rich (2014) stated that the use of video observations presented individual professional development that helped teachers to recognize disparities between beliefs and practices that lead to the implementation of new more productive practices. Teachers are able to move past their perceptions of their teaching and lack of awareness to better plan and implement more productive instructional strategies in future lessons (Calandra & Rich, 2014).

Snoeyink (2010) conducted a study in which participants stated that using video observations helped them identify and change idiosyncrasies that they determined were displeasing and seemed to obstruct learning. The study showed that participants viewed reflective practice using video observations as a tool to develop their effectiveness through better instructional practices and student behavior management (Snoeyink, 2010). Throughout the study, teachers stated that they were able to identify areas that needed improvement and alter instructional strategies to better meet the needs of their students in future lessons (Snoeyink, 2010). Video observations gave participants a chance to see their students' views of the lesson which in turn altered future learning opportunities (Snoeyink, 2010).

A study on preservice teachers conducted by Sydnor (2016) found that participants developed an emphasis on student engagement, classroom behavior, and the use of reflective practice as a means of constructing better lessons that lead to students obtaining a deeper understanding of content. As participants viewed their video lessons, their center of attention moved from what went wrong in the lesson to how they could



improve future lessons (Sydnor, 2016). Sydnor's findings also suggested that using video observations as a reflective tool is a beneficial form of professional development.

Erasmus (2012) stated that professional development occurs through reflecting on video-recorded lessons through the analysis of instructional beliefs and practices that can increase personal and professional reform. Wright (2008) concluded from his research that the use of video reflections had a beneficial effect on teachers in that it helped them to heighten their ability to recall, analyze, and ultimately enhance future learning opportunities.

Hollingsworth and Clarke (2017) conducted a study in which mathematics teachers video recorded lessons using one camera focused on the teacher and a second camera to record students. Participating teachers viewed their recorded lessons, made notes of their observations, and then had conversations with researchers to obtain reflective information (Hollingsworth & Clarke, 2017). This study supported the use of video-recorded lessons for reflective practice because teachers were provided with data-driven observations to base their analysis of the learning experiences of students (Hollingsworth & Clarke, 2017). Video observations act as a factual recollection of classroom occurrences, a means to see learning experiences through the perspective of students, and a catalyst for change to increase student learning (Hollingsworth & Clarke, 2017).

Another study conducted by Hamel and Viau-Guay (2019) indicated that the use of video-recorded lessons as a source for reflective practice offered a more in-depth analysis of teaching practices rather than solely using teacher recollection. Their study noted that video-based reflections are beneficial and should be an essential part of

professional development for novice and experienced teachers (Hamel & Viau-Guay, 2019). Hamel and Viau-Guay concluded that reflective practice using video-recorded evidence assisted the participating teachers in achieving their pedagogical goals.

As teachers watch their own video-recorded lessons, they can observe events occurring in their lessons, student responses, and participation and use the data-driven reflection to bring light to their beliefs and practices that would otherwise remain hidden (Farrell & Macapinlac, 2021). Mosley Wetzel et al. (2017) stated classroom videos

- show exact occurrences of the recorded lesson
- identify aspects of the lesson that were overlooked
- show instances of frustration for the teacher and students
- present opportunities for self-reflection
- identify the relationship between teacher actions and student learning

Using video as a vehicle for reflection aids teachers in enhancing and improving their practices and provides students with more meaningful learning experiences (Mosley Wetzel et al., 2017).

## **Summary**

This review of literature discussed qualities and characteristics of reflective practitioners, Dewey's characteristics of reflective practice, Schön's reflection-in-action and reflection-on-action, the impact on the learning environment, types of reflective practice, teacher effectiveness, adult learning theory, fundamentals of professional development, and the use of video observations as a reflective tool. According to Stronge (2018) teachers who exude effectiveness center their focus on their students, cultivate an atmosphere that encourages creative thinking, and strive to advance student

comprehension of the curriculum. Effective teachers have a profound knowledge of their curriculum, have strong classroom management abilities, and executes successful instructional practices (Farrell, 2015).

Curtis and Carter (2008) noted that reflective practice engages teachers in a critical evaluation of their teaching style and can promote a positive impact in the classroom. Farrell (2015) ascertained that participating in reflective practice assists teachers in comparing their pedagogy to their instructional practices and discovering possible misconceptions that hinder student learning. Connelly et al. (2020) identified reflective practice as a way for teachers to become more effective through presenting opportunities to identify and resolve problematic situations, make changes for future lessons, and find ways to meet the needs of their students.

Using video observations as a reflective practice provides teachers with the chance to analyze instructional practices by recognizing and repeating successful aspects of their lesson and altering the less successful aspects (Sayin, 2013). Participating in video recorded classroom observations as a reflective tool provides teachers with fact-based details that can be unnoticed when relying on memory (Mathew et al., 2017). Observing oneself through video-recorded lessons enhances teacher learning through visible details of teaching practices and how students respond to classroom experiences (Hollingsworth & Clarke, 2017). The utilization of video observations to self-reflect on their instructional practices helps teachers to gain a better understanding of their students' perspectives (Knight, 2014). The literature review in this chapter supports the positive correlation between reflective practice using video-recorded lessons and effective teaching.

## **Chapter 3: Methodology**

### **Restatement of the Problem**

The most influential variable that affects student achievement is the quality of teaching (Ko et al., 2013). Through the incorporation of reflective practices, teachers are presented with opportunities to acknowledge ways to improve their instruction (Danielson, 2009). Disu (2017) concluded that the addition of reflection positively affects instruction, thus resulting in more effective learning experiences. Analysis of classroom recorded lessons can help teachers become more aware of their practices which can lead to the identification of changes that need to be made to improve learning experiences for students (Disu, 2017). This study focused on using classroom video observations to determine the relationship between reflective practice and teacher perception of effectiveness.

### **Research Question**

This study was conducted with the intent to measure the relationship between reflective practice and teacher perception of effectiveness through video observations. Participants were asked to complete a pre- and post-survey to assess their use of the reflective practice, video one lesson per week, reflect on the video observation, and answer a final reflection question. The objective of this study was to answer the following research questions:

1. In what ways does reflecting on classroom instructional recordings affect teacher perception of effectiveness?
2. To what extent does reflecting on classroom instructional recordings affect teacher perception of effectiveness?

## **Methodology**

This study was designed to use a mixed methods design, which involved collecting and analyzing data, making a compilation of gathered data, and using qualitative and quantitative means to create inferences within the study (Tashakkori & Creswell, 2007). The rationale for using a mixed methods approach in this study was that the use of either qualitative or quantitative data exclusively does not provide sufficient information. By using a mixed methods approach, I was able to identify trends that resulted in a more detailed analysis. According to Morgan (2007), the use of mixed methods is appropriate because it uses a combination of words and numbers to collect data. The use of mixed methods research analyzes qualitative and quantitative data, represents the perspectives of participants, and gathers extensive sets of data (Wisdom & Creswell 2013).

The mixed methods in this study were based on the convergent design that included the collection and analysis of two different databases and then combined them to compare results and identify trends (Creswell & Plano Clark, 2017). The intent of using a convergent design is to collect data that are different but also interrelated that address the research problem (Creswell & Plano Clark, 2017). Creswell and Plano Clark (2017) stated that the use of convergent design is best suited when the researcher is confined to a short time to collect data and needs both qualitative and quantitative information from participants. Collecting this type of data provides the researcher with a more detailed understanding of the research problem (Creswell & Plano Clark 2017). “The design facilitates the direct comparison of participants’ perspective gathered in an open-ended questioning format with perspective drawn from the researcher’s standpoint”

(e.g., on an instrument such as a survey chosen by the researcher) in close-ended questioning” (Creswell & Plano Clark, 2017, p. 99). By doing this, I was able to combine the participants’ thoughts and opinions while reporting statistical data.

This study involved collecting quantitative data in the form of a Likert scale that compared participants’ use of reflective practice through a pre- and post-survey.

Qualitative data were collected through participants answering reflective questions before and after viewing their classroom videos. This type of data collection provided me with a more extensive understanding of the relationship between reflective practice and teacher perception of effectiveness.

### **Research Context and Participants**

This study included participating teachers who work in a middle school serving approximately 636 students in Grades 6-8. The faculty consists of teachers who formally worked in the district’s two middle schools that were consolidated last school year into one new middle school. Participating teachers continued to work in their classrooms, which provided a comfortable and safe setting to participate in the reflective practice. Since the school prioritizes easily available technology, participating teachers had access to video equipment. This was a new phenomenon study because teachers have no prior experience or knowledge of using video-recorded lessons as a reflective practice tool.

The study was initiated by every teacher receiving an emailed invitation asking them if they would like to volunteer to participate in the study (see Appendix A). I used my personal email address to ensure confidentiality because our district email account is accessible to the department of technology. The email asked teachers who wanted to volunteer to reply with “Yes, I would like to participate in this study.” The email

included information on the process such as completing the pre-assessment survey, recording a lesson each week for a total of 6 weeks, submitting the response to each recorded lesson, responding to the final reflection question, and completing the post-assessment survey. All 48 teachers at the research site received the email inviting them to participate in the study voluntarily. The intended goal was to have at least 20 teachers participate in the study. Volunteers were also informed that they would be the only person to view their video-recorded lessons due to this study focusing on self-reflection. Participating teachers were assigned a number for confidentiality purposes. Electronic data collection was stored on a password-protected external drive and any paper copies of the pre- and post-assessment survey, weekly reflection responses, and the final reflection responses were stored in a locked cabinet that is only accessible to me. Each teacher who volunteered to participate received a hard copy of the adaptation of Larrivee's (2008) Tool for Assessing Development as a Reflective Practitioner self-assessment survey as a pre-assessment to determine their knowledge and implementation of reflective practice (see Appendix B for permission to use). By giving them hard copies of the assessment survey to complete and hand deliver to me, they did not have access to their pre-assessment survey responses when they completed the post-assessment survey. All teachers who volunteered to participate in this study were included in the data collection process.

### **Instrument and Procedures**

This study was limited to a length of 6 weeks. The data collection methods used for this study include a pre- and post-assessment of reflective practice and responses to reflective questions. The pre- and post-survey was an adaptation of Larrivee's (2008)

Tool for Assessing Development as a Reflective Practitioner self-assessment survey to determine their knowledge and implementation of reflective practice. Participants received the pre-survey at the beginning of Stage 1. They were to answer the questions and submit the results to me for analysis. Once the pre-survey was completed, participants were then to video one lesson per week, respond to pre-video observation questions, watch their videos, and respond to post-video observation questions. The pre-video observation questions participants were asked to answer were

- What do you anticipate as the strengths of this lesson?
- How do you anticipate students will react to this lesson?

The post-video observation questions participants were asked to answer were

- What do you think were the strengths of the lesson?
- How did students react to the lesson?
- What would you do differently if you taught this lesson again and how will this affect future lessons?

Participants submitted their responses to me through email or hand delivered a hard copy to me. At the end of the 6 weeks, participants responded to the post-survey and submitted the results to me for analysis. Participants also were asked to complete a final reflection that asked,

- How has participating in the video reflections affected your perception of effectiveness as a teacher?

### **Stage 1**

During Stage 1, participating teachers completed an adaptation of Larrivee's (2008) Tool for Assessing Development as a Reflective Practitioner self-assessment



survey as a pre-assessment to determine their knowledge and implementation of reflective practice (see Appendix C). The survey collected quantitative data in that it used a Likert scale. For each question, participants were asked to mark “frequently,” “sometimes,” “infrequently,” or “never.” Frequently was assigned a score of 4, sometimes was a score of 3, infrequently was a score of 2, and never was a score of 1. Refer to Appendix C to view the survey questions and scale. For positively worded items, higher scores indicate an increased use and familiarity with reflective practice. Conversely, for negatively worded items, lower scores indicate increased use and familiarity with reflective practice. The data were analyzed and recorded to determine participants’ initial use and familiarity with reflective practice.

## **Stage 2**

During the 6-week study, participating teachers were asked to video one lesson per week, answer two pre-video observation questions, watch the videos, reflect on their lessons, answer three post-video observation questions, and email or personally deliver to me the response to the reflection questions each week (see Appendix D). I collected teacher responses to the reflection questions and looked for commonalities. During this stage, initial coding was used because it identified recurring or commonalities of the data by comparing and contrasting patterns in the collected data (Chun Tie et al., 2019). Coding was used to interpret the collected data from the video reflections to obtain a thorough understanding of the participants’ perspectives (Charmaz, 2006). Once the initial coding was done, axial coding then was used to identify any relationships or commonalities in the codes (Charmaz, 2006). Responses to the reflection question were submitted each week. Teachers were asked to respond to the pre- and post-observation

questions. Pre-video observation reflection questions were

- What do you anticipate as the strengths of this lesson?
- How do you anticipate students will react to this lesson?

The post-video observation questions were

- What do you think were the strengths of the lesson?
- How did students react to the lesson?
- What would you do differently if you taught the lesson again and how will this affect future lessons?

### **Stage 3**

The study concluded with the adapted version of Larrivee's (2008) Tool for Assessing Development as a Reflective Practitioner self-assessment as a post-survey (see Appendix E). I then compared the pre- and post-survey responses to determine if there was a change in perception and use of reflective practice from the pre-survey in Stage 1. The pre- and post-survey used a Likert scale, so I looked for a change in participants' self-rating on reflective practice. Participants were also required to complete and submit a final reflection that was coded by identifying reoccurring themes of reflective practices through initial and axial coding. The final reflection question was

- How has participating in the video reflections affected your perception of effectiveness as a teacher? (See Appendix F)

### **Analysis of Data**

For this study, a modified Likert scale was used to measure attitudes and practices of reflection. The quantitative data collected from the pre- and post-Likert surveys were compared to determine if there is a change in perception and use of reflective practice.

Using a Likert scale to collect data provided me with insight into participants' practices and attitudes toward the use of reflection. Data collected through a Likert scale can be easily analyzed because it is quantitative (Knight, 2014). According to Nemoto and Beglar (2014), the advantages of using a Likert scale survey are that

data can be gathered relatively quickly, can provide highly reliable person ability estimates, the validity of the interpretations made from the data they provide can be established through a variety of means, and the data can be compared, contrasted, and combined with qualitative data-gathering techniques. (p. 2)

By comparing the pre- and post-survey results, I analyzed how participants rated themselves to determine if there was a difference between the two sets of data.

The qualitative data collected from the reflection questions were analyzed using initial and axial coding to identify emerging themes. The use of coding prevents the researcher from influencing participants and their responses with bias or assumptions (Charmaz, 2006). The use of initial coding helps to identify common themes in the collected data (Chun Tie et al., 2019). Axil coding is designed to classify, correlate, and compile extensive sets of data to reconstruct differently after initial coding (Charmaz, 2006). After each video observation, participants were asked to respond to the pre- and post-video reflection questions and send their responses to me to code. Each week's responses consisted of a different round of coding in which I read and analyzed the data and coded them for commonalities and themes that occurred. This enabled me to look for trends in each round of coding. The last round of coding consisted of the final reflection responses from participants.

