Educators' Perceptions of the Mindframes and Practices of Visible Learning

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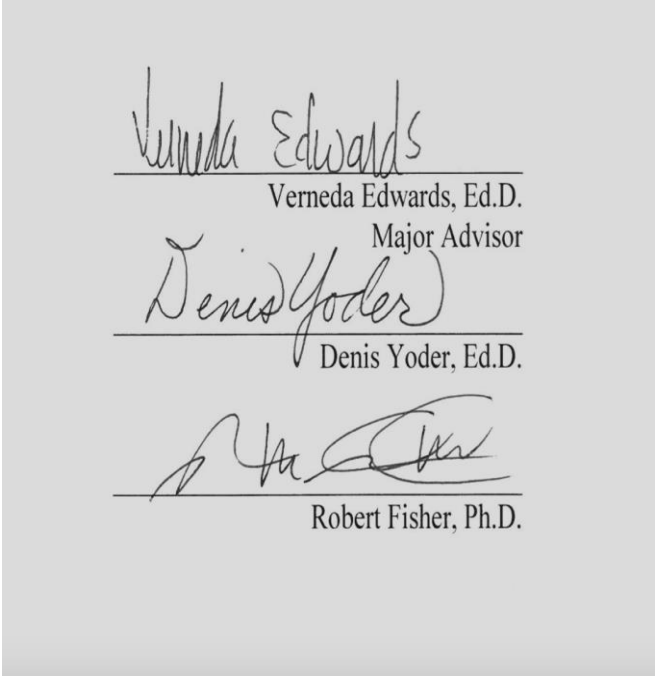

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Abstract

The purpose of this qualitative study was to examine educators' perceptions of the impact of implementing the mindframes and practices of Hattie's (2009, 2012) Visible Learning research and its impact on teaching and learning. This study was also conducted to gain an understanding of how these educators perceived Visible Learning and its impact on instruction and the experiences for their students, along with themselves, in classrooms and schools. In addition, this study examined the educators' perceptions of the mindframes, or core beliefs, of Visible Learning and their impact. The researcher utilized a qualitative design incorporating phenomenological response interviews to gather data. Educators were selected for this study using the criterion sampling procedure from a single district that began implementing Visible Learning during the 2017-2018 school year. The sample, which included K-12 teachers, administrators, and innovation and learning coaches who had previous knowledge gained through professional development sessions, professional readings, or observations in the learning environments, included 18 participants. Interviews were conducted with the participants in the sample which included three teachers, three innovation and learning coaches, and three principals or assistant principals at both the elementary and secondary levels in a single district. The information shared by participants in the current study indicated the perceived value of the investigation and implementation of Visible Learning research and practices. The analysis of the data also indicated an impact on beliefs, learning processes, instruction and assessment methods, and overall impact on teaching and learning. Participants also shared their perception of the successes with and challenges of implementing Visible Learning research and practices. The results of this

study led the researcher to recommend that education leaders provide opportunities for professional development to instill an understanding of Visible Learning beliefs and practices. Educational leaders should investigate the methods to systemically implement Visible Learning into schools and districts to ensure it is embedded into the culture and with fidelity into daily practice. In addition, leaders need to narrow the focus on initiatives to allow educators to deeply entrench the research and allow for time to gain clarity on what methods specific students need while also dedicating long-term commitments and supports to warrant the longevity of successful implementation. Visible Learning research and practices could provide educators with a set of common beliefs (the mindframes), the most successful instructional methods in the learning process, and methods for assessing to inform teaching and learning that could enhance learning for all students. District and school leaders could transform traditional learning classrooms into environments where the student is in the center of the learning process and the educator becomes the catalyst for deeper and authentic learning experiences.

Dedication

A Danish Proverb states, “Don’t sail out farther than you can row back.” For me, this journey was filled with sizeable challenges that yielded insurmountable achievements. When I thought I had traveled out too far, I leaned on the foundation of support from many people. I could not have accomplished this without the love and support from so many. First of all, I want to recognize all of the family members who have come before me, notably my grandmother, Geraldine Schultz, who was the inspiration for my passion for teaching, learning, and inspiring students. This also includes a plethora of strong and hard-working women who have inspired me to view the world without limits.

I have been blessed with a family I love dearly who provides so many proud moments to balance out the daily quirks and laughs. Thank you to my husband, Scott, who has supported and challenged me to always accomplish what seems impossible. To our sons, Bailey, Cade, and Aiden, I hope to always make you proud and demonstrate that you can make the world a better place while following your dreams. I am also so grateful for my parents, Michael and Ramona Eickman, from whom I learned that love, hard work, and a dedication to others can lead to living a full life. My brothers, Ryan and Adam, along with their families, have always supported me and I am proud to be a part of your lives.

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I am also grateful to Dr. Fisher, colleague and friend, who served on my defense committee. I have humbly served alongside my school family since 2010 and truly know no other collective group of educators who give so much of themselves to change the lives of the students they love. There are so many district leaders who inspired and encouraged me not only through this process, but also in daily leadership. Thank you! Also, I could not have completed this study without the participants who volunteered their time. I truly appreciate your dedication and sharing your experiences as educators. Finally, I find new respect every day for all people serving in education who dedicate their life's work to the kids who are our future.