Data from the pre-assessment survey in Stage 1 and the post-assessment survey in

Stage 3 were analyzed and compared to determine if the quantitative data indicated a significant change in perception and use of reflective practice or if there was no significant change on an individual basis and from the collective group of volunteers. Qualitative data from each reflection question response on the video-recorded lessons in Stage 2 were analyzed to determine if there were commonalities and emerging themes. The qualitative data from the final reflection question in Stage 3 were analyzed to identify how participants related engaging in the reflective practice with their perception of effectiveness. By comparing the quantitative and qualitative data collected in this study, I was able to determine if there was a significant positive correlation between the data and teacher perceptions of effectiveness.

### **Ethical Procedures**

- Participation in this study was voluntary.
- Classroom videos were only viewed by the recording teacher.
- Each participant was asked to email or personally deliver their reflections to me.
- All electronic data were kept on a password-protected external hard drive, and all paper copies of responses were securely kept in a locked cabinet that is solely accessible to me.
- Participants were instructed to use their personal email accounts when sending electronic responses.
- I was not present with participants when they completed the pre- and post-assessment or any of the responses to the reflection questions.
- Participants did not have access to their responses to the pre-assessment

survey when they completed the post-assessment survey.

- Participants were also assigned a number for data collection to protect their privacy.
- All collected data will be securely stored for 5 years.
- During the data collection period, I did not engage in any conversations pertaining to this study.

### **Summary**

A mixed methods design was used to determine the relationship between reflective practice and teacher perception of effective teaching. Participants were asked to use video observations to reflect on their instruction and determine ways to improve learning experiences for their students. Quantitative data were collected from the use of the pre- and post-surveys on reflective practice using an adapted version of Larrivee's (2008) Tool for Assessing Development as a Reflective Practitioner, and qualitative data came from participant responses to open-ended pre-video observation reflection questions, post-video observation reflection questions based on their video observations, and a final reflection question. Collected data were analyzed using initial and axial coding to understand any relationship between the use of reflective practice and teacher perception of effectiveness.

To ensure confidentiality, participants were assigned a number. Each participant's weekly video was only to be viewed by the participant, and their reflection was viewed exclusively by me. Participants sent me their responses either handwritten or via personal email. Since the study was designed to be conducted in the school in which I currently work, I limited my interaction with participants during this time and abstained from

answering any questions participants had about my views on reflective practice or the study to remove any bias. Chapter 4 includes the collected data and analysis of participant responses to the reflective procedures as stated in the methodology of this study.

## **Chapter 4: Results**

### **Introduction**

This research study was conducted for the purpose of understanding the relationship between reflective practice and teacher perception of effectiveness. Disu's (2017) research, as stated in Chapter 2 of this study, concluded that being a reflective practitioner enables teachers to have a more amplified sense of the relationship between their actions and the effects on student learning. Effective teachers have an innate love for teaching, aspire to make a difference in their students' lives, encourage their students to have the desire to learn, are enthusiastic, are driven to increase student achievement, and want to continue to grow as an educator to positively affect learning opportunities for their students (Lam, 2014). According to Scales (2008), effective teachers use reflective practice to self-evaluate and determine what they need to change in order to improve student learning. The focus of this study was to answer the following research questions:

1. In what ways does reflecting on classroom instructional recordings affect teacher perception of effectiveness?
2. To what extent does reflecting on classroom instructional recordings affect teacher perception of effectiveness?

This chapter focuses on the results of the study including pre- and post-data from the adaptation of Larrivee's (2008) Tool for Assessing Development as a Reflective Practitioner self-assessment survey, pre- and post-classroom video reflective questions, and a final reflection question.

### **Overview of Participants and Methodology**

The study was comprised of 19 teachers: three teach English language arts, two

teach mathematics, four teach science, four teach social studies, one teaches special education, and five teach elective classes. An email was sent out to all 48 teachers in the school inviting them to participate in the study voluntarily. The study was comprised of three stages.

- Stage 1: Participants were asked to complete a pre-survey on reflective practice using an adaptation of Larrivee's (2008) Tool for Assessing Development as a Reflective Practitioner.
- Stage 2: Participants were asked to video a lesson and complete pre- and post-video observation questions for a total of six videos.
- Stage 3: Participants were asked to respond to a final reflection question and complete the post-survey on reflective practice using an adaptation of Larrivee's (2008) Tool for Assessing Development as a Reflective Practitioner.

The pre-video observation questions participants were asked to answer were

- What do you anticipate as the strengths of this lesson?
- How do you anticipate students will react to this lesson?

The post-video observation questions participants were asked to answer were

- What do you think were the strengths of the lesson?
- How did students react to this lesson?
- What would you do differently if you taught the lesson again and how will this affect future lessons?

The final reflection question participants were asked to answer was

- How has participating in the video reflections affected your effectiveness as a



teacher?

Originally, 20 teachers volunteered to participate, but one was unable to participate due to unforeseen circumstances. Due to this, 39.5% of the teachers in the school participated in the study.

The study used a mixed methods design through the collection and analysis of quantitative and qualitative data. Using a mixed methods approach allows for a more extensive analysis of data rather than using exclusively qualitative or quantitative methods. During this study, quantitative data were collected using a Likert scale comparing pre- and post-survey results of participants' use of reflective practice. Nemoto and Beglar (2014) stated that collecting data through a Likert scale can be used as a comparison with data gathered using qualitative means. Qualitative data were collected through participant responses to reflective questions before and after viewing their classroom videos and a final reflection question. This mixed methods approach to data collection provided me with a deeper understanding of the relationship between reflective practice and teacher perception of effectiveness.

### **Pre- and Post-Survey Description and Results**

Pre- and post-survey data were collected using an adaptation of Larrivee's (2008) Tool for Assessing Development as a Reflective Practitioner. Participants were asked to rate their current reflective practice based on questions that addressed Level 1, pre-reflection; Level 2, surface reflection; Level 3, pedagogical reflection; and Level 4, critical reflection. Ratings were selected on a Likert scale with the following options: Frequently received 4 points, sometimes received 3 points, infrequently received 2 points, and never received 1 point. The results of the pre- and post-survey were analyzed based

on all responses. Of the 19 responses, seven participants' post-survey scores were higher than 10 points, 10 participants' scores were between 1 and 9 points higher, one participant showed no change in score, and one had a score of -3. The average score for the pre-survey was 167.42, and the average score for the post-survey was 177.73 with an average difference of 10.32 points. Participants 2, 9, and 12 had the greatest difference of points between the pre- and post-survey scores. Table 1 shows the comparison scores of the pre- and post-surveys for each participant. See Appendix G for an item-by-item analysis of the pre- and post-survey results.

**Table 1**

*Pre- and Post-Survey Data*

Teacher	Pre-survey score	Post-survey score	Difference between pre- and post-survey
1	179	185	6
2	157	191	34
3	170	173	3
4	164	161	-3
5	199	199	0
6	171	182	11
7	181	182	1
8	166	169	3
9	144	186	42
10	173	178	5
11	153	167	14
12	155	183	28
13	164	167	3
14	176	182	6
15	189	194	5
16	154	167	13
17	178	184	6
18	169	173	4
19	139	154	15
Average	167.4211	177.7368	10.315789

### **Research Question 1: In What Ways Does Reflecting on Classroom Instructional Recordings Affect Teacher Perception of Effectiveness?**

This research question was designed to identify the relationship between the use of reflective practice and how participants viewed their effectiveness as a teacher. Data from pre- and post-questions for Videos 1-6 provided evidence to support Research Question 1.

#### ***Video 1 Data***

Analysis of the Pre- and Post-Question 1 for Video 1 showed the emergence of three themes:

- engagement/student interest
- student understanding/prior knowledge
- teacher instruction/materials

The data for Post-Question 1 showed an increase of 1 in Themes 1 and 3 and a decrease of 3 in Theme 2 as compared to the pre-question. For the post-question, Participant 1 stated, “Students were able to do more than I thought.” Participant 12 stated that “using graphs to help their understanding” was the strength of this lesson. Participant 17 said that students were “engaged and focused on figurative language.”

Pre- and Post-Question 2 revealed two themes: engagement/student interest and confusion/struggle to understand. Post-Question 2 showed a decrease of 3 for Theme 1 and an increase of 3 for Theme 2 as compared to the pre-question. For Post-Question 2, Participant 4 said the students “enjoyed the lesson and did not want to stop.” Participant 12 stated, “total confusion, they did not understand.” Participant 14 added that “many participated and made connections, more than I expected.”

For Post-Question 3 most participants stated that they would change some aspect of their instructional practice. Participant 3 stated that they “would have students do the math parts of the science lesson instead of me doing it.” Participant 7 responded, “I needed to spend time earlier in the year establishing close reading skills and habits.” Participant 10 said they needed to “provide more information as part of the instruction.” Table 2 shows data from the reflection questions for Video 1. See Appendix H for detailed responses from participants for Video 1.

**Table 2**

*Video 1*

Questions	Theme 1	Theme 2	Theme 3
Pre-Question 1. Anticipated strengths of the lesson.	6 participants cited engagement/ student interest	7 cited student understanding/ prior knowledge	6 cited teacher instruction/ materials
Post-Question 1. Strengths of the lesson.	7 participants cited engagement/ student interest	4 cited student understanding/ prior knowledge	7 cited teacher instruction/ materials
Pre-Question 2. Anticipated student response.	14 cited engagement/student interest	3 cited confusion/ struggle to understand	
Post-Question 2. How did students respond?	11 cited engagement/ student interest	7 cited confusion/ struggle to understand	
Post-Question 3. What would you do differently?	18 cited Change instructional practice		

***Video 2 Data***

Analysis of Pre- and Post-Question 1 of Video 2 exhibited Theme 1 as student engagement/interest, Theme 2 as student understanding/prior knowledge, and Theme 3 as

teacher instruction/materials. Data from Post-Question 1 showed an increase of 5 for Theme 1, a decrease of 3 for Theme 2, and a decrease of 3 for Theme 3. Participant 7 stated that the strength of the lesson was based on teacher instruction but stated in the post-question that the strength was that “students were highly engaged in the lesson.” Participant 15 also responded to the pre-question as the strength being the use of “new methods to present the material,” but in the post-question said the strength was “student engagement and understanding.”

Two themes were uncovered in Pre- and Post-Question 2. Theme 1 was student engagement/interest, and Theme 2 was student confusion/struggle to understand. Participant 8 stated in the pre-question that students will be “confused at first and have mixed reactions,” but in the post-question said the students were “positive and involved.” Participant 19 responded to the pre-questions by saying students will be “confused and frustrated,” but in the post-question said that “students helped each other and participated.”

Two themes appeared in responses to Post-Question 3. Theme 1 was change instructional practice, and Theme 2 was add a reflective element to the lesson. Sixteen participants cited that they would change their instructional methods, two said they would add a reflective piece to the lesson, and one said they would not change anything. Participant 3 stated that they would “add a reflective conversation with students” and Participant 6 said they would “add a reflection about how students could apply what they have learned to a real-world setting.” Participant 11 stated, “I was not confident in explaining the concept. I would use more online resources to help model, would break the lesson into smaller steps, and extend it to a second day.” Table 3 displays data from the

reflection questions for Video 2. See Appendix I for detailed responses from participants for Video 2.

**Table 3**

*Video 2*

Question	Theme 1	Theme 2	Theme 3
Pre-Question 1. Anticipated strengths of the lesson.	5 participants cited engagement/ student interest	8 cited student understanding/ prior knowledge	6 cited teacher instruction/ materials
Post-Question 1. Strengths of the lesson.	10 participants cited engagement/ student interest	5 cited student understanding/ prior knowledge	4 cited teacher instruction/ materials
Pre-Question 2. Anticipated student response.	12 cited engagement/ student interest	7 cited confusion/ struggle to understand	
Post-Question 2. How did students respond?	17 cited engagement/ student interest	2 cited confusion/ struggle to understand	
Post-Question 3. What would you do differently?	16 cited change instructional practice	2 cited add a reflective piece	

***Video 3 Data***

Emerging themes for Pre- and Post-Question 1 for Video 3 were student engagement/interest, student understanding/prior knowledge, and teacher instruction/materials. Pre- and post-data from Question 1 showed a slight change in Theme 2 and no change in Themes 1 and 3. Responses from 63% of participants showed no change in theme. However, Participant 12 stated in the pre-question that the strengths of the lesson pertained to teacher instruction, but the post-question response was that “this was a lower ability class and students had trouble recalling previously learned

information.” Participant 16’s pre-question response was related to teacher instruction, whereas the response to the post-questions was focused on student engagement.

Pre- and Post-Question 2 for Video 3 indicated two themes: student engagement/interest and student confusion/struggle to understand. Post-Question 2 indicated a decrease of 4 for Theme 1 and an increase of 3 for Theme 2. Participant 2 stated in the pre-question that “students will be interested in the topic,” but in the post-question stated that students “were confused about the topics due to no prior knowledge.” In the pre-question, Participant 9 stated that students would be “frustrated,” but in the post-question, “students reacted better than I thought and were engaged and interested.” Participant 15 expressed in the pre-question that “students will do well, but may be nervous,” and in the post-question added that “students dreaded the lesson but performed better than expected.”

Data from Post-Question 3 indicated that 15 participants cited they would change their instructional practices, three would change nothing, and one would add a reflective element to the lesson. Participant 2 expressed the need to “front load vocabulary to increase understanding, because students had lots of questions.” Participant 3 wanted to “add a reflective conversation on how to make a difference.” Participant 11 shared that they “should have done a practice in progressive order because students were confused and that made them disengaged.” Participants 10, 14, and 18 said they would not change anything. Participant 18 also said this for Video 2. Table 4 displays data from reflection questions for Video 3. See Appendix J for detailed responses from participants for Video 3.

**Table 4***Video 3*

Question:	Theme 1	Theme 2	Theme 3
Pre-Question 1. Anticipated strengths of the lesson.	6 participants cited engagement/ student interest	7 cited student understanding/ prior knowledge	6 cited teacher instruction/ materials
Post-Question 1. Strengths of the lesson.	6 participants cited engagement/student interest	6 cited student understanding/ prior knowledge	6 cited teacher instruction/ materials
Pre-Question 2. Anticipated student response	12 cited engagement/ student interest	6 cited confusion/ struggle to understand	
Post-Question 2. How did students respond?	8 cited engagement/ student interest	9 cited confusion/ struggle to understand	
Post-Question 3. What would you do differently?	15 cited change instructional practice	1 cited add a reflective piece	3 said change nothing

*Video 4 Data*

Analysis of Video 4 Pre- and Post-Question 1 revealed Theme 1 as student engagement/interest, Theme 2 as student understanding/prior knowledge, and Theme 3 as teacher instruction/materials. Participant 19 stated in the pre-question that “I do not anticipate many strengths in this lesson.” However, for the post-question response, Participant 19 stated that “students were able to solve the equations and the extra practice helped.” Participant 6 responded to Pre-Question 1 by saying, “The game will be the strength,” but added in the post-question response, “The educational game built in the opportunity to partner share and reflect on their learning.”

Pre- and Post-Question 2 cited two themes: student engagement/interest and



student confusion/struggle to understand. Comparing Pre- and Post-Question 2 responses, 32% of participants changed their responses from Theme 1 to Theme 2. Participant 1 added that students “complained at the amount of work/research needed to complete each slide.” Participant 9 stated that “students became fatigued and not all students were engaged or participated.” According to Participant 12, “Students were confused and could not grasp the concept.” Participant 6 included in the post-question response that “even though students were engaged and stayed on task, they were less enthusiastic with having to complete the reflective journal assignment.”

Analysis of Post-Question 3 revealed that 89% of participants cited that they would change their instructional practice. Participant 4 said they would “have students write questions and answers to make sure they are retaining the information.” Participant 10 responded to the question that “I should have not assumed students knew how to complete a power point.” Participant 11 stated, “I would present the content better. I needed more conceptual explanation and modeling to ensure smooth transition.” Participants 1 and 15 said they would not change anything for this lesson. Participant 18 stated in Videos 2 and 3 that they would not change anything; however, for Video 4, they stated, “I would make students solve the problems before teaching it to let them see the difference between equations and inequalities.” Participants responded to this question by giving examples and details of what they could do to make this lesson more beneficial to their students. Table 5 displays data from reflection questions for Video 4. See Appendix K for detailed responses from participants for Video 4.

**Table 5***Video 4*

Question:	Theme 1	Theme 2	Theme 3
Pre-Question 1. Anticipated strengths of the lesson	4 participants cited engagement/student interest	6 cited student understanding/ prior knowledge	8 cited teacher instruction/ materials
Post-Question 1. Strengths of the lesson	5 participants cited engagement/student interest	7 cited student understanding/ prior knowledge	7 cited teacher instruction/ materials
Pre-Question 2. Anticipated student response	16 cited engagement/ student interest	3 cited confusion/ struggle to understand	
Post-Question 2. How did students respond?	12 cited engagement/ student interest	7 cited confusion/ struggle to understand	
Post-Question 3. What would you do differently?	17 cited change instructional practice	2 said change nothing	

*Video 5 Data*

The analysis of Pre- and Post-Question 1 for Video 5 responses disclosed Theme 1 as student engagement/interest, Theme 2 as student understanding/prior knowledge, and Theme 3 as teacher instruction/materials. Pre- and Post-Question 1 had four participants cite strengths as being student engagement, three cite student understanding/prior knowledge, and 12 cite teacher instruction. Participant 11 said that the flipchart would be the strength but added in the post-question response, “I didn’t execute as well as I anticipated.” Participant 12 stated in the pre-question that engagement was the strength but changed that to teacher instruction through using a rubric as the strength of the lesson.

Pre- and Post-Question 2 had 63% of the participants cite that students reacted as

being engaged and highly interested in the lesson and 37% cited that students reacted as being confused and struggled to understand. Participant 1 responded to student anticipated reactions in the pre-question as thinking it will be boring, but in the post-question, “they seemed to enjoy the video and they shared what they liked or found interesting with each other.” Response from Participant 12 included in the pre-question that students “will be excited to start the lesson and be able to follow the rubric,” but in the post-question, students “did not want to follow the instructions. Participant 17 stated in the pre-question that “students will hate the lesson” however, in the post-question added that “students enjoyed the lesson.”

Analysis of responses to Post-Question 3 showed 89% of participants would change instructional practice and 11% said no change in lesson. Participants 1 and 18 stated that they would not change any aspect of the lesson. Participant 18 also stated no change in Videos 2 and 3. According to Participant 2, they would have “front loaded information through text.” Participant 7 stated that they would “provide leveled text for practice and remediate in small group setting.” Participant 19 included that they would “use more complicated questions.” Table 6 displays data from reflection questions for Video 5. See Appendix L for detailed responses from participants for Video 5.

**Table 6***Video 5*

Question:	Theme 1:	Theme 2:	Theme 3:
Pre-Question 1. Anticipated strengths of the lesson	4 participants cited engagement/ student interest	3 cited student understanding/ prior knowledge	12 cited Teacher instruction/ materials
Post-Question 1. Strengths of the lesson	4 participants cited engagement/ student interest	3 cited student understanding/ prior knowledge	12 cited Teacher instruction/ materials
Pre-Question 2. Anticipated student response	12 cited engagement/ student interest	7 cited confusion/ struggle to understand	
Post-Question 2. How did students respond?	12 cited engagement/ student interest	7 cited confusion/ struggle to understand	
Post-Question 3. What would you do differently?	17 cited change instructional practice	2 said change nothing	

*Video 6 Data*

Pre- and Post-Question 1 analysis of Video 6 supported Theme 1 as student engagement/interest, Theme 2 as student understanding/prior knowledge, and Theme 3 as teacher instruction/materials. Five participants cited student engagement/interest as the strength of the lesson, four cited student understanding/prior knowledge as the strength, and 10 cited teacher instruction/materials as the strength. Participant 6 stated in both the pre- and post-question that the strength of the lesson is student reflection. In the pre-question, Participant 10 wrote that the strength of the lesson was “group work, the activity, and student engagement,” but in the post-question response, they wrote that the strength was “me being able to move from group to group and modeling how to find the

answers.”

Pre-Question 2 had 79% of participants cite that students will be engaged and interested in the lesson, and 21% cited that students would be confused or struggle with the lesson. Post-Question 2 had 68% cite students would be engaged and interested in the lesson and 32% cite students were confused and/or struggled with the lesson. Participant 11 stated in the pre-question that “students will not be as excited or engaged but will stay in learning mode.” However, in the post-question response, they stated that students were “enthusiastic and engaged in the scaffolding activity.” Participant 18 responded to the pre-question by saying students “will not like the lesson” and in the post-question response included that “students did not grasp the lesson very well and struggled with the problem-solving.”

Post-Question 3 had 84% of participants cite that they would change their instructional practices and 16% of participants would not change anything about their lesson. Participant 4’s response included making the lesson “more rigorous.” Participant 11 said they “could break the lesson into smaller groups and refine my targets.” Participant 19 determined that they would “turn the study guide into a review game.” Participant 18 said they would not change anything, but in Post-Question 2, they stated that “students did not grasp the lesson and they struggles with problem-solving.” Table 7 displays data from reflection questions for Video 6. See Appendix M for detailed responses from participants for Video 6.

**Table 7***Video 6*

Question:	Theme 1	Theme 2	Theme 3
Pre-Question 1. Anticipated strengths of the lesson	5 participants cited engagement/ student interest	4 cited student understanding/ prior knowledge	10 cited Teacher instruction/ materials
Post-Question 1. Strengths of the lesson	5 participants cited engagement/ student interest	4 cited student understanding/ prior knowledge	10 cited Teacher instruction/ materials
Pre-Question 2. Anticipated student response	15 cited engagement/ student interest	4 cited confusion/ struggle to understand	
Post-Question 2. How did students respond?	13 cited engagement/ student interest	6 cited confusion/ struggle to understand	
Post-Question 3. What would you do differently?	16 cited change instructional practice	3 said change nothing	

Pre- and post-video reflection provided evidence to support Research Question 1, “In what ways does reflecting on classroom instructional recordings affect teacher perception of effectiveness?” Analysis of the data in this section focused on two overall components: student actions during the lesson and teacher actions during the lesson. Pre- and Post-Questions 1 and 2 provided information on the strengths of the lesson and student reactions to the lesson. Question 1 revealed three main themes:

- student engagement and/or interest in the lesson
- student understanding and/or use of prior knowledge
- teacher instructions and or materials

Responses to Pre- and Post-Question 2 focused on student reactions and were divided

into two main themes:

- student engagement and/or interest
- students being confused or struggling with the lesson

Post-Reflection Question 3 overall focused on changing teacher instruction, and responses began with what “I would” or “I should” do to improve the lesson. For this question, there were two overall emerging themes:

- change in instructional practice
- change nothing

Examination of responses for Post-Question 3 disclosed that Participant 18 determined they would not change any aspect of the lesson in four of the six videos. Overall, most participants’ responses focused on what they would do differently to improve the learning experience for their students.

Data from Pre- and Post-Questions 1 and 2 focused on the strengths of the lesson and how students responded. Participants were able to compare what they thought would happen in the lesson to what actually happened. The use of classroom instructional recordings provided participants the opportunity to visually observe the relationship between their actions and their students’ actions. A study conducted by Tripp and Rich (2012) reported that the use of video observations helps teachers to

- associate their educational values with their instructional practices
- develop a deeper understanding of their assumptions about teaching and learning
- be able to identify aspects of the lesson that they did not remember
- conclude improvements that need to be implemented so students will have a

more productive learning experience

Comparing what they anticipated as the strengths of the lesson and how students responded to the factual events gave participants evidence of possible misconceptions on their part. This process provided teachers with a microscopic view of how their plans and implementation of instruction were perceived by their students. Knight (2014) included in his research that the practice of using video observations as a reflective tool allows teachers to experience their instructional practices through the eyes and experiences of their students. Themes from Pre- and Post-Questions 1 and 2 provided supporting evidence that participants' focal point was their students. Through this focal lens, participants could begin to identify positive and negative aspects of their lessons. Disu's (2017) research study reinforced this theory in that he deduced that effectiveness is affected by reflective practice because it motivates teachers to make positive changes that are driven by the analysis of their students' responses to the learning environment and teacher instructional practices.

Data from Post-Question 3 led to the theme that was based on the actions of the participants. This centered on what changes they would make to help improve the lesson. Being able to view their actions and student responses assisted teachers in the development of a profound conception of their current practices and what aspects need to be altered (Pellegrino & Gerber, 2012). Since most responses started with "I would" or "I should," participants place the responsibility for change on themselves. Viewing their videos helped them to determine what they need to do to improve their instructional practices. Ko et al. (2013) stated that effective teachers

- set clear and concise instructional goals



- are well-informed about their curriculum and productive instructional strategies
- strive to include practices that refine how they teach their content
- are knowledgeable of their students' needs and abilities
- accept responsibility for student success

Through the process of answering Post-Question 3, participants focused on making changes to their actions and practices. Knight (2014) added in his research that teachers who participate in reflective practice using video observations reported that they were surprised by what they learned about their instruction and how students reacted, which helped them adjust to their practices and improve learning opportunities for their students. The progression of responses from participants for each of the six classroom instructional recordings provided evidence that they acknowledge their perception of effectiveness through the use of reflective practice.

### **Research Question 2: To What Extent Does Reflecting on Classroom Instructional Recordings Affect Teacher Perception of Effectiveness?**

The final reflection response asked participants to explain how participating in the video reflections has affected their perception of effectiveness as a teacher. Responses to this question support Research Question 2 by providing evidence on how this reflective process has affected their instructional practices. Participants gave examples of things they noticed about their behavior and practices and how that affected their students. Analysis of the data from the final reflection questions revealed that participants were more mindful, more intentional, and focused on improving learning experiences for their students. Participant 5 added to their response, "I find myself reflecting not only after the

lesson but also during the lesson.” Participant 6 stated, “Even though I have been teaching for 20 years, this process has helped me become a more effective teacher.” Participant 9 included in their response, “I also need to work on building student confidence.” According to Participant 13, “This has helped me see myself through the eyes of my students.” The response for Participant 14 said, “It has made me more aware of what I do each day.” Through this process, participants cited the positive changes they have made by becoming reflective practitioners. Participating in reflective practice provided participants insight into ways of improving learning experiences for their students.

The cumulation of data from the final reflection question provided detailed responses from participants on how participating in this study has affected their perception of effectiveness. By explaining that they realize what they need to do to improve their instructional practices, they are moving towards being more effective. Wright (2008) stated in his research that video reflections have a positive effect on teacher effectiveness by helping teachers to develop a propensity to better recall, analyze, and strengthen their instructional practices. This process assisted participants to develop ways to better meet the needs of their students. Snoeyink (2010) supported this assumption by stating that through participation in reflective practice, teachers are better equipped to identify specific areas of their instructional practices and actions that need to be improved to better serve the needs of their students regardless of their ability. Since effective teachers deeply understand their curriculum, display productive classroom management, and execute exceptional instructional practices, participants in this study gained a better understanding of what they need to do to be more effective (Farrell,

2015). Through participation in reflective practice using classroom instructional video observations, participants were able to analyze their beliefs, practices, and actions to determine ways to improve learning experiences for their students, thus affecting their perception of effectiveness. Table 8 displays data from the final reflection question. See Appendix N for detailed responses from participants.

**Table 8***Final Reflection*

Participant	Response
1	Helped me to be more observant and began paying more attention to collaboration.
2	I need to be more specific and show examples to deepen understanding.
3	By giving students time to reflect will allow them more time to process new information.
4	I have been able to reflect on how I present material and observe my teaching style and how students respond.
5	I have become more mindful and now give my students time to reflect as well.
6	I have noticed words that overuse, my facial expressions, and that I gravitate to certain students.
7	I have learned to be more mindful of students' background knowledge pertaining to their culture. I have also learned that technology is not always the best strategy to use.
8	I need to improve on directions and descriptions. I also need to use better questions to bring out higher order thinking.
9	I need to chunk more lessons to reduce student frustration and fatigue.
10	I need to slow down, introduce new topics effectively, and include more spiral reviews.
11	This has helped me become more intentional with the design of my instructions.
12	This has allowed me to see things I did not notice in real time. I can see places for improvement.
13	I need to stop talking so much and allow students to talk more. I need to increase my wait time so I can allow students to think for themselves.
14	By pre-planning, reflecting, and observing students' reactions, I am more mindful of doing what is best for my students.
15	It has caused me to be more aware of my teaching habits. It is very easy to notice things I need to correct.
16	I need to explain directions more.
17	I need to do more differentiation and give extra time to pull small groups.
18	Looking back on my lesson helps me see if I could have done something differently
19	It helped me to see the reactions of my students to the lesson and my instruction. It helped me see what strategies I need to keep or change.

## Summary

Analysis of data collected through this research study offered insight into what ways and to what extent reflecting on classroom instructional recordings affects teacher perception of effectiveness. Goe et al. (2008) concluded in their study that effective teachers develop high expectations, utilize a variety of resources for instructional plans, collaborate with peers, and develop instructional practices that will lead to successful student experiences. Through both the quantitative data from the pre- and post-survey using the adaptation of Larrivee's (2008) Tool for Assessing Development as a Reflective Practitioner self-assessment survey and qualitative data from the pre- and post-open responses to reflections on instructional recordings and the final reflection question, I have the following conclusions:

- Participants became more aware of the actions of their students.
- Participants became more aware and mindful of their actions and how they affect their students.
- Participants identified ways to improve instructional experiences for their students.

These conclusions support the relationship between reflective practice and teacher effectiveness in that participants became more observant of their students' needs and how their actions and instructional practices affect student learning, and by recognizing new strategies to improve learning experiences.