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Chapter 1

Introduction

School improvement has been in the forefront of systematic education reform efforts. This has educators and lawmakers in search of a solution that consistently optimizes learning for students in our schools (DuFour & Eaker, 1998; DuFour & Marzano, 2011; Edmonds, 1982; Fullan, 2008, 2011; Hattie, 2012; Hattie & Zierer, 2018; Lezotte, 1991; Schmoker, 2006). As the debate centering around what works best to improve education continues, Hattie's (2009) Visible Learning is emerging as a possible solution (Mansell, 2008).

The original meta-analysis conducted and reported by Hattie (2009) involved the analysis of more than 20 years of 1,400 studies involving approximately 250 million learners. This work has continued to include a total of more than 1,400 meta-analyses having been conducted by the year 2018 (Hattie & Zierer, 2018). Through the structure of Visible Learning, Hattie (2012) has made the simple claim that, "Teachers, schools, and systems need to be consistently aware, and have dependable evidence of the effects that all are having on their students – and from this evidence, make the decisions about how they can teach and what they teach" (p. 149).

Researchers, such as Fullan (2010), have reported that decades of studies indicated "the smallest number of high-leverage, easy-to-understand actions" (p. 127) can lead to powerful change in our schools. However, systemic change efforts are not simple. Educational reform efforts require time and often a shift in the culture of traditional education organizations. This transformation occurs when educators work together to share successful practices. However, Sarisohn (2018) reported that time is

limited for teachers to collaborate with others. Additionally, if instructional time continues to be a rare commodity, student learning and growth will be impacted (McCarthy, 2016). Therefore, further research is needed to determine if Visible Learning could impact educational practices.

This study is an examination of the perceptions of current educators and their experiences utilizing the framework of Visible Learning in their current field. Chapter 1 provides the background, purpose, and significance of the study along with the questions addressed in the research. Additionally, the delimitations, assumptions, and organization of the study are provided.

Background

The first laws for the compulsory education of American children were enacted in 1918 (Watson, 2008). Public education reform researchers grappled with the issue of how to systematically improve academic outcomes for all students. Heck (2015) claimed that this may be because "the problems researchers seek to understand are considerably more complex than in some other fields" and Heck continued, saying that reform movements in education "have been more affected by changes in politics and societal values" (p. 58). Furthermore, Heck (2015) reported the following regarding education in America:

> Historical examples of external policies that redefined educational practices included the National Defense Education Act of 1958, the Elementary and Secondary Education Act of 1965 (ESEA), the Education for All Handicapped Children Act (1975), which was later replaced by the Individuals with Disabilities Education Act (1990), A Nation at Risk (1983), the No Child Left Behind Act of

> 2001, and Race to the Top (RTTT), which was part of the American Recovery and Reinvestment Act of 2009. (p. 58)

Educators have encountered new requirements of laws such as the Every Student Succeeds Act (ESSA) enacted December 2015 (U.S. Department of Education, 2019). Not only were these laws initiated in an effort to improve schools, but also to improve the civil rights of all people. Because of ESSA, educational leaders faced important educational issues in dynamically changing political environments that not only affected the solutions, but also the rules of engagement for public educators; most importantly student achievement was tied to the amount of funding received (Thompson, 2019).

Education is an applied field in which research provides knowledge to practitioners for the utilization of new information to improve student learning. Within the context of the constant evolution of legislation and mandates, Hattie (2012) claimed educators have not been able to consistently look at research and make systemic changes across the educational system in the United States. Increasing student achievement will not happen with, "short-term interventions, by naming and blaming, by more testing, by more accountability, by new curricula, or by new resources" (Hattie, 2012, p. 167).

The concept of Visible Learning was developed by Hattie in 2009 when the initial results of meta-analyses, which compared several educational practices influencing learning outcomes for students, suggested that some practices yielded greater results than others. Hattie and Zierer (2018) reported Visible Learning research identified practices that impact student learning. According to the Visible Learning research, for a method or intervention to positively impact student achievement, it must yield an effect size of at least 0.40 which is equivalent to one year's learning growth for students (Hattie & Zierer,

2018). Practices that had an effect size of more than 0.40 were considered to accelerate learning (Hattie & Zierer, 2018). For the Visible Learning research, Hattie (2012) stated, "A meta-analysis involves identifying a specific outcome (such as achievement) and identifying an influence on that outcome (such as homework)," then systematically search all existing studies that investigated the relationship (p. 10).

Hattie and Zierer (2018) reported that the Visible Learning research "seeks to get to the crux of this multitude of findings from educational research and identify the main message…the aim is to move from 'what works' to 'what works best' and when, for whom, and why" (p. xviii). In conjunction with this, an educator's success "is based not only on competencies but more on mindframes; less on what we do and more on how we think about what we do" (Hattie & Zierer, 2018, pp. 160-161). Hattie (2012) concluded that mindframes are the key to Visible Learning and that educators who develop these mindframes seek the evidence of their impact, understand the nature of this impact, and know how to act upon the outcomes of their impact.