## Chapter 5: Discussion

### Discussion

Reflective practice provides teachers with opportunities to identify areas of strength as well as areas that require improvements to enhance the learning experiences of their students (Connelly et al., 2020). According to Ko et al. (2013), effective teachers refer to those who

- exhibit an exceptional comprehension of their curriculum
- design learning experiences that are organized and focused
- use questioning techniques that are engaging and challenging
- develop and implement competent means of assessing student understanding

Effective teachers thoroughly understand their content, display strong class management practices, and provide exceptional learning opportunities for their students (Farrell, 2015). The purpose of this study was to understand the relationship between reflective practice and teacher perception of effectiveness. By incorporating reflective practice, teachers are able to identify the needs of students and can be open to making improvements to their instruction with the goal of increasing effectiveness (Connelly et al., 2020). Habib (2017) noted that reflective practice can be used to evaluate one's pedagogy to elevate one's effectiveness. The study focused on the following research questions:

1. In what ways does reflecting on classroom instructional recordings affect teacher perception of effectiveness?
2. To what extent does reflecting on classroom instructional recordings affect teacher perception of effectiveness?

This study was classified as a new phenomenon study since participating teachers have no prior experience using classroom instructional recordings to participate in reflective practice. Justification for using classroom instructional videos is a result of research conducted by Tripp and Rich (2012). They stated that by observing video-recorded lessons, teachers will be able to

- recognize the connection between their beliefs and their instructional practices
- achieve a deeper understanding and develop a voice pertaining to their assumptions about teaching and student learning
- identify occurrences during the lesson that they did not realize while they were teaching the lesson
- ascertain what parts of their lesson were effective and what needs to improve

This research study involved 19 teachers from the same school serving students in Grades 6-8 who participated voluntarily. It used a mixed methods design that was conducted in three stages.

- Stage 1: Consisted of participating teachers completing an adaptation of Larrivee's (2008) Tool for Assessing Development as a Reflective Practitioner self-assessment survey as a pre-assessment to determine their understanding and use of reflective practice. The survey used a Likert scale to calculate a score.
- Stage 2: Required participating teachers to video one lesson per week for a total of 6 weeks and respond to the following pre- and post-reflection questions for each video:
  - Pre-video reflection questions:

- What do you anticipate as the strengths of this lesson?
- How do you anticipate students will react to this lesson?
- Post-video reflection questions:
  - What do you think were the strengths of the lesson?
  - How did students react to this lesson?
  - What would you do differently if you taught the lesson again and how will this affect future lessons?
- Stage 3: Required participating teachers to complete the adapted version of Larrivee's (2008) Tool for Assessing Development as a Reflective Practitioner self-assessment as a post-survey. The pre- and post-survey results were compared to determine if there was a change in perception and use of reflective practice. Participating teachers also completed the following final reflection question:
  - How has participating in the video reflections affected your effectiveness as a teacher?

Mixed methods through a convergent design were used in this study because it was confined to 6 weeks to collect data using both qualitative and quantitative responses from participants. Incorporating this design promotes the correlation of the viewpoints of the participants through open-response questions compared to the pre- and post-survey scores (Wisdom & Creswell, 2013). This type of data collection provided a more extensive understanding of the relationship between reflective practice and teacher perception of effectiveness. According to research conducted by Tashakkori and Creswell (2007), using a mixed methods design allows the researcher to use qualitative and



quantitative means to collect and analyze data to make inferences in a study. This chapter discusses the findings of the study as defined in Chapter 4, how it supports each research question, the limitations and delimitations of the study, and recommendations for further research.

### **Summary of Pre- and Post-Survey Results**

Participating teachers completed the adapted version of Larrivee's (2008) Tool for Assessing Development as a Reflective Practitioner as a pre- and post-survey. This survey used a Likert scale to score participants' use and understanding of reflective practice. The survey asked participants to respond by selecting frequently (4 points), sometimes (3 points), infrequently (2 points), and never (1 point). Survey questions were divided into four category levels: pre-reflection, surface reflection, pedagogical reflection, and critical reflection. Pre- and post-survey scores were compared to determine if there was a change in perception and use of reflective practice. The average score for the pre-survey was 167.42, and the average score for the post-survey was 177.73 with an average difference of 10.32 points. Seven participants had a score difference of 10 or more points.

### **Research Question 1 Findings: In What Ways Does Reflecting on Classroom**

#### **Instructional Recordings Affect Teacher Perception of Effectiveness?**

The first research question was designed to identify the relationship between the use of reflective practice and how participants viewed their effectiveness as a teacher. During Stage 2 of this study, participants used their classroom instructional videos to reflect on the lesson they taught, their instructional practices, and how students responded to the lesson. Mosley Wetzel et al. (2017) justified using classroom instructional videos

by stating the following:

- Videos show exact details of the lesson.
- Videos allow the teachers to identify parts of the lesson that may have gone unnoticed.
- Videos exhibits moments of frustration for the teacher and students.
- Videos help to recognize the connection between the actions of the teacher and student learning.

Data from pre- and post-questions for Videos 1-6 provided evidence to support Research Question 1. Participants answered two pre-reflection questions and three post-reflection questions for each video. Responses were compared to determine if there was a difference between what participants thought would happen in the lesson and what they actually observed through the video observations. Analysis of Pre- and Post-Question 1 of the classroom instructional videos revealed three main themes as the strengths of the lessons:

- student engagement/student interest
- student understanding/use of prior knowledge
- teacher instruction/materials

Analysis of Pre- and Post-Question 2 of the classroom instructional videos revealed two main themes as to how students reacted to the lessons:

- student engagement/student interest
- student confusion/struggle to understand

Analysis of responses to Post-Question 3 concentrated on changing teacher instruction.

Participants responded to this question with what “I would” or “I should” do to improve

the lesson. For this question, two themes were revealed:

- change in instructional practices
- change nothing

The post-questions required participants to watch their videos and then respond to the questions. By doing this, participants were able to see their instruction and how students reacted rather than using memory. This type of self-reflection allows teachers to better analyze their instruction and make needed adjustments to improve their effectiveness (Hollingsworth & Clarke, 2017). The use of classroom instructional recordings as a reflective tool helps teachers to gather evidence about their current instructional practices and how students react to their lessons (Mosley Wetzel et al., 2017). When answering Post-Question 1 for Video 1, Participant 1 stated that students were able to do more than they thought in the pre-question response. Participant 5 responded to Post-Question 2 for Video 2 by saying that some students needed to be guided through the assignment. Also, for Post-Question 2 on Video 2, Participant 12 stated that there was total confusion and students did not understand the lesson. This participant realized that their students needed additional instructions and clarification during this lesson. When participating in reflective practice, teachers can observe how their instructional practices affect students and identify ways to better meet the needs of their students (Connelly et al., 2020).

Post-Question 3 addressed what participants would do differently if they taught the lesson again. Participant 10 responded to Post-Question 3 of Video 1 by stating that they needed to provide more information at the beginning of the lesson to help students have a better understanding of the lesson. Participant 12 responded to Post-Question 3 of

Video 2 by stating that the lesson was not effective and that they need to change the order in which they taught the topic. This type of reflection produces teachers who analyze their instructional practices from the perspective of their students, research new methods of instruction, and make the necessary improvements that will positively affect student learning (Maksimović & Osmanović, 2019). Participant 17 noted that they would take more time to model an extended response and focus on ways to help students make connections to the text. Reflective practice using video observations is a way for teachers to increase their effectiveness by evaluating their instruction and determine how to improve future learning experiences for their students (Stuhlman et al., 2017). Responses to Post-Question 3 focused on instructional changes the participant would make that would provide more productive learning opportunities for their students.

**Research Question 2 Findings: To What Extent Does Reflecting on Classroom Instructional Recordings Affect Teacher Perception of Effectiveness?**

The final reflection question asked participants to explain how participating in the 6-week video reflection study has affected their effectiveness as a teacher. Responses to this question support Research Question 2 by providing evidence as to how this reflective process has affected their instructional practices. According to Connelly et al. (2020), the main goal of reflective practice is to concentrate on promoting self-improvement with instructional practices, thus providing more beneficial learning experiences for students. Participant 5 concluded that this process has helped them to reflect during and after each lesson and has led to providing their students with time to reflect as well.

McGregor and Cartwright (2011) ascertained through their research that the use of reflective practice enables teachers to be more likely to identify key events that occur

during a lesson, analyze those events, and integrate new strategies to avoid repeating less successful past instructional practices. Participant 6 added that it was nerve-racking to watch themselves teach, but being able to reflect pointed out things that needed to be changed. Benade (2015) noted that reflection is difficult and unsettling but will lead to a change in practice. Participant 12 emphasized that the process has helped them to see aspects of their instructional practices that went unnoticed in real time, which has led to identifying areas to improve. Being able to watch a video of one's lessons provides factual details that are not noticed when relying on the memory of the lesson (Mathew et al., 2017). Participant 13 stated that this process allowed them to see themselves through the eyes of their students and recognize that their instructional practices need to be more student-centered. Balls et al. (2011) concluded that the most effective method of professional development is reflection that starts with a genuine analysis of one's actions resulting in a dedication to continuous improvement. Participant 14 emphasized that the process of pre-planning a lesson, watching the classroom instructional recordings, and reflecting has assisted them in being more mindful of doing what is best for students. Farrell (2015) stated that benefits from reflective practice include

- the prevention of hasty and mediocre practices
- boosting teacher confidence
- making decisions based on the analysis of data
- questioning of beliefs and assumptions
- effectively identifying areas that need improvement
- increased professionalism
- helping both experienced and new teachers

The analysis of data from the final reflection question brought to light that participants were more mindful, intentional, and focused on improving their instructional practices. The use of reflection gives teachers the time to evaluate their beliefs, how their beliefs affect their instruction, the extent it affects student achievement, and what necessary actions need to be incorporated to improve future learning opportunities (Gupta, 2019; Shoffner, 2008). Responses to this question provided supporting evidence for Research Question 2 by including the positive changes participants made through participating in reflective practice.

### **Summary of Findings**

After analyzing the data collected throughout this study, I concluded that reflective practice is an integral part of teacher effectiveness. The result of this study parallels a study conducted by Motallebzadeh et al. (2018) in that their findings suggested the positive correlation between reflective practice and increased teacher perception of effectiveness leading to improved learning experiences for their students. Qualitative data collected from participants' responses to the pre- and post-video reflection questions and the final reflection question indicated that by viewing and reflecting on classroom instructional recordings, teachers were able to identify areas that need to be changed, thus improving learning experiences for students. This is supported by research conducted by Zafar (2017) which stated that when teachers participate in reflective practice, they are more likely to challenge their beliefs and current practices, base changes to instruction on the needs of their students, challenge their comfort level, and make the needed improvements to their instructional practices.

In the post-video reflection Question 3, participants acknowledged changes to

their lessons that will be more beneficial to their students. Some of the changes participants stated they would make were

- break the lesson into smaller sections to reduce student frustration
- take more time to model examples
- present the content with clearer explanations
- make the lesson more rigorous
- front load information prior to the lesson
- change how students are grouped or add more cooperative grouping activities
- add a reflective conversation
- provide more clarifications about the lesson and expectations
- be more structured to reduce wasted time
- give more complex examples

The incorporation of analytical reflection enables teachers to enhance their comprehension of the relationship between their practices and student achievement, thus resulting in more insightful decisions on instructional planning (Farrell & Ives, 2014). Participants used their classroom instructional recordings to identify aspects of their instruction that needed adjustment to better meet the needs of their students.

Responses to the final reflection question provided supporting evidence of the positive correlation between participating in reflective practice and teacher perception of effectiveness. Participants were asked how participating in this reflective practice study has affected their effectiveness as a teacher. A summary of responses to this question included

- It has helped me be more observant.

- It has allowed me to see areas that need adjustments and given me the opportunity to make changes to my instruction.
- I now reflect during and after each lesson to determine if I need to make changes to my next lesson.
- It has made me more mindful of my students' needs.
- I was able to see that I need to improve on directions and descriptions.
- I need to slow down, introduce topics effectively, and add more spiral reviews.
- It has helped me be more intentional with the design of my instruction.

A study conducted by Connelly et al. (2020) found that using reflective practice helps teachers to engage in the cycle of identifying areas that need improvement, make those changes, determine if the new instructional practices were beneficial, and continually revise practices that lead to productive learning opportunities for students. Participants were able to use the classroom instructional video reflections as a tool to drive change in their instruction, thus increasing their perception of effectiveness and improving the learning environment for their students.

Analysis of the data collected during this study supports using reflective practice as a means to help increase teacher perception of effectiveness. Participants provided specific examples of what they observed through the classroom instructional recordings compared to what they thought about the strengths of the lesson, how students reacted to the lesson, and what changes they would make if teaching the lesson again. Mathew et al. (2017) concluded in their research that using video-recorded lessons as a reflective practice opportunity gave teachers a chance to see the exact details and events of their



lessons. Using this reflective tool allowed participants to see how their instructional practices affect their students' abilities to understand the curriculum and successfully complete the lesson.

### **Limitations and Delimitations of the Study**

Limitations of this study were those restricted by the design of the research.

- Participation in this study was voluntary and conducted with teachers at the same school.
- The data were collected from 19 volunteer participants out of a total sample size of 48 teachers.
- At first, teachers were reluctant to volunteer to participate in the study.
- This study used data collected during a 6-week period in three different grade levels and across all subject areas.
- Having a short collection time may have produced limited results. Due to my presence and employment at the research site, bias may have occurred.
- Participants may not have answered the pre- and post-survey questions truthfully to appear to incorporate reflective practice more often than they actually did.
- During the collection time, many participants and students were absent due to various illnesses such as COVID-19 and the flu, which may have put additional pressure on participants to complete the study.
- Participants were instructed that they could use their personal cell phones or school equipment to video their lessons. Using either type of video equipment may have been difficult for those with limited technology experience.

- One participant answered the pre- and post-survey the exact same way. A possible explanation for this could be that this participant made a copy of their pre-survey response prior to returning it to me and then answered the post-survey the same way.
- Participants may have responded to the pre-survey in a way that made them appear to already participate in reflective practice.
- After participating in the video reflections, teachers may have been more critical of their perception and use of reflective practice in the post-survey as compared to the pre-survey.

Delimitations of this study were based on the design and site of the research.

- Teachers were asked to volunteer to participate in the study to ensure they did not feel pressured to be a part of the data collection.
- Classroom instructional videos were viewed exclusively by the teacher who recorded them, thus assisting the authenticity of their instructional practices.
- My presence and employment at the research site made it convenient for participants to submit their responses to the pre- and post-survey, weekly pre- and post-reflection questions, and the final reflection question.
- Participants were able to use their personal cell phones or the school video equipment to record their weekly lessons. Doing this made it easier for participants to record their classroom instructional lessons.

### **Recommendations for Further Research**

My first recommendation is that this study needed to be longer than 6 weeks and should have included all teachers. For ethical practices, this study asked for volunteers to

participate, but I suggest that all teachers be involved in the reflective practice process. I had a small sample size of participants to volunteer to participate in this study, which limited the amount of data I was able to collect. Using classroom instructional recordings as reflective practice should be a yearlong process. Having a longer collection date and including all teachers would have provided more data to analyze therefore providing me with a more accurate representation of the relationship between reflective practice and teacher perception of effectiveness.