This study was conducted in a single suburban Midwest district that began implementing Visible Learning during the 2017-2018 school year. The district was chosen because it had surpassed the initial years of implementation and therefore participants may have deeper knowledge of Visible Learning in practice. The district enrolled 12,550 students in K-12 and employed 956 certified staff members ([redacted], 2021). The district in this study was comprised of elementary schools serving grades Kindergarten through 5th grade, middle schools that included 6th, 7th, and 8th grade students, and high schools that educated 9th through 12th grade students ([redacted], 2021). In addition, 84% of teachers had six or more years of classroom

experience while 82% of teachers held a master's degree or higher ([redacted], 2021). Participants were educators who included classroom teachers, special educators, innovation and learning coaches, and administrators who had at least one year of training.

Statement of the Problem

The United States continues to score low on educational performance measures and the gap between students who have high academic achievement or low academic achievement measures had expanded (DuFour & Fullan, 2013). Hansen, Levesque, Quintero, & Valant, (2018) reported according to the results of the 2017 National Assessment of Education Progress, the racial and ethnic achievement gaps have shown a slight decrease; however the income-based achievement gap has remained unchanged. Hansen et al. (2018) also noted that there was a wide variance of the results from state-to-state and that, "local and state policies and conditions—including, for example, within-state wealth and income gaps—could help to define the size of these gaps" (p. 7). In addition, multiple reports may vary slightly on the academic aptitude of American students, but there was a need for widespread, systemic change to increase achievement for all students. The time for clarity by investigating what improves student achievement at all levels to replicate these processes in a systematic way is crucial.

Researchers in the field of education such as Borek (2008) and Killion and Hirsh (2011) found that there was a call for more rigorous standards during this deficit in overall student academic achievement. Barrows, Gift, and Peterson (2016) reported, "The last two years have witnessed the largest jump in state standards since they were established as a part of the federal accountability program" and also stated, "36 states

have strengthened their standards since 2013" (p. 5). DuFour and Marzano (2011) claimed that no other generation of American educators has been expected to accomplish so much with all learners. Along with this expectation, Figuero, Leachman, and Masterson (2018) reported there was also a concern in some places in the United States where resources were becoming scarcer as budgets at the federal, state, and local levels had been decreased. Twenty-nine states' per pupil funding was less in 2015 than in 2008, while 19 of these states also experienced decreased local funding (Figueroa et al., 2018). There is a necessity to look at success models, as some schools and districts continue to produce high levels of student achievement despite diminishing resources.

Multiple reports may vary slightly on the academic achievement of American students, but it is clear that there is a need for widespread, systemic change. DuFour and Marzano (2011) reported the following regarding education in America:

> A system that has 30 percent of its students drop out of high school, that has one-third of its graduates who enter higher education requiring remediation, that has one of the highest college dropout rates in the world, that contributes to enormous gaps in achievement for minority and poor students, and that has seen its relative success in educating its population plummet compared to other nations cannot assume the position that all is well. (p. 9)

Educational systems in countries such as Finland, Canada, and Singapore should also be examined. In these countries, educational organizations take a more developmental approach to expanding the capacity of leaders who could assist teacher collaborative teams use diagnostic data while linking it to improved instructional strategies to get higher student achievement results (Fullan, 2014). Teams of educators learn alongside

one another as they monitor student progress and provide interventions when needed (Fullan, 2014). In American education, districts frequently change programs without securing the data necessary to determine if students are achieving. Hattie and Zierer (2018) claimed, "Reformers too often propose more resources, more autonomy, more international competition, better comparative studies, more statistics, innovative technology, and much more as sure means of revolutionizing school and instruction" (p. 166). Hattie and Zierer (2018) also reported that educators often too quickly leap from factor to competing factor in what makes a difference in education. Unlike the education system in Finland, Canada, and Singapore, this trend has caused traditional structures and practices to remain in place, hindering the advancement of the high-impact methods in common practice that increase student achievement (McNulty & Besser, 2011).

Another hurdle for educators in America is the achievement gap. The Center for Public Education (CPE, 2015) reported that not every child entering school has advantages that set them up for success even before entering school. The authors of this report claimed, "Parents' level of education can make a difference in a child's readiness for school, as can other factors, such as family makeup and income, access to a high-quality pre-kindergarten program and teacher quality" (CPE, 2015, p. 1). Now, more than ever, teachers need to collaborate about students' data, utilize ongoing and meaningful assessments, and research the best instructional practices for all students' ability levels to narrow the gap.

Graham and Ferriter (2008) reported traditional school structures and processes should be challenged to meet the needs of struggling students while leaders weigh all resources to leverage more capital power, time, and energy to provide academic success

for all learners. Eaker and Keating (2012) claimed that in order to meet all students' needs, "Not only are excellent teachers important, it is virtually impossible to have a significant impact on student learning without excellent teaching" (p. 17). Schmoker (2018) argued that because of a lack of clarity of researched best practices, teachers are instead coerced to try to find quick fixes for learning improvement by implementing the next new trend without any reassurances of validity. Schmoker (2006) also claimed, "Educators in overwhelming majorities have agreed that there is indeed a yawning gap between the most well-known, incontestably essential practices and the reality of most classrooms" (p. 2).

At the basic level, the classroom and students change each year. A variable such as this creates an ever-changing scope of beginning and ending points of data. Therefore, a model for continuous improvement is essential to ensure the experience of success for students. It is at the teaching level, the information the students are taught daily, where the real learning happens (Hattie, 2009, 2012). DuFour and Marzano (2011) suggest traditional education has focused on improving teaching, but the systematic process of educators focused on learning is where real educational change can occur. Schmoker (2006) reported, "If we wish to resist the creeping dissolution of conventional public schools, we have to wake up to the fact that the experts are among us" (p. 6). Schmoker (2006) claimed that educators often have refined best practices that the education system has failed to recognize and replicate. If educators don't know how to capitalize on the practices that yield a high impact on student achievement, and if reflective and collaborative practices are not evident amongst the practitioners, then the education system will fail to elevate every student to their highest potential (Donohoo, Hattie, &

Eells, 2018). If the focus continues solely on teaching, educators will continue to invest in ineffective programs instead of investigating what improves student achievement at all levels and replicating these practices in a systematic way. Researchers such as Hattie have suggested evidence of effective practices and beliefs in education through the meta-analysis of many studies. There is a need for qualitative research focusing on current educators' perceptions of the effects of the mindframes, or beliefs, and practices of Visible Learning.

Purpose of the Study

The purpose of this qualitative study was to examine the perceptions of the impact of implementing the mindframes and practices of Hattie's (2009, 2012) Visible Learning research and their impact on teaching and learning in their current field. This study was also conducted to gain an understanding of how these educators perceived the impact of Visible Learning on instruction and the experiences for their students, along with themselves, in classrooms and schools. In addition, this study examined the educators' perceptions of the impact of the mindframes, or core beliefs, of Visible Learning used by these educators.

Significance of the Study

Previous research studies have provided evidence regarding the benefits of educators engaging in the process of continuous improvement (DuFour & Eaker, 1998; DuFour & Fullan, 2013; DuFour & Marzano, 2011; Eaker & Keating, 2012; Fullan, 2008). However, there is a limited body of research on the specific qualities of instructional practices which could be utilized to improve student learning experiences at the classroom level. Findings from this study could add to the growing body of research

regarding school improvement efforts and what current teachers and educational leaders perceive to have the most impact. Specifically, this study may also uncover the perceptions of the specific mindframes educators utilize during instruction that may enhance student achievement. Finally, the results of this study could provide guidance to teachers and administrators about potential Visible Learning practices to implement based on the perceptions and experiences of other educators.

Delimitations

According to Lunenburg and Irby (2008), delimitations are the "self-imposed boundaries set by the researcher on the purpose and scope of the study" (p. 134). The following delimitations were used to narrow the focus of this study:

1) Participants initially volunteered and were selected based on their self-reported knowledge through training of Visible Learning research and their willingness to participate in the study.
2) Participants were all currently certified K-12 teachers, instructional coaches, or administrators working in a school setting.
3) Participants were either in buildings or school systems that had implemented Visible Learning.
4) The research sample was limited by volunteers from a single school district.

Assumptions

Assumptions are factors in the research "that are accepted as operational for purposes of the research" (Lunenburg & Irby, 2008, p. 135). The following assumptions were made in this study:

1) The participants were knowledgeable about the Visible Learning research.

2) The participants had received at least one year of training on the Visible Learning research.
3) The participants understood the interview questions being asked.
4) The interviewer was unbiased and did not influence the participants.
5) The participants answered the questions honestly from their own perceptions.

Research Question

According to Creswell (2014), research questions are formulated from the broad, general purpose statement to more focused and specific questions. The research question investigated was: What are educators' perceptions of implementing the mindframes and practices of Visible Learning and their impact on teaching and learning?

Definition of Terms

To provide the reader with clarity and understanding, this section provides terms and definitions used throughout the study.

Clarity. Providing clarity to both teachers and students includes revealing the learning intentions and success criteria to identify where learning is going, if progress is being made, and where the learning will go next (Hattie, 2008).

Collaboration. The process of learning together to solve problems, create new ideas, and collectively improve practice to increase learning is collaboration (Bloomberg & Pitchford, 2017).

Collective teacher efficacy. The overall belief that a group of teachers in a school have the ability to impact the learning of all students regardless of factors outside of the school (Almarode & Vandas, 2018).

Culture. School culture is defined as the system of collective beliefs, values, relationships, and perceptions of every aspect of the functioning of the school (Fullan, 2008).

Effect size. Effect size in statistics is a number that measures the relationship between variables used to compare results from different measures. In the Visible Learning research, Cohen's "d" is used where the mean difference of the measured values of one study is compared to another and then divided by the pooled standard deviation across both studies (Hattie, 2012; Hattie & Zierer, 2019).

Engagement. Student engagement involves students being interested and perceiving learning as positive and persisting in the learning despite challenges (Schlechty, 2011).

Exemplars. Examples of evidence pieces, such as student work, that demonstrate levels of quality work and allow learners to match success criteria with examples that meet or exceed learning expectations are exemplars (Almarode & Vandas, 2018).

Feedback. Feedback is any information given formally or informally that students can use to confirm, revise, or to help determine the next steps in the learning process (Nottingham & Nottingham, 2017).