Since participants in this study did not have prior experience with reflective practice using classroom instructional videos, my second recommendation would be to provide participants with professional development on reflective practice using classroom instructional videos. Due to their limited prior knowledge of reflective practice, teachers may not have truthfully responded to the reflection questions or the pre- and post-survey questions.

My third recommendation pertains to the pre- and post-survey using the adapted version of Larrivee's (2008) Tool for Assessing Development as a Reflective Practitioner. Prior to administering the pre-survey, it is important to emphasize that teachers need to be honest in their responses and not inflate their scores so as to inaccurately represent their use and familiarity of reflective practice. After analyzing the data from the pre- and post-survey, I surmised that participants may not have answered the survey questions that accurately represented their understanding and use of reflective practice. Larrivee (2008) concluded through her research that by participating in reflective practice, one can recognize challenging and uncomfortable events that need to be addressed so self-realization can occur. Teachers need to be informed that it is

acceptable to be a novice in the use and understanding of reflective practice as they respond to the pre-survey. They also need to be aware that this process may be difficult but has the potential to lead to more effective instructional practices. Research from Stronge (2018) supported this because he concluded that reflective practice leads to increased effectiveness which in turn results in higher student achievement. I also suggest that the number of questions on the survey be reduced. Several participants told me as they submitted their survey results that it had too many questions, took a long time to complete, and was somewhat confusing. Due to the ethical precautions used in the study, I was unable to clarify any confusion with questions on the survey. If participants had been able to ask me questions, their responses to the survey may have been different. For future use of this study, I suggest teachers be able to ask questions for clarification.

As a fourth suggestion, I would add a reflective journal element to this process. Using journals provides teachers with an opportunity to record their thoughts about a particular situation and relate those thoughts to ways to improve their instructional practices. I recommend incorporating journaling using a split-page design in which they will put the responses to the pre-video observation questions on the left side of the page and the responses to the post-video observation questions on the right side of the page. By doing this, teachers will be able to compare what they thought would happen to what actually happened during the lesson. The use of reflective journals is supported by research conducted by Cirocki and Farrell (2017) in which they stated that writing allows teachers to associate their instructional practices with student learning by identifying the successful and less successful parts of the learning experience. Teachers will also be able to use the reflective journaling to see the progression of their effectiveness through

participating in this reflective process. See Table 9 for an example of a split-page journal design.

**Table 9**

*Weekly Reflective Journal*

Pre-Question 1 response: What do you anticipate as the strengths of this lesson?	Post-Question 1 response: What do you think were the strengths of this lesson?
Pre-Question 2 response: How do you anticipate students will react to this lesson?	Post-Question 2 response: How did students react to this lesson?
	Post-Question 3 response: What would you do differently if you taught this lesson again and how will it affect future lessons?

**Implications for Practice**

After analyzing the data collected for this research study, I concluded that reflective practice needs to be an integral part of teacher professional development. A study conducted by Alammari (2018) reiterated that reflective practice

- motivates teachers to analyze their instruction identifying areas of strength and weakness;
- encourages teachers to incorporate new instructional strategies; and
- results in being more aware of the needs of their students when they plan, execute, and cultivate learning experiences.

It is my assumption that responses to the reflection question and the pre- and post-survey would have been more detailed and valid if participants had prior knowledge of this type of reflective practice. The focus of the professional development on reflective practice should be:

- Why reflective practice is important to increased teacher effectiveness.
- What it means to be a reflective practitioner.
- This will be a self-reflective process and will not be used as an evaluation tool for administrators.

It is important for teachers to know that this is a self-reflective process and will not be used to evaluate their teacher performance. When presenting professional development on reflective practice to teachers, administrators should follow the andragogical model of the adult learning theory. As indicated in a study conducted by Knowles et al. (2005), the following components are integral parts of this model:

- Participating adults need to see the connection between the learning experience and a personal or professional experience.
- Adults need to have a sense of autonomy in determining what they need to learn.
- Adults need to be able to connect the learning opportunity with positive effects on their personal or professional lives.
- The focus needs to be on intrinsic motivations.

It is essential to implement professional development learning experiences that connect the needs of the learner with the needs of the organization so that needed changes will be made (Knowles et al., 2005). According to Aguilar (2013), professional development should provide opportunities for teachers to achieve a deeper understanding of what they are teaching, lead to increased effectiveness, develop new instructional strategies, and improve student achievement. This type of professional development will prepare teachers for participating in the reflective practice using classroom instructional

recordings by giving them a deeper understanding of the reflective practice process and how it relates to teacher effectiveness.

It is my suggestion that teachers need to have opportunities to discuss their reflections on their videos with their peers and/or a curriculum coach. This would not be used as an evaluation of teacher performance, but rather a time to discuss the process with others. Due to the restraints of this study, participants were unable to discuss aspects of this process with me and were not given time to discuss them with each other. This could have resulted in less accurate and authentic data due to confusion or lack of understanding. Drago-Severson (2008) emphasized in her research that an essential component of teacher effectiveness is being able to share thoughts, practices, beliefs, and assumptions through collaboration. Weekly team or grade-level meetings would provide teachers with collaboration time to discuss their observations, reflections, and future changes to their instructional practices. Peer collaboration provides a more comfortable and secure setting for teachers to learn from each other's reflective experiences because everyone is on the same level (Mathew et al., 2017). By adding time for collaboration, teachers will have the opportunity to share thoughts, ideas, and feelings on how participating in reflective practice using classroom instructional videos has affected their perception of effectiveness.

### **Recommendations for Systematic Implementation**

As a result of the findings of this study, I recommend implementing reflective practice using classroom instructional recordings in schools where the focus is on teacher effectiveness. According to Varlas (2009) and Goldhaber (2015), teacher effectiveness is the most influential factor that affects student achievement and the learning environment.

As a result of this, all schools should prioritize practices that will increase teacher effectiveness. I recommend beginning the school year with professional development on reflective practice and the importance of increasing teacher effectiveness. Woodland (2019) suggested that professional development is better received by teachers when they can identify the positive correlation between what is being learned and the effects on their instructional practices. During the professional development session, teachers should be presented with the integral components of reflective practice. Connelly et al. (2020) associated five themes: planning, curriculum management, adaptation, relationship building, and professional growth. Teachers need to be informed that reflective practice should be used to steer instructional plans by determining what is essential for learning through the analysis of students' reactions to the learning experience to determine what changes need to be made that will strengthen student learning (Connelly et al., 2020). They need to share ideas with other teachers pertaining to identifying student needs, employ new strategies to ensure their success, and be more aware of areas in need of improvement on a professional level (Connelly et al., 2020).

This professional development session should provide teachers with instructions on the essential components of using classroom instructional recordings as a reflective tool such as to video one lesson per week, answer two pre-reflection questions, watch their video, and then answer the three post-video observation questions. Information should be provided about the implementation of using video observations such as using their personal video equipment such as a cell phone or the equipment provided by the school to record one lesson per week. The teacher should be informed that their videos will not be viewed by anyone else or used as an evaluation method by administration and



that they will answer pre-video observation questions, watch their video, and then answer video observation questions. A best practice to suggest would be to use a split-page reflective journal to respond to the pre- and post-reflection questions. During this time, teachers should also be instructed to meet with their grade-level team once a month to discuss their experiences of participating in the reflective practice process. According to Drago-Severson and Blum-DeStefano (2018a), the most influential factor in school reform through increased teacher effectiveness is giving teachers adult learning experiences where they can share their thoughts, practices, beliefs, and assumptions. Providing teachers time to discuss this process with their peers will allow them a chance to learn from each other. I also recommend including the following mid-year reflection question as used in the original study:

- What have you noticed about your instructional practices and student achievement through participating in weekly reflections on classroom instructional recordings?

Teachers should continue doing weekly video reflections and monthly team discussions throughout the duration of the school year. Prior to the last week of school, teachers should respond to the following final reflection question:

- How has participating in the video reflections affected your effectiveness as a teacher?

Calandra and Rich (2014) concluded from their study that video observations provided teachers with professional development in which they became better equipped to identify inconsistencies between their pedagogy and practices that result in the execution of more beneficial instructional practices. I recommend giving teachers the

opportunity to meet as a whole group to discuss lessons learned, ways to improve the process, and how to move forward with reflective practice in the upcoming school year. It is important that the focal point of this meeting be about teacher perception of effectiveness as a result of participating in reflective practice using video observations.

### **Conclusion**

The purpose of the study was to investigate the relationship between reflective practice using classroom instructional videos and teacher perception of effectiveness. Being a reflective practitioner provides opportunities to learn from experiences through the obtainment of perspicacious information about their beliefs and practices (Finlay, 2008). The focus on reflective practice was supported by a study conducted by Alammari (2018) that stated reflective practice

- motivates teachers to examine occurrences in their instruction and identify areas of strengths and weaknesses
- helps teachers to integrate more effective instructional practices
- results in teachers being more attuned to the needs of their students to develop, implement, and improve learning experiences

This study was designed to answer the following research questions:

1. In what ways does reflecting on classroom instructional recordings affect teacher perception of effectiveness?
2. To what extent does reflection on classroom instructional recordings affect teacher perception of effectiveness?

After a thorough analysis of collected data from the pre- and post-surveys, responses to weekly pre- and post-video observation questions, and the final reflection question, the

following conclusions were made:

- Participants became more aware of the actions of their students.
- Participants became more aware and mindful of their actions and how they affect their students.
- Participants identified ways to improve instructional experiences for their students.

The findings provided supporting evidence for the research questions presented in this study. This study was prompted by a desire to understand the relationship between reflective practice and effectiveness. Research conducted by Stronge (2018) supported the findings of this study by stating that effective teachers are able to visualize and implement instructional goals using their educational training and knowledge of their curriculum to increase student achievement. Having personally participated in using classroom instructional recordings to reflect on my pedagogy and instructional practices, I wanted to research the relationship between teachers' reactions and the process of reflection. Through this study, participants were able to use reflective practice to identify aspects of their instructional practices that had gone unnoticed prior to viewing their videos. They also ascertained ways to improve their instructional practices for future lessons. This chapter included a summary of collected data, findings that support each research question, and suggestions for further research and implementation of reflective practice using classroom instructional videos.

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## **Appendix A**

### **Email for Volunteer Participation**

Dear Colleagues,

I would like to invite you to volunteer to participate in a dissertation study on reflective practice and teacher perception of effectiveness. This will be a self-reflective process in which if you volunteer, you will be asked to do the following:

- Complete a pre-survey on reflective practice
- Video one lesson each week for a total of six weeks
- Watch your video and respond to the reflection question
  - What would you do differently if you taught this lesson again and how will this affect future lessons?
- Submit your weekly video reflection response to me either by email or on paper
- Respond to the final reflection question after submitting the six video reflections
  - How has participating in the video reflections affected your perception of effectiveness as a teacher?
- Complete the post-survey on reflective practice

To ensure confidentiality, volunteers will be assigned a number for data collection. You will be the only person to watch your video-recorded lessons and reflection submissions will be kept on a password protected external hard drive. If you would like to participate in this study, please respond to this email by stating “Yes, I would like to volunteer to participate in this study.” Thank you for your time and consideration.

Angela Greer

## **Appendix B**

### **Permission to Use Larrivee's Tool for Assessing Development as a Reflective Practitioner Survey**



## Statement of Permission to Use

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

I, Barbara Larrivee, hereby grant permission to use the *Survey of Reflective Practice: A Tool for Assessing Development as a Reflective Practitioner*, to:

Name: Angela Greer  
 Institution: Gardner-Webb University  
 Address: 110 South Main Street  
 Boiling Springs NC, 28017

Phone no.: XX

E-mail: [XX@csusb.edu](#)

This permission is granted for research purposes only. If changes are made to the Survey, the citation must say “adapted from.”

The above named also agrees to provide a written summary of findings including a by-item analysis. This report should be sent within 30 days of completion of the research via e-mail to [blarrive@csusb.edu](mailto:blarrive@csusb.edu).

Dr. Barbara Larrivee  
 Professor Emerita  
 California State University

I agree to these terms to use the Survey.

---

Survey User

Date

**Appendix C**  
**Adapted Pre-Assessment**

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

#### Pre-Survey Self Assessment

Practice Indicators <i>For each indicator, select the rating you think best represents your current practice. I am a teacher/teacher candidate who:</i>	Assessment Criteria			
LEVEL 1 : PRE-REFLECTION	Frequently	Sometimes	Infrequently	Never
Operates in survival mode, reacting automatically without consideration of alternative responses				
Enforces preset standards of operation without adapting or restructuring based on students' responses				
Does not support beliefs and assertions with evidence from experience, theory or research				
Is willing to take things for granted without questioning				
Is preoccupied with management, control and student compliance				
Fails to recognize the interdependence between teacher and student actions				
Views student and classroom circumstances as beyond the teacher's control				
Attributes ownership of problems to students or others				
Fails to consider differing needs of learners				
Sees oneself as a victim of circumstances				
Dismisses students' perspectives without due consideration				
Does not thoughtfully connect teaching actions with student learning or behavior				
Describes problems simplistically or unidimensionally				
Does not see beyond immediate demands of a teaching episode				
LEVEL 2 : SURFACE REFLECTION	Frequently	Sometimes	Infrequently	Never
Limits analysis of teaching practices to technical questions about teaching techniques				
Modifies teaching strategies without challenging underlying assumptions about teaching and learning				
Fails to connect specific methods to underlying theory				
Supports beliefs only with evidence from experience				
Provides limited accommodations for students' different learning styles				
Reacts to student responses differentially but fails to recognize patterns				
Adjusts teaching practices only to current situation without developing a long-term plan				
Implements solutions to problems that focus only on short-term results				
Makes adjustments based on past experience				
Questions the utility of specific teaching practices but not general policies or practices				
Provides some differentiated instruction to address students' individual differences				

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

Practice Indicators <i>For each indicator, select the rating you think best represents your current practice. I am a teacher/teacher candidate who:</i>	Assessment Criteria			
LEVEL 3 : PEDAGOGICAL REFLECTION	Frequently	Sometimes	Infrequently	Never
Analyzes relationship between teaching practices and student learning				
Strives to enhance learning for all students				
Seeks ways to connect new concepts to students' prior knowledge				
Has genuine curiosity about the effectiveness of teaching practices, leading to experimentation and risk-taking				
Engages in constructive criticism of one's own teaching				
Adjusts methods and strategies based on students' relative performance				
Analyzes the impact of task structures, such as cooperative learning groups, partner, peer or other groupings, on students' learning				
Searches for patterns, relationships and connections to deepen understanding				
Has commitment to continuous learning and improved practice				
Identifies alternative ways of representing ideas and concepts to students				
Recognizes the complexity of classroom dynamics				
Acknowledges what student brings to the learning process				
Considers students' perspectives in decision making				
Sees teaching practices as remaining open to further investigation				
LEVEL 4 : CRITICAL REFLECTION	Frequently	Sometimes	Infrequently	Never
Views practice within the broader sociological, cultural, historical, and political contexts				
Considers the ethical ramifications of classroom policies and practices				
Addresses issues of equity and social justice that arise in and outside of the classroom				
Challenges status quo norms and practices, especially with respect to power and control				
Observes self in the process of thinking				
Is aware of incongruence between beliefs and actions and takes action to rectify				
Acknowledges the social and political consequences of one's teaching				
Is an active inquirer, both critiquing current conclusions and generating new hypotheses				
Challenges assumptions about students and expectations for students				
Suspends judgments to consider all options				
Recognizes assumptions and premises underlying beliefs				
Calls commonly-held beliefs into question				
Acknowledges that teaching practices and policies can either contribute to, or hinder, the realization of a more just and humane society				
Encourages socially responsible actions in their students				

**Appendix D****Weekly Video Reflection Questions**

Weekly response to reflection question on videoed lesson

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

Pre-Video Reflection Questions:

1. What do you anticipate the strengths of this lesson?
2. How do you anticipate students will react to this lesson?

Post-Video Reflection Questions:

1. What do you think were the strengths of this lesson?
2. How did students react to the lesson?
3. What would you do differently if you taught this lesson again and how will this affect future lessons?

**Appendix E**  
**Adapted Post-Assessment**

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

## Post-Survey Self Assessment

Practice Indicators <i>For each indicator, select the rating you think best represents your current practice. I am a teacher/teacher candidate who:</i>	Assessment Criteria			
LEVEL 1 : PRE-REFLECTION	Frequently	Sometimes	Infrequently	Never
Operates in survival mode, reacting automatically without consideration of alternative responses				
Enforces preset standards of operation without adapting or restructuring based on students' responses				
Does not support beliefs and assertions with evidence from experience, theory or research				
Is willing to take things for granted without questioning				
Is preoccupied with management, control and student compliance				
Fails to recognize the interdependence between teacher and student actions				
Views student and classroom circumstances as beyond the teacher's control				
Attributes ownership of problems to students or others				
Fails to consider differing needs of learners				
Sees oneself as a victim of circumstances				
Dismisses students' perspectives without due consideration				
Does not thoughtfully connect teaching actions with student learning or behavior				
Describes problems simplistically or unidimensionally				
Does not see beyond immediate demands of a teaching episode				
LEVEL 2 : SURFACE REFLECTION	Frequently	Sometimes	Infrequently	Never
Limits analysis of teaching practices to technical questions about teaching techniques				
Modifies teaching strategies without challenging underlying assumptions about teaching and learning				
Fails to connect specific methods to underlying theory				
Supports beliefs only with evidence from experience				
Provides limited accommodations for students' different learning styles				
Reacts to student responses differentially but fails to recognize patterns				
Adjusts teaching practices only to current situation without developing a long-term plan				
Implements solutions to problems that focus only on short-term results				
Makes adjustments based on past experience				
Questions the utility of specific teaching practices but not general policies or practices				
Provides some differentiated instruction to address students' individual differences				

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

Practice Indicators <i>For each indicator, select the rating you think best represents your current practice. I am a teacher/teacher candidate who:</i>	Assessment Criteria			
LEVEL 3 : PEDAGOGICAL REFLECTION	Frequently	Sometimes	Infrequently	Never
Analyzes relationship between teaching practices and student learning				
Strives to enhance learning for all students				
Seeks ways to connect new concepts to students' prior knowledge				
Has genuine curiosity about the effectiveness of teaching practices, leading to experimentation and risk-taking				
Engages in constructive criticism of one's own teaching				
Adjusts methods and strategies based on students' relative performance				
Analyzes the impact of task structures, such as cooperative learning groups, partner, peer or other groupings, on students' learning				
Searches for patterns, relationships and connections to deepen understanding				
Has commitment to continuous learning and improved practice				
Identifies alternative ways of representing ideas and concepts to students				
Recognizes the complexity of classroom dynamics				
Acknowledges what student brings to the learning process				
Considers students' perspectives in decision making				
Sees teaching practices as remaining open to further investigation				
LEVEL 4 : CRITICAL REFLECTION	Frequently	Sometimes	Infrequently	Never
Views practice within the broader sociological, cultural, historical, and political contexts				
Considers the ethical ramifications of classroom policies and practices				
Addresses issues of equity and social justice that arise in and outside of the classroom				
Challenges status quo norms and practices, especially with respect to power and control				
Observes self in the process of thinking				
Is aware of incongruence between beliefs and actions and takes action to rectify				
Acknowledges the social and political consequences of one's teaching				
Is an active inquirer, both critiquing current conclusions and generating new hypotheses				
Challenges assumptions about students and expectations for students				
Suspends judgments to consider all options				
Recognizes assumptions and premises underlying beliefs				
Calls commonly-held beliefs into question				
Acknowledges that teaching practices and policies can either contribute to, or hinder, the realization of a more just and humane society				
Encourages socially responsible actions in their students				

**Appendix F**  
**Final Reflection Response**



Final reflection response:

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

How has participating in the video reflections affected your perception of effectiveness as a teacher?

**Appendix G**  
**Pre- and Post-Survey Analysis**

Adapted Survey of Reflective Practice: A Tool for Assessing Development as a Reflective Practitioner				
Pre-Survey Self Assessment				
Practice Indicators	Assessment Criteria			
<i>For each indicator, select the rating you think best represents your current practice. I am a teacher/teacher candidate who:</i>				
LEVEL 1 : PRE-REFLECTION	Frequently	Sometimes	Infrequently	Never
Operates in survival mode, reacting automatically without consideration of alternative responses		5	10	4
Enforces preset standards of operation without adapting or restructuring based on students' responses	2	3	13	1
Does not support beliefs and assertions with evidence from experience, theory or research			11	8
Is willing to take things for granted without questioning	1	5	7	6
Is preoccupied with management, control and student compliance	2	7	8	2
Fails to recognize the interdependence between teacher and student actions		3	12	4
Views student and classroom circumstances as beyond the teacher's control		4	8	7
Attributes ownership of problems to students or others	1	7	7	3
Fails to consider differing needs of learners		1	10	8
Sees oneself as a victim of circumstances		2	8	9
Dismisses students' perspectives without due consideration		1	9	9
Does not thoughtfully connect teaching actions with student learning or behavior		2	10	7
Describes problems simplistically or unidimensionally		7	6	6
Does not see beyond immediate demands of a teaching episode		3	10	6
LEVEL 2 : SURFACE REFLECTION	Frequently	Sometimes	Infrequently	Never
Limits analysis of teaching practices to technical questions about teaching techniques		7	6	6
Modifies teaching strategies without challenging underlying assumptions about teaching and learning		9	8	2
Fails to connect specific methods to underlying theory	2.0	4	8	5
Supports beliefs only with evidence from experience	3.0	7	8	1
Provides limited accommodations for students' different learning styles	2.0	4	9	4
Reacts to student responses differentially but fails to recognize patterns		8	9	2
Adjusts teaching practices only to current situation without developing a long-term plan		5	10	4
Implements solutions to problems that focus only on short-term results	1.0	7	7	4
Makes adjustments based on past experience	17.0	1	1	
Questions the utility of specific teaching practices but not general policies or practices	1.0	11	6	1
Provides some differentiated instruction to address students' individual differences	14	4	1	
Practice Indicators	Assessment Criteria			
<i>For each indicator, select the rating you think best represents your current practice. I am a teacher/teacher candidate who:</i>				
LEVEL 3 : PEDAGOGICAL REFLECTION	Frequently	Sometimes	Infrequently	Never
Analyzes relationship between teaching practices and student learning	11	8		
Strives to enhance learning for all students	19			
Seeks ways to connect new concepts to students' prior knowledge	16	3		
Has genuine curiosity about the effectiveness of teaching practices, leading to experimentation and risk-taking	9	9	1	
Engages in constructive criticism of one's own teaching	9	7	3	
Adjusts methods and strategies based on students' relative performance	10	9		
Analyzes the impact of task structures, such as cooperative learning groups, partner, peer or other groupings, on students' learning	11	8		
Searches for patterns, relationships and connections to deepen understanding	14	3	2	
Has commitment to continuous learning and improved practice	14	5		
Identifies alternative ways of representing ideas and concepts to students	11	8		
Recognizes the complexity of classroom dynamics	14	3	2	
Acknowledges what student brings to the learning process	14	4	1	
Considers students' perspectives in decision making	10	7	1	
Sees teaching practices as remaining open to further investigation	11	7	1	
LEVEL 4 : CRITICAL REFLECTION	Frequently	Sometimes	Infrequently	Never
Views practice within the broader sociological, cultural, historical, and political contexts	8	8	3	
Considers the ethical ramifications of classroom policies and practices	13	4	2	
Addresses issues of equity and social justice that arise in and outside of the classroom	8	9	2	
Challenges status quo norms and practices, especially with respect to power and control	3	11	5	
Observes self in the process of thinking	5	13	1	
Is aware of incongruence between beliefs and actions and takes action to rectify	4	14	1	
Acknowledges the social and political consequences of one's teaching	8	9	1	1
Is an active inquirer, both critiquing current conclusions and generating new hypotheses	10	8	1	
Challenges assumptions about students and expectations for students	6	13		
Suspends judgments to consider all options	3	14	2	
Recognizes assumptions and premises underlying beliefs	3	15	1	
Calls commonly-held beliefs into question	1	12	6	
Acknowledges that teaching practices and policies can either contribute to, or hinder, the realization of a more just and humane society	11	6		1
Encourages socially responsible actions in their students	15	4		

Adapted Survey of Reflective Practice: A Tool for Assessing Development as a Reflective Practitioner				
Post-Survey Self Assessment				
<b>Practice Indicators</b> <i>For each indicator, select the rating you think best represents your current practice. I am a teacher/teacher candidate who:</i>	<b>Assessment Criteria</b>			
<b>LEVEL 1 : PRE-REFLECTION</b>	<b>Frequently</b>	<b>Sometimes</b>	<b>Infrequently</b>	<b>Never</b>
Operates in survival mode, reacting automatically without consideration of alternative responses		2	12	5
Enforces preset standards of operation without adapting or restructuring based on students' responses		7	10	2
Does not support beliefs and assertions with evidence from experience, theory or research			9	10
Is willing to take things for granted without questioning	1	3	9	6
Is preoccupied with management, control and student compliance		8	9	2
Fails to recognize the interdependence between teacher and student actions		2	12	5
Views student and classroom circumstances as beyond the teacher's control		1	9	9
Attributes ownership of problems to students or others	2	3	7	7
Fails to consider differing needs of learners		1	7	11
Sees oneself as a victim of circumstances		1	8	10
Dismisses students' perspectives without due consideration			10	9
Does not thoughtfully connect teaching actions with student learning or behavior			6	13
Describes problems simplistically or unidimensionally	1	4	13	
Does not see beyond immediate demands of a teaching episode		2	7	10
<b>LEVEL 2 : SURFACE REFLECTION</b>	<b>Frequently</b>	<b>Sometimes</b>	<b>Infrequently</b>	<b>Never</b>
Limits analysis of teaching practices to technical questions about teaching techniques		3	14	2
Modifies teaching strategies without challenging underlying assumptions about teaching and learning		7	11	1
Fails to connect specific methods to underlying theory		1	15	3
Supports beliefs only with evidence from experience	1.0	10	7	1
Provides limited accommodations for students' different learning styles		5	10	4
Reacts to student responses differentially but fails to recognize patterns		2	15	2
Adjusts teaching practices only to current situation without developing a long-term plan		1	8	9
Implements solutions to problems that focus only on short-term results		7	6	6
Makes adjustments based on past experience	12.0	6	1	
Questions the utility of specific teaching practices but not general policies or practices	1.0	8	9	1
Provides some differentiated instruction to address students' individual differences	14	2	2	1
Survey of Reflective Practice: A Tool for Assessing Development as a Reflective Practitioner				
<b>Practice Indicators</b> <i>For each indicator, select the rating you think best represents your current practice. I am a teacher/teacher candidate who:</i>	<b>Assessment Criteria</b>			
<b>LEVEL 3 : PEDAGOGICAL REFLECTION</b>	<b>Frequently</b>	<b>Sometimes</b>	<b>Infrequently</b>	<b>Never</b>
Analyzes relationship between teaching practices and student learning	14	5		
Strives to enhance learning for all students	19			
Seeks ways to connect new concepts to students' prior knowledge	17	2		
Has genuine curiosity about the effectiveness of teaching practices, leading to experimentation and risk-taking	14	5		
Engages in constructive criticism of one's own teaching	12	5	2	
Adjusts methods and strategies based on students' relative performance	14	5		
Analyzes the impact of task structures, such as cooperative learning groups, partner, peer or other groupings, on students' learning	11	8		
Searches for patterns, relationships and connections to deepen understanding	12	6		
Has commitment to continuous learning and improved practice	18	1		
Identifies alternative ways of representing ideas and concepts to students	14	4	1	
Recognizes the complexity of classroom dynamics	19			
Acknowledges what student brings to the learning process	17	2		
Considers students' perspectives in decision making	12	7		
Sees teaching practices as remaining open to further investigation	15	4		
<b>LEVEL 4 : CRITICAL REFLECTION</b>	<b>Frequently</b>	<b>Sometimes</b>	<b>Infrequently</b>	<b>Never</b>
Views practice within the broader sociological, cultural, historical, and political contexts	9	9	1	
Considers the ethical ramifications of classroom policies and practices	14	5		
Addresses issues of equity and social justice that arise in and outside of the classroom	10	7	2	
Challenges status quo norms and practices, especially with respect to power and control	3	13	3	
Observes self in the process of thinking	11	8		
Is aware of incongruence between beliefs and actions and takes action to rectify	8	10	1	
Acknowledges the social and political consequences of one's teaching	15	4		
Is an active inquirer, both critiquing current conclusions and generating new hypotheses	10	8	1	
Challenges assumptions about students and expectations for students	14	5		
Suspends judgments to consider all options	8	10	1	
Recognizes assumptions and premises underlying beliefs	6	12	1	
Calls commonly-held beliefs into question	6	10	3	
Acknowledges that teaching practices and policies can either contribute to, or hinder, the realization of a more just and humane society	12	7		
Encourages socially responsible actions in their students	15	4		

**Appendix H****Video 1 Data**

## Video 1 Data

### Pre-Question 1: Strengths of the lesson

1. Be able to build and create
2. Gain understanding of focused note taking
3. Conceptualize the scale of each layer of the atmosphere
4. My communication and the flow of the class to be the strength
5. Student engagement, text analysis, critical thinking, and small group collaboration
6. Interaction and student discussion
7. Identifying theme and modeling
8. Student enjoyment and writing
9. Interactive and interesting
10. Hands on activity and discussion
11. Teacher content knowledge
12. Understanding and interpreting graphs
13. Students' realization of the size of the atmosphere
14. Connecting past to present
15. I believe the lesson will be strong
16. Collaboration and presentation
17. focus on figurative language
18. use of prior knowledge
19. Understanding of theme

### Post-Question 1

1. Students were able to do more than I thought
2. Successfully complete the notes
3. Discussions because they had a difficult time conceptualizing the scale
4. My communication of the activity and student follow through
5. Student interest, text analysis, classroom atmosphere, student involvement
6. (Participant did not complete the post-questions)
7. Modeling and was able to identify theme
8. Students enjoyed it and were attentive
9. Student collaboration
10. Collaboration and student discussion
11. My ability to control an energetic group
12. Using graphs to help their understanding
13. Being able to keep students engaged
14. More students were able to make the connections
15. Lecture and student discussions
16. Creative presentations and collaboration
17. engagement and focus on figurative language
18. students used their prior knowledge
19. use of theme and participation

Pre-Question 2: anticipated student reaction:

1. All students will remain on task and excited
2. Students will struggle with the concept
3. Students will be surprised at the actual scale
4. Students will be excited and might get rowdy
5. Excited, competitive, and challenged
6. They will like it
7. Students will struggle to correctly identify the theme from text
8. Students may not like to write with a time limit, but will enjoy the lesson and pay attention
9. They will like the interaction and be able to grasp a basic understanding
10. Eagerness
11. Engaged and have lots of questions
12. Like the creativity of the assignment
13. Fully engaged and shocked
14. Some students will participate in the discussions while others will be quiet
15. Bored, but will participate
16. Will enjoy working together
17. Moving around the room, but on task
18. Positive reaction
19. Might feel confused in the beginning

Post-Question 2: anticipated student reaction

1. Enjoyed the activity and wanted to share with other groups
2. At first confused but understood by the end
3. Mind blown
4. Enjoyed the lesson and didn't want to stop
5. Serious and got frustrated at the activity
6. (left blank)
7. Some students needed to be guided through the assignment
8. Writing was strong but some were off topic. Overall they did they reacted positively
9. Since they were being rewarded throughout the lesson, they participated and seemed to enjoy it
10. Engaged
11. Engaged and understood the process
12. Total confusion! They didn't understand
13. Mostly excited to be out of the classroom
14. Many participated and made connections, more than I expected
15. A lack of participation, several were absent
16. Reacted well and engaged in public speaking
17. Nervous, but began to relax. Exit ticket showed 85% understood

- 18. Positive because of prior knowledge
- 19. All participated with a positive reaction

Question 3: what would you do differently?