Formative assessment. Formative assessment is the process of ongoing opportunities for students to demonstrate their learning. Teachers continuously monitor the effect of instruction at the onset and as learning occurs during a course or unit of study in both formally and informally (Marzano, 2006).

Goal setting. The process of utilizing formative evidence of student learning to determine what students have already learned and what the next steps in learning should

be according to the success criteria and learning progressions is goal setting (Almarode & Vandas, 2018).

Growth mindset. The belief that a person's learning potential is unknown and qualities can be built upon through application and experience, perseverance, and taking risks to improve is growth mindset (Dweck, 2006).

Learner agency. Learner agency is when the students take ownership of their learning process with shared goals and expectations facilitated by the teacher (Martin, 2018).

Learner dispositions. Learner dispositions are important attitudes and habits that successful learners display that have lasting benefits beyond the school environment. They are also called qualities of mind, learning habits, learning powers, and learning strengths (Claxton, 2018).

Learning intention. The learning intention is what students are intended to learn as a summary or restatement of the standard often written in student language (Almarode & Vandas, 2018).

Learning progressions. The steps to learning that begin with foundational knowledge and build up in increments that progress to the mastery of the learning intention are learning progressions (Almarode & Vandas, 2018).

Meta-analysis. Meta-analyses use statistical methods to combine results of several studies. The Visible Learning research is a synthesis of meta-analyses (Hattie & Zierer, 2019).

Student evidence. Authentic, relevant, and valid information about student learning used to mark progress through performance that indicates where the learner is in

the learning progressions is student evidence. Evidence determines the next steps in learning (Bloomberg & Pitchford, 2017).

Success criteria. Success criterion specifies what students must do to show evidence of achieving the learning intention. Co-creating success criteria involves students in the process to develop a common understanding of what success entails to achieve a learning intention (Almarode & Vandas, 2018).

Summative assessment. The practice of evaluating student knowledge at the end of a course or unit of study is summative assessment. Summative assessments are intended to measure the final learning outcomes at a predetermined timeframe such as the end of the school year (Marzano, 2006).

Visible learning mindframes. Hattie (2012) defined the mindframes as a set of beliefs that teachers and school leaders utilize to make decisions and take action. The mindframes describe teachers as evaluators who understand the learning process and who facilitate change through receiving and providing feedback (Hattie and Zierer, 2018).

Organization of the Study

Chapter 1 presented the background, statement of the problem, and the purpose and significance of the study about the perceptions of current educators and their experiences of utilizing the research and practices of Visible Learning in their current field. Limitations, assumptions, and the research question used were also introduced. A literature review focused on previous and current school improvement efforts and research comprises Chapter 2. Chapter 3 includes the methodology of the study, the research design, the procedures of data collection, and data analysis. Information is also provided about the sampling procedures, instrumentation used, the researcher's role, and

the limitations of the study. Chapter 4 presents the results of the research findings to the research question. Chapter 5 includes a summary of the study, findings related to the literature, and major findings.

Chapter 2

Review of the Literature

The purpose of this qualitative study was to examine educators' perceptions of the impact of implementing the mindframes and practices of Hattie's (2009, 2012) Visible Learning research and the impact on teaching and learning. The literature review for this study includes a review of the research on education reform, the movement to improve academic achievement, and an overview of the framework of Visible Learning (Almarode & Vandas, 2018; Arnold, 2011; DeWitt, 2018; Donohoo et al., 2018; Fisher & Frey, 2016, 2018; Fisher, Frey, & Hattie, 2016, 2018; Hattie, 2009, 2012, 2015, 2016; Hattie, Masters, & Birch, 2016; Hattie & Zierer, 2018; Lachner, Togel, Weckend, & Zierer, 2018; Pearsall, 2018; Shanahan, 2017; Waack, 2019).

Education reform efforts exist to improve teaching and learning practices in schools to improve academic achievement. The movement to improve academic achievement helped to identify best practices that proved effective in increasing achievement for all students. The concept of Visible Learning is based on a meta-analysis conducted by John Hattie (2009, 2012) that measured and compared the effect sizes of factors, or interventions, that influenced learning to investigate which of these factors has the greatest impact on student learning.

Education Reform

A series of education initiatives and legislation have been pivotal in the history of education reform (Borek, 2008; Camp, 2019; Center for Public Impact, 2016; Common Core State Standards Institute, 2020; Holmes, 2012; Klein, 2015a, 2015b; National Board for Professional Teaching Standards, 2020; Roush, 2019; Russo, 2014; U.S. Department

of Agriculture, 2008; U.S. Department of Education, 1983, 1995, 2001, 2010, 2015, 2019, 2020; U.S. House of Representatives, 2020; U.S. Senate, 2020; Weiss, 2013). During the 20th century, education reform efforts centered on providing access to free universal public education and increasing access for more students. By 1918, all states had passed laws that mandated universal and compulsory education for children up to 12 years old (Camp, 2019). In 1946, Congress appropriated funds for a nationwide school lunch program, which created a new reason for families to send their children to school while establishing a way, "to provide permanent Federal support to longstanding efforts in some States and localities to provide meals to school children. (U.S. Department of Agriculture, 2008, p. 6).