- 1. Show a video of an example for students to follow
- 2. I would come up with a song or easy way for students to remember the 5 phases of note taking
- 3. Having students do the math part of the science lesson instead of me doing it for them
- 4. Divide students into more groups and being mindful of the time
- 5. Have students assigned to groups prior to class. Give them task cards on different color paper
- 6. Did not answer
- 7. I needed to spend more time earlier in the year establishing close reading skills and habits. Have them highlight text evidence
- 8. Be clearer about what I expected in their writing assignment
- 9. More structured to have less wasted time and to break up the reflection into smaller chunks
- 10. Provide more information as part of the introduction
- 11. Spend a little more time on the written parts of the notes
- 12. I would break this lesson up into multiple days. Putting it all together in one lesson blew some of their minds
- 13. I would do this activity on our field to give students more room and I would use students as distance markers to give a better visual
- 14. To get those less willing to participate more involved
- 15. Give students more time to explore. Do a video break down, give students better access to database website
- 16. I would assign groups instead of letting students choose their own group because some groups worked, and some didn't
- 17. I would make sure each station had a hint or a clue to help struggling learners
- 18. I would reduce the amount of information I told them
- 19. Given more complex examples



**Appendix I**  
**Video 2 Data**

Video 2:

Pre-Question 1: strengths of lesson

1. Students' ability to build, code, and be creative
2. Will like expressing their thoughts and feelings
3. Research experience and desire to be correct
4. Modeling and communication
5. Engagement, participation, and student led activity
6. Engagement in the hands-on activity
7. Good examples, guided notes, and high interest
8. Use of prior knowledge, and complete task with fewer directions
9. Collaborative discussion and students comparing visual interpretations
10. Using different activities to present new topics
11. Use of prior knowledge and scaffolding
12. High interest and engagement
13. Student understanding and voice
14. Ability to read maps and articles
15. New method to present materials
16. real world relevance and life skills
17. vocabulary
18. use of prior knowledge
19. use of prior knowledge and problem-solving skills

Post-Question 1: strengths of the lesson

1. student creativity, communication, and vocabulary
2. participation and enjoyment of the activity
3. application of research and engagement
4. modeling and communication
5. engagement, excitement, and use of critical thinking
6. engagement and note taking skills
7. students were highly engaged in the lesson
8. most written responses were good and students knew what to do
9. collaboration and discussion using various perspectives
10. interest and engagement in the activities
11. my consistency
12. student interest
13. student use of voice
14. use of maps and participation
15. engagement and understanding
16. relevance to real life experiences
17. student interest and participation
18. applying prior knowledge

19. use of the new problem-solving skills

Pre-Question 2: anticipated student reactions

1. engaged, excited, and happy
2. confused at first, but will enjoy it
3. will be passionate about their decision and explanation
4. eager to participate and excited
5. hesitant at first, will need support, then have a positive reaction
6. involved and responsive to the lab
7. high engagement and enjoyment
8. confused at first, mixed reactions
9. frustrated, disinterested, but will make connections with prior learning
10. engaged and enjoyment
11. engaged and asking lots of questions. Will have an ah-ha moment
12. involved and give personal experiences
13. actively engaged
14. enjoy working with their peers
15. bored and struggle to engage
16. some students will enjoy it but others will complain about having to use math
17. enjoyment and engagement
18. struggle at first
19. confused and frustrated

Post-Question 2: student reactions

1. engaged and eager to participate
2. loved the group discussion
3. little loud, but engagement was high, and they understood the information
4. excited and ready to participate
5. excited, leaders emerged, and they want to do more activities like this
6. on task and engaged
7. highly engaged
8. positive and involved
9. excited to make connections/discoveries, enjoyment
10. were interested
11. engaged but talkative. Retreat of confidence in problem solving
12. engaged and accessed prior knowledge
13. gave strong arguments
14. most understood the connections
15. bored but participated
16. surprised and interested in how this related to real life experiences
17. enjoyed and showed their understanding of the concept
18. worked hard and were positive

19. helped each other and participated

Question 3: what would you do differently

1. give fewer directions
2. give the article prior to the activity so students would have more time to discuss
3. add a reflective conversation with students
4. add one more team to reduce down time
5. add a game and create a question/comment stem bank
6. add a reflection about how they could apply what they learned to a real-world setting
7. provide more clarification about irony
8. add a video to the lesson to explain the concept better
9. give student a guide to help them know where to start
10. change the order in which I taught the topic. It was not effective
11. I was not confident in explaining the concept. I would use more online resources to help model. I would break the lesson into smaller steps and extend it to a second day
12. Use demonstration equipment and give them more hands on experience
13. Write down their answers before the debate, take notes during the debate, and write a summary
14. Take more time to teach the lesson. Add an edPuzzle, video, or more visuals to help students make connection
15. Put students in groups and have them present to the class to increase engagement
16. I would give students a set amount to work with and limit their extra expenses
17. Give students a preview of the words they were studying
18. Lesson went great and I wouldn't change anything
19. Include more partner work

**Appendix J**  
**Video 3 Data**

### Video 3 Data

#### Pre-Question 1: strengths of lesson

1. Building and programing robots, participation, and engagement
2. Engagement
3. Learning about global warming – student interest
4. Excitement and participation
5. High interest to students and challenging
6. Student interest and participation
7. Writing a summary, using graphic organizers, and practicing
8. Prior knowledge and student interest
9. Student collaboration and using multiple types of resources
10. Analyzing a primary source document
11. Scaffolding content
12. Hands on demonstration and being a mini lesson
13. Student understanding
14. Engaging activities
15. Student performance
16. Use prior knowledge to work a budget
17. Citing evidence
18. Can see the sequence and apply it to problem solving
19. Using prior knowledge to solve problems

#### Post-Question 1: strengths of the lesson

1. Working together and building the robots
2. Engaged in learning about colleges
3. Student interest in global warning and conversations on how to fix it
4. Explanation and demonstration
5. Small group analysis and appropriate challenge for students
6. Student participation and team setting
7. Graphic organizers
8. Followed directions and using prior knowledge for the writing prompt
9. Use of various materials; primary reading sources, images, and secondary reading sources.
10. Hands on
11. Used a flip chart to guide learning. They quickly made connections.
12. This was a lower-level class and students had trouble recalling previously learned information.
13. Students understood mass and how to measure it.
14. Did well with chunking strategy
15. Engagement and student work
16. Engaged and on task
17. Modeling of citing evidence

18. Students coming up with the formula.
19. Used previously learned strategies.

Pre-Question 2: anticipated student reaction

1. They will struggle to calibrate the robot if they do not follow directions.
2. They will be interested in the topic
3. Will be passionate about their topic to research.
4. Excited and eager
5. Struggle with vocab, but excited to study another Poe text.
6. Enjoy the review, take it seriously, and better prepare for the assessment.
7. Low engagement, complaining, and dislike the writing assignment.
8. A strong reaction to a new genre.
9. Frustrated
10. Will do well and understand the contents.
11. Bored so I will use an interactive game to increase engagement.
12. Engaged and interested. Willing to explain what they observe.
13. Engaged
14. Engaged and enjoy the review game.
15. Will do well but may be nervous.
16. Will enjoy the activity because it is relative.
17. Confident
18. Be positive.
19. Work fast since it's a review

Post-Question 2: Student reactions

1. Frustrated and did not want to read the directions.
2. Confused about the topics due to no prior knowledge.
3. They were passionate and wanted to learn more.
4. They were excited and encouraging each other to participate.
5. Confused at first
6. Stayed on task, took the assignment seriously, and encouraged each other.
7. About half refused to participate and left the practice templet blank.
8. Did not like the assignment and were reluctant to participate.
9. They reacted better than I thought. They were engaged and interested.
10. They reacted like I expected.
11. Energetic and engaged.
12. Some were unable to read the spring scale correctly.
13. Excited and actively engaged.
14. They loved the competition.
15. Dreaded the lesson but performed better than expected.
16. Enjoyed the lesson and was actively engaged.

17. After the modeling, students better understood the lesson.
18. At first they didn't want to participate, but once they realized the formula was not that difficult, they started working.
19. I had to split the class into two groups. One that was ready to play the game and the other who needed a little more practice.

Post-Question 3: What would you do differently

1. I would read the instructions to make sure they understood. I would also demonstrate and model.
2. Front load vocabulary to increase understanding. They had lots of questions.
3. Add a reflective conversation on how to make a difference.
4. I would have voiced more goals and made teams of fewer people.
5. Use a video clip and front load vocabulary.
6. I would incorporate group work.
7. Needed to be done pencil and paper.
8. I would choose a different selection.
9. I would chunk the lesson into 2-3 days because it was too much to do in 1 day.
10. I would not change anything.
11. I should have done the practice in a progressive order because students were confused and that made them disengaged.
12. Add a mini lesson to reinforce the concept.
13. I would put them into groups of two so everyone would have to participate.
14. Nothing
15. Give students more prep time.
16. I would have added a final assessment to evaluate student understanding of budgeting for a field trip.
17. I would give them a list of TDQ's and have them choose half to work on independently.
18. I would do the same thing next time.
19. Used task cards instead of Kahoot.



**Appendix K****Video 4 Data**

## Video 4 Data

### Pre-Question 1: Anticipated strengths of the lesson

1. Building and programing a satellite.
2. Researching different local colleges.
3. Students experiencing something tangible.
4. The lesson will be fun and engaging and students will be active.
5. Choice boards and engaging topic.
6. Being interactive and using a game to build good learning foundation.
7. Guided notes and familiar examples to activate background knowledge.
8. Students will know what to do.
9. Giving students a variety of options of documents to analyze and use collaboration.
10. Use of technology to complete a project.
11. The activity that I planned.
12. Giving several pictorial examples.
13. Using a formula to measure the volume of a regular and irregular shape object.
14. The use of a video.
15. Using auditions to engage students.
16. Students had to do individual research, an oral presentation, and the use of a scoring rubric.
17. Using a strategy to prompt students to write a lengthier essay.
18. Use of prior knowledge to complete the lesson.
19. I don't anticipate to see many strengths in this lesson.

### Post-Question 1: What were the strengths of this lesson?

1. Following directions, easy build, and communication between groups.
2. Students identifying colleges that fit their criteria. Students were engaged.
3. Students were able to see and experience the concept through a hands-on activity.
4. The lesson was interesting and fun.
5. High interest and student choice.
6. The educational game built in the opportunity to partner share and reflect on their learning.
7. Relatable/familiar examples and good practice opportunities.
8. Clear instructions. Students wrote very good descriptions.
9. Mix of primary and secondary sources, and use of images and text.
10. Resources and links provided to students.
11. The activity was the strength.
12. Recalled prior knowledge and understood simple examples.
13. Students getting to see the materials and getting to use the instruments.
14. Video gave lots of information.
15. The lesson was engaging and entertaining.

16. Students found and took notes on famous people. The presentations were very well put together.
17. The use of writing prompts to help organize their thoughts and make real world connections.
18. They were already taught slope intercept so it was easier to see them learn.
19. Students were able to solve the equations and the extra practice helped.

Pre-Question 2: anticipated student response

1. Excited once they accomplish the task.
2. They will enjoy it and be easy for them.
3. They will be surprised in the results of their lab.
4. They will enjoy the lesson. It uses a different style of learning, and they will like it.
5. They will enjoy the multiple opportunities for choice.
6. They will stay on task and provide a good reflection.
7. They will enjoy the familiar examples, but will have trouble with the abstract concept of identifying symbolism independently.
8. They will enjoy the selection of music and find it easy to describe.
9. They will skip the more complex/less concrete text to analyze and try to just do the easier ones.
10. Students will be familiar with the power point platform and will do well.
11. Will be engaged with the competition aspect of the lesson.
12. Be engaged and interested in the situational questions.
13. Some students will be reluctant with the math involved in the lesson.
14. Most will participate and do well with the 5 finger retell strategy.
15. They will love it.
16. They will be positive and respond well to the research, but will not like the idea of an oral presentation.
17. Be able to organize their thoughts into more intellectual learning/writing.
18. They will have a positive reaction once they see that it is not much different from equations.
19. They will be frustrated at first.

Post-Question 2: How did students react?

1. They got excited once they accomplished the mission, but became frustrated when they had to rethink or rebuild the program.
2. Complained at the amount of work/research needed to complete each slide.
3. Got excited at the results.
4. Students participated, even those who are usually reluctant to participate. They enjoyed the lesson.
5. Excited and engaged.