During the 1950s and 1960s, several events that expanded access to universal public education occurred. The Civil Rights movement of 1954 to 1968 swept the nation and there was a demand for justice and equality for people of color. In 1954, the Supreme Court unanimously ruled that schools could not be segregated by race in Brown vs. the Kansas Board of Education (Camp, 2019). This prompted the effort to provide all students access to a quality education regardless of race, religion, socioeconomic status, or ethnic group (Camp, 2019).

Although the removal of barriers for all children to access a public education had been the focus during this time, the quality of that education also faced scrutiny. In October 1957, the Soviet Union successfully launched Sputnik, the first satellite to orbit the Earth. During the Cold War era, Americans felt secure that the nation was technologically superior to all other countries, including the Soviet Union until Sputnik's success (U.S. Senate, 2020). Having a rival country advance in the Space Race incited

questions surrounding the quality of education in America and whether the system was producing enough scientists and engineers (U.S. Senate, 2020). The quality of education for young people in the schools during this time was under scrutiny as lawmakers believed there was a need for funding to enhance many fields of education to protect the nation (U.S. House of Representatives, 2020). In response, the National Defense Education Act (NDEA) was passed in 1958 to provide additional funding to enhance education programs in the areas of science, mathematics, and modern foreign language education (U.S. House of Representatives, 2020). By July, 1969, America succeeded in landing astronauts on the Moon. Roush (2019) concluded that not only was this a victory for America in the Space Race, but it also changed education funding and priorities by transforming how the nation viewed science education and the importance of incorporating technology into the teaching in all subject areas.

Additional federal legislation to support equal access for all children to public educational institutions began to gain momentum. In 1965, Title I of the ESEA, was passed to ensure the equity for students from families in poverty by providing federal funds to schools serving low-income communities (U.S. Department of Education, 2020). Not only was there an appeal to provide a quality public education to all students regardless of race, religion, economic status, or ethnicity, there was also a demand for the education community to include students with special needs. The United States Congress established that schools must provide a free and appropriate education to students with disabilities by establishing the Individuals with Disabilities Education Act (IDEA) in 1975 (U.S. Department of Education, 2010). Students who at one time had been denied

access to schools due to mental or physical disabilities were now able to receive an education in their local public schools.

Another effort for education reform came in the 1980s when economic strains in the United States prompted a direction towards reform. Lezotte (1991) stated this decade "witnessed a relentless discourse on school reform at all levels – federal, state, and local – unmatched since the late 1950s when the nation sought to respond to Sputnik" (p. 19). Terrel Bell, newly appointed Secretary of Education by the Reagan Administration, initiated the National Committee on Excellence in Education to examine the newly formed U. S. Department of Education by evaluating the effectiveness of the public school system (Borek, 2008). The outcome was, *A Nation at Risk*, published in 1983. Ultimately, "its fiery rhetoric did catch the attention of the national press, where it provoked a national discussion about the quality and purpose of public education" (Borek, 2008, p. 572).

The report outlined the threat to the American way of life by stating, "Our once unchallenged preeminence in commerce, industry, science, and technological innovation is being overtaken by competitors throughout the world" (U.S. Department of Education, 1983, p. 1). The description included a comparison of students' global test scores reporting the rise of illiteracy rates for 23 million adults with an increase of 13% of students aged 17 and up to a 40% increase for minority youth (U.S. Department of Education, 1983). In addition, declining College Board School Aptitude Test (SAT) scores, and other factors proving a decline in the skills and knowledge of American students as compared to the performance of students in other countries was reported (U.S. Department of Education, 1983). Ultimately, four categories emerged as problematic

within the country's education system: content, expectations, time, and teaching (Borek, 2008). From *A Nation at Risk*, several recommendations for improvement emerged including an increased focus on challenging content for graduation requirements, the adoption of rigorous expectations and measurable standards, the extension of or more effective use of the time devoted to learning, the improvement of the preparation of teachers, and leadership accountability to achieve these reforms (Holmes, 2012).

There were many lasting effects of *A Nation at Risk*. There was a widespread public demand for, "more rigorous standards at all levels of schooling" and "standardized tests of achievement be implemented" (Borek, 2008, p. 572). Also, a call for the improvement of teaching and learning helped to establish the National Board of Professional Teaching Standards in 1987 to advance the high standards and quality of teaching for all teachers and learning for all students (National Board for Professional Teaching Standards, 2020).

Reform efforts in the 1990s, shaped by the outcomes of the previous decade, focused on improving standards while fostering greater accountability of educators based on student achievement on standardized assessments. As the government became more involved in improving the education system in America, there were two main education acts passed in 1994 that collectively accomplished these efforts: the Improving America's Schools Act of 1994 (IASA) and *Goals 2000: Educate America Act* of 1994 (U.S. Department of Education, 1995).

Goals 2000: Educate America Act became education reform law in March, 1994 which required states that sought out federal funding, to establish plans for standards and assessments to improve schools (What is Goals 2000: The Educate America Act?, 1994).