6. They enjoyed the game, but were less enthusiastic with having to complete the reflective journal assignment.
7. As predicted, several had trouble transferring skill to independent work.
8. No student rated the song less than a 6 on the Likert scale.
9. Students became fatigued and not all students were engaged/participated.
10. Most reacted very well, but some acted like they have never opened a power point slide show before.
11. Students were engaged, but some struggled due to poor concept presentations.
12. Students were confused if the problem involved more than 2 arrows of force. They could not grasp the idea of thrust/drag and lift/weight.
13. Better than expected. They were actively engaged and helped one another.
14. Some worked, but reluctant learners did not write much on the 5 finger retell.
15. They loved it.
16. They enjoyed the assignment. Some students preferred to do their presentation from their desk.
17. More difficult for some than others, but over all it helped them flesh out their extended response.
18. They had a positive reaction.
19. Some struggled while others wanted more independent work.

#### Post-Question 3: What would I do differently

1. This was well as is.
2. I need to break this into chunks as to not overwhelm them.
3. Have a few extra solar bags or small ones for students to do in groups.
4. I would have students write questions and answers to make sure they are retaining the info.
5. Include exemplars of some items on the choice board.
6. I would partner the students up to get them out of their comfort zone. Also set a shorter time limit.
7. Make sure all students had background knowledge and remediate in small group instruction.
8. I would go over the concept before presenting the assignment. Also spend time discussing periods of music history.
9. I would chunk documents together to help alleviate some fatigue.
10. Spend time explaining power point slide show and how to add slides, pictures, and text sizing. I should have not assumed they knew how to complete a power point.
11. I would present the content better. I needed more conceptual explanation. Needed more modeling to ensure smooth transition.
12. Include more lessons on flight because of the difficult abstract concept.
13. Do a sample problem at each station.
14. Use a better video to get their attention.

15. Nothing, this was a strong lesson.
16. I would make a student rubric for the class to mark as the students are presenting.
17. I would take more time to model an extended response and focus on how I want them to make connections to the text.
18. I would make them solve it before teaching it to let them see the difference of equations and inequalities.
19. I would have separated the weaker/struggling students into a smaller group with me verses teaching the whole group lesson.

**Appendix L****Video 5 Data**

## Video 5 Data

### Pre-Question 1: anticipated strengths of the lesson

1. Listening skills
2. Students love any activity/lesson that allows them to draw/color.
3. The subject area.
4. Progression of activities.
5. Scaffolding and multiple chances to practice.
6. Being hands on lab, done with partners, data analysis, and open discussion.
7. Engaging story, guided notes, and signposts.
8. Being able to play a piece of music.
9. Fast moving, brings the material to a personal level.
10. Topic and activity about veterans.
11. The presentation using a flipchart to promote understanding and relevant application.
12. Based on own interest, choice, and engaging.
13. The use of a demonstration.
14. Enjoyment of the topic.
15. Questioning and student creativity will be the strengths.
16. Gaining knowledge of local colleges and majors and careers.
17. Context clues, instructional strategies.
18. Use of prior knowledge applied to a new concept.
19. Figures of speech, comprehension strategies.

### Post-Question 1: What were the strengths?

1. Students have their own computer and ear buds to listen to the passage and answer the questions.
2. Students being able to draw and be creative.
3. Students asking questions.
4. The progression of the lesson helped keep the lesson organized and students on task.
5. Short passages were entertaining and using scaffold practice.
6. Being an open-ended lab, using trial and error to find the answers. Students helping each other.
7. Signpost notes, think-aloud strategies.
8. Execution of the lesson and being able to monitor and adjust as needed.
9. Class participation and class discussion.
10. The topic and being able to make connections.
11. The flipchart, but I didn't execute as well as I anticipated.
12. Use of a rubric and using test builds.
13. Student engagement
14. The research process and discussions
15. Questioning and student engagement

16. Exposing students to different types of colleges and productive discussions
17. Modeling and practice
18. Students used their understanding of square roots to explain the Pythagorean Theorem.
19. How the lesson was structured and use of figures of speech and comprehension strategies.

Pre-Question 2: anticipated student reactions

1. Probably think it is boring.
2. Will enjoy it and turn it in on time.
3. They will think the plant will die and be amazed that their plant thrived.
4. Will enjoy the lesson because they can learn and play at the same time.
5. Confident with scaffolding and engaged in the passages.
6. They might struggle and rebel a bit but will become more engaged as they follow the procedures.
7. They will do better identifying foreshadowing on a second read of the text.
8. They will feel a sense of accomplishment.
9. They will like that the documents are short and be more likely to dive into them.
10. Positive and relate to the stories.
11. Highly engaged and move fast.
12. Be excited to start and able to follow the rubric.
13. Excited and intrigued.
14. Will like the assignment, but probably not the writing component.
15. Will be happy to use their imaginations, but will be bored with the questioning assignment.
16. May not understand the full grasp of the lesson.
17. Will boost their confidence and result in a difference in their work.
18. Will not have a positive reaction to the lesson because they did not have a good experience with square roots.
19. They will hate the lesson.

Post-Question 2: How did students react?

1. They seemed to enjoy the video and they shared what they liked or found interesting with each other.
2. They were excited and wanted to hurry and get started.
3. They were amazed that the plant did not die and began asking questions to try to explain it.
4. They enjoyed it and retained a lot of information.
5. Liked the variety of practice.
6. Frustration and complaining did occur but became motivated and engaged as they began to solve the problems.
7. They tried hard, but needed several reminders to read closely.



8. They worked with each other to correct their mistakes.
9. Struggled some but the class discussion helped with understanding, and they did well.
10. Worked well together and were excited.
11. Engaged and were eager to share and ask questions.
12. Did not want to follow the instructions.
13. Most were shocked at the demonstration.
14. Enjoyed the videos and reading about the survivors.
15. Some were confused, but overall enjoyed the lesson.
16. Students asked questions and showed a lot of interest.
17. Engaged and showed improvement with their vocab.
18. They did not react positively to the lesson because they did not want to do the work.
19. They enjoyed the lesson.

Post-Question 3: What would you do differently

1. Nothing, all went well.
2. It would have helped to front load information through text.
3. Have each table group do a plant in a jar.
4. Change my grouping strategies to make the class go smoother and more efficient.
5. Choose a passage from their own library book, more relatable to current reading.
6. To cut down on the amount of time the lab took. Use student demonstrations.
7. Provide leveled texts for practice, remediate in small group setting.
8. I would use a different instructional strategy.
9. I would add a little more independent work to help ensure all students were engaged.
10. I would add more details to the activity sheet.
11. I would build in some time/opportunities for students to do more with sharing and making connections with their prior experiences and the content.
12. Review how to fill out a lab report and provide more materials for the lab.
13. Have students write their own explanations after the demonstration before I explain it.
14. I would rework the rubric and probably revisit the writing component for my regular classes.
15. Instruct students to be more specific about their characters. I would also model the answering process more.
16. I would have students think of a job they would want to do, then use that to drive their research on their college.
17. Take more time to practice and would pull small groups.
18. I would not do anything differently.
19. I would use more complicated questions.

**Appendix M****Video 6 Data**

## Video 6 Data

### Pre-Question 1: anticipated strengths

1. Student creativity and communication.
2. Prior knowledge of AVID terms and definitions.
3. The lab will help students see something they normally can't see.
4. Student performance and techniques.
5. Background building for new unit and text study.
6. Being online, interactive, visual representations, and student reflections.
7. Using a video to introduce the concept.
8. Using a familiar song.
9. Student choice, creativity, and design.
10. Group work, the mapping activity, and student engagement.
11. The lesson is designed to target specific weaknesses that were uncovered by an assessment. It is data driven.
12. Interesting, cool lab gear, and being hand-on.
13. Learning a new concept.
14. Participation, eagerness, and interest in the lesson.
15. Student engagement.
16. Read and annotate an article on stress and learn ways to deal with stress.
17. Using multiple perspectives and passages.
18. Familiar with the concept and using prior knowledge.
19. Using a study guide with practice problems.

### Post-Question 1: strengths of the lesson

1. Students working in their group to plan, brainstorm, research, build, and program. Student creativity.
2. Working together to complete their vocabulary cards.
3. The lab increased student understanding.
4. Students using proper form and techniques.
5. Opportunity for students to discuss ideas related to the novel.
6. Using a new website, visual representations, group discussions, and reflecting on what they learned.
7. The example worked well to solidify the general concept.
8. Working with each group.
9. Student choice to focus on what they viewed as important and their creativity.
10. Me being able to move from group to group and model how to find the answers.
11. Specificity of the subject and presentation of the materials.
12. Engaging lab activity and student perspective.
13. Having students participate in an engaging activity.
14. The lesson helped students to learn about the physical features of Europe and helped review for the test.
15. Student engagement and pacing.

16. Class discussion on stress, the video and articles related to stress increased student understanding.
17. Reading passage, making connections, and relative discussions.
18. Using models to explain the concept.
19. Using previous strategies to solve problems and questioning.

Pre-Question 2: anticipated student reaction

1. Will participate, be engaged, and excited.
2. They will enjoy working as a group.
3. They will think it is neat and enjoy the lab.
4. Will enjoy the activity and be excited at the outcomes.
5. Hopefully excited to begin a new unit.
6. Be focused and on task. Be able to store vocabulary in long term memory.
7. Interested, but confused with mood/tone.
8. Will feel good in the beginning but lack confidence on the extended section.
9. They will respond good to the lesson and enjoy not having to worry about being right or wrong.
10. A few will complain, but most will like the lesson.
11. They will not be as excited or engaged but will stay in learning mode.
12. Engaged and participating in discussion.
13. They will start out thinking they know the answers but realize they do not.
14. They will enjoy it.
15. They will enjoy the lesson.
16. Will enjoy the video and discussion.
17. They will enjoy thinking and connecting to their own lives.
18. Will not like the lesson.
19. Should not be frustrated.

Post-Question 2: Student reactions

1. Way too excited and communication was great. They used a lot of the vocabulary.
2. Liked being in groups but were having difficulty being quiet and considerate to one another.
3. They enjoyed the experiment.
4. Had great attitudes and worked hard. They supported each other.
5. Gave insightful responses during the discussion and fully participated.
6. They enjoyed it once they got the hang of it. Students responded that the website helped them understand more.
7. They were confused.
8. Some students did not like waiting for their group to participate.
9. They liked being able to create and participated.
10. Some worked very hard, but others wanted me to give them the answers because they didn't want to work.

11. Enthusiastic and engaged in the scaffolding activity.
12. The activity caused some students to get headaches. They discussed what they observed and thought it was cool.
13. They were shocked at what they did not realize was part of the water cycle.
14. Most enjoyed the activity and participated.
15. They loved getting to act and see each other perform.
16. They enjoyed it and completed the annotation part.
17. Loved the discussion, didn't enjoy the passages as much, and worked well in their group.
18. They did not grasp the lesson very well and struggled with the problem solving.
19. They did well and didn't show frustration.

Post-Question 3: What would I do differently

1. I would establish 3 rules of engagement to guide the lesson.
2. Have the groups predetermined before they come in. I would also divide up their work between each of them.
3. I would have enough equipment for each group.
4. Make it more rigorous.
5. Include images to make predictions about the plot of the novel instead of using video clips.
6. Make the students more responsible for their learning. Also teach about coefficients and subscripts to prevent confusion.
7. Find a better way to define these terms.
8. Use a different song.
9. Expand into a larger project and allow more time for students to present.
10. I would choose the groups to eliminate playing and getting off task. I even changed after the first lesson today and gave more detailed directions up front.
11. I could break the lesson into small groups and refine my targets.
12. Not much, it went well.
13. I would begin the unit with this lab so it will require them to use more previous knowledge/inference skills.
14. Nothing, students did well.
15. Find ways to keep students working longer.
16. I would have a place where students could display what stresses them. They could get into groups and discuss what strategies they could use or do to help cope with their stress.
17. Use passages that would be more high interest to students. I would allow them to choose their own group.
18. I really don't think I would change anything.
19. I would have turned the study guide into a review game.

**Appendix N**  
**Final Reflection Response Data**

### Final Reflection Response:

1. It has helped me be more observant to how each group works together. I also began paying more attention to collaboration.
2. This has allowed me to see the adjustments that I need to make in my instructions. I need to be more specific and show examples to deepen their understanding. I also noticed that I call on students frequently and need to check for understanding more often. I am working to differentiate more between my 6<sup>th</sup> to 8<sup>th</sup> grade classes.
3. I realized that giving students time to reflect either through discussion or in writing will allow them more time to process the new information. I also realized that I need more equipment so that more students can actively participate in the labs.
4. I have been able to reflect on how I present the material. I have also been able to observe my teaching styles and how students respond. I have noticed that I move around the room a lot and give feedback.
5. Participating in the video reflections has improved my effectiveness as a teacher. I find myself reflecting not only after the lesson but reflecting during the lesson. I also noticed that I was more likely to first go to a specific group each time independent work began. This reflective practice has made me ore mindful and has carried over into giving my students time for reflection as well.
6. It's a little nerve wrecking to watch yourself teaching because you notice words you overuse, body language (facial expressions especially), and how you can interact more with some students than others. I have noticed that I gravitate to certain students and the students who are in close proximity to me do better than those I do not get close to. I also noticed that I tend to call on the same students so I need to get more students involved in the discussions. Watching students work in their groups has helped me pick out leaders, followers, talkers, introverts, and extroverts. This is a type of data analysis that I have not done in the past. Even though I have been teaching 20 years, this process has helped me become a more effective teacher.
7. I have learned that I need to be more mindful of my students background knowledge pertaining to their culture. I have also learned that technology is not always the best strategy to use. Students need to use paper and pencil to help hold them more accountable.
8. I saw times when I could have used better wording and different questions to bring out higher order thinking. I need to improve on directions and descriptions.
9. I have been able to see areas that I could make adjustments for future lessons. I need to chunk more lessons to reduce student frustration and fatigue. Lessons where I used a variety of sources were more successful than those with few sources. I also need to work on building student confidence.
10. I realized that I need to slow down and introduce new topics effectively. I also need to complete a spiral review often, because I noticed that students don't study and remember the content from the day before.

11. This helped me be more intentional with the design of my instruction. I am now incorporating more small group personalized instruction.
12. It allowed me to see things I did not notice in real time. I could see where something I said or wrote confused students. I also was able to see certain aspects of their thinking in some conversations. This has allowed me to see places for improvement much easier than relying on my memory.
13. Participating in the video reflection helped me to see myself through the eyes of my students. It also made me realize that I need to stop talking so much and allow students to talk more. I need to increase my wait time so I can allow them to think for themselves.
14. It has made me more aware of what I do each day. By pre-planning and reflecting, as well as observing students reactions from the videos, I am more mindful of doing what is best for my students.
15. It has caused me to be more aware of my teaching habits. After watching the videos, it was very easy to notice things that I need to correct. It has helped me teach more effectively.
16. After looking over my videos I have noticed that I let my students work in groups more. I have realized that I need to explain directions more.
17. I plan to take more time to provide examples to ensure everyone's understanding. I realized that I need to do more differentiation and give extra time to pull small groups.
18. It has helped me look back on my lessons and see if I feel like I could have done something differently than I did. I realized that I need to show different ways to solve problems.
19. Watching the videos of myself teach has affected my effectiveness as a teacher. The videos helped me to see the reactions of my students to the lessons and my instruction. It also helped me to see what strategies I need to change or keep.