The act included eight goals intended to be achieved by the year 2000 for participating states:

> to improve learning and teaching by providing a national framework for education reform; to promote the research, consensus building, and systemic changes needed to ensure equitable educational opportunities and high levels of educational achievement for all students; to provide a framework for reauthorization of all Federal education programs; to promote the development and adoption of a voluntary national system of skill standards and certifications. (U.S. Department of Education, 2001, p. C-22)

The states retained the control and responsibility of overseeing local school boards for providing education to the students served. This responsibility included the implementation of what standards were taught as long as the high school graduation rate was at least 90% and students would be able to demonstrate competency over challenging course matter in multiple subjects (What is Goals 2000: The Educate America Act?, 1994).

The IASA of 1994 was also the reauthorization of the ESEA of 1965. Four key elements were emphasized for the comprehensive improvement effort. These included high standards for every student, improving teacher training to teach these standards, imparting local reform with the goal for accountability of results, and strengthening partnerships within communities and families and the schools (IASA, 1994). The IASA, along with *Goals 2000: Educate America Act,* were implemented to help establish a framework for standards-based education reform in states and communities (U.S. Department of Education, 1995).

The start of the 21st century, a growing consensus for nationwide education reform became more widespread to ensure Americans could stay competitive in a global economy (Camp, 2019). There was also a growing achievement gap between certain groups of students and their peers. In 2002, the No Child Left Behind (NCLB) Act was signed into law. This act not only significantly increased the federal role in holding states responsible for the academic progress for all students, but it also focused on schools increasing the academic achievement of specific subgroups of learners whose achievement trailed their peers (Klein, 2015a). To continue to receive federal funding, states were required to test students in specified grades and disaggregate the results for the student population and specific subgroups such as English Learners, students in special education, children from low-income households, and racial minorities (Klein, 2015a). This high-stakes student testing and increased accountability for student achievement levels resulted in penalties and sanctions for schools that did not make adequate yearly progress (AYP) by established deadlines (Camp, 2019). Klein (2015a) explained schools were monitored under the law by a process known as AYP where if a school fails to meet the state, "annual achievement targets for two years or more, either for all students or for a particular subgroup, it is identified as not 'making AYP' and is subject to a cascade of increasingly serious sanctions" (p. 4). Several schools failed to meet achievement levels as intended by NCLB by pre-determined deadlines and educators claimed that the law had been underfunded and federal spending had not reached the levels as promised when the act was initiated (Klein, 2015a).

Because the No Child Left Behind efforts showed a lack of evidence regarding academic improvement and with a transition in leadership in the White House, it was

foreseeable that new changes were on the horizon. President Barack Obama signed the American Reinvestment and Recovery Act in 2009 which allocated 4.35 billion dollars to education through the Race to the Top Initiative (RTTI) designed to prompt reform in K-12 education (U.S. Department of Education, 2015). This federal grant program awarded 11 states, most with disadvantaged districts and schools, funding over four years in exchange for the pledge to enact reform efforts to increase student performance, adopt more rigorous standards, improve teacher preparation programs, and use student performance data to play a major role in the evaluation of educators' performance (Center for Public Impact, 2016). According to results reported by the Center for Public Impact in 2016, states included in the RTTI experienced an average of 88% increase in adopting reform policies, where the average was 68% in states that applied but were not awarded funding, and only 56% in states that did not apply (Center for Public Impact, 2016).

While the states that participated in the RTTI experienced a surge in education policy reform, the outcome was not as promising as the data indicated. The program mirrored many criticized components of NCLB such as the heavy reliance on test scores to evaluate educators and entire schools, relying on a narrow set of strategies, and expecting to universally raise student achievement and close gaps in a short frame of time (Weiss, 2013). There were many discrepancies in the opinions of both policymakers and educators on the success of RTTI. In a report written three years after implementing RTTI by Weiss (2013), there were areas of progress and promise to RTTI such as an increase in investing in teacher preparation and improvement programs, but those were overshadowed by the flawed notion that states "hold teachers and schools accountable

before helping them establish foundations for success" (p. 4). Weiss (2013) reported, "The push to do too much too quickly with too few resources has led teachers, principals, and superintendents to express frustration and stress. Most critical, many of the major problems limiting student and school success remain unaddressed" (p. 4). In addition, Weiss (2013) concluded, "Long-term, comprehensive approaches are needed to attain real educational improvement, and that Congress must play a key positive role in making these approaches come to fruition" (p. 66).

The Common Core State Standards (CCSS) initiative was on the horizon as RTTI was in progress. Lessons learned from RTTI contributed to the development of the CCSS widespread effort across 48 states (Weiss, 2013). Beginning in 2009, state leaders from members of both the National Governors Association Center for Best Practices (NGA Center) and the Council of Chief State School Officers (CCSSO) initiated the effort to develop a system of consistent education standards (Common Core State Standards Initiative, 2020). This attempt was the most comprehensive attempt to develop and implement universal standards for students in K-12th grades in order for graduates to leave school prepared for college and the workforce (National Public Radio ED, 2014).

The CCSS movement gained initial acceptance, but then met challenges in most states for many reasons. There would be common definitions for proficiency as previous federal laws mandated that states give annual tests; however each state chose its own tests and proficiency levels making it difficult to make comparisons from state to state (National Public Radio ED, 2014). Other reasons for waning support were that some states' standards were not found to be as rigorous as the CCSS, a political divide about the growing federal role in education existed, and many states had groups of parents and

educators who opposed the CCSS (National Public Radio ED, 2014). In the early stages, teacher unions supported the standards, however when assessments were being developed, mandates from the NCLB law included requirements for evaluations of teachers to be based partly on student achievement on tests (Russo, 2014). Also, states began to experience varying degrees of success when implementing the CCSS. Among the issues found to impede the success of CCSS included the process seemed rushed and there had not been time to create a new curriculum to match the standards, teachers felt there also wasn't time to become familiar with the standards, and new tests were sporadically put into practice whether the new standards were effectively put in place or not (Russo, 2014).

As the RTTT and the CCSS education reform endeavors unfolded, it was evident that the NCLB mandates needed to be addressed. Although NCLB started an important national dialogue about the achievement gaps among traditionally underserved students, stakeholders recognized that updates were needed in the areas of expanding opportunities to all students while also supporting schools and educators (U.S. Department of Education, 2019). In December 2015, the Every Student Succeeds Act (ESSA) became the latest reauthorization of the Elementary and Secondary Act (ESEA) and would replace the NCLB Act of 2002 (U.S. Department of Education, 2019). States would continue the testing of students in grades 3 through 8 and once at the high school level, however, there would be a wide range for discretion of goal setting, how and what to hold districts accountable for, and how to intervene for schools with low performance measures (Klein, 2015b). Other changes included discontinuing the federal role in teacher evaluations, states now needed to identify and intervene on the bottom 5% of

students or if the graduation rate was 67% or less, or if subgroups were struggling (Klein, 2015b). To accomplish this, states were able to choose their own long and short-term goals that addressed the changes noted above while having the expectation that the sub-groups furthest behind their peers increase graduation rates and close the achievement gaps (Klein, 2015b).

Educational reform has a crucial part of the history of education in America. Federal, state, and local governments have strived to ensure all children receive a quality education by mandating changes in how students are educated. However, students are falling behind and an achievement gap exists where certain groups of students lag behind at a greater rate, "despite the hard, often heroic work done by many teachers and administrators" (Schmoker, 2006, p. 2).

School Improvement

Education leaders have been pivotal in the movement for school improvement (Ainsworth, 2017; DuFour & Eaker, 1998; DuFour & Fullan, 2013; Edmunds, 1979, 1982; Fleming & Raptis, 2003; Fullan, 2010, 2011; Lezotte, 1992, 2011; Lezotte & Bancroft, 1985; Marzano, McTighe, & Pickering, 1993; Matthewson, 2016; Nottingham, 2017; Sagowitz, 2008; Schmoker, 2004, 2006, 2018; Stiggins, 2007; Wachter, 2017). Several individuals in the history of American education sought to improve the quality of the educational experience and increase academic achievement and have contributed to the research. The strategy of leaders in educational reform was often to create systems with better standards, assessments, monitoring, and intervention (Fullan, 2011). However, Hattie & Zierer (2018) claimed, "People spark revolutions – through their visions, their beliefs, and through their dreams" (p. 166).

During the 1960s, educational researchers were divided on the factors that influenced student achievement. A report by James Coleman in 1966 suggested that educational achievement was determined by factors outside of the school setting, such as socio-economic status and family background, more than factors inside the school like the quality of teaching or the learning expectations set by the school staff (Fleming & Raptis, 2003). Suggesting that the variability in student achievement was due to factors primarily outside of the educators' control led researchers, such as Ronald Edmunds (1979), to further investigate and ultimately find proof that factors within schools did make a difference on student achievement. Edmonds' (1979) initial reporting in a mainstream influential journal focused on the results from studies of inner-city schools where low SES student achievement met or exceeded the national average.

As Edmonds (1982) continued to uncover evidence that the characteristics of schools were important in determining academic achievement, he claimed:

> certain characteristics of an effective school are (1) the principal's leadership and attention to the quality of instruction; (2) a pervasive and broadly understood instructional focus; (3) an orderly, safe climate conducive to teaching and learning; (4) teacher behaviors that convey the expectation that all students are expected to obtain at least minimum mastery; and (5) the use of the measures of pupil achievement as the basis for program evaluation. (p. 4)

Considered to be a pioneer in the Effective Schools Movement, Edmonds believed that research with a common body of knowledge regarding school conditions that afforded opportunities for all students to achieve should be used to inform school improvement practices (Edmonds, 1982; Fleming & Raptis, 2003).

Like Edmonds, Lawrence Lezotte also conducted research in response to the Coleman Report beginning in 1974 (Lezotte, 1992). Lezotte collaborated with Edmonds to enact long-range improvement efforts in smaller, non-urban schools. Lezotte and Bancroft (1985) reported, "Collectively, these activities lend support to the belief that individual schools can and do make a difference for students, and that it is possible to improve both teaching and learning in the context of the effective school" (p. 27).

Lezotte (1992) was also one of the original researchers in the Effective Schools Movement where schools that made a difference in achievement for all students provided the research base for the blueprint to school improvement. While researching effective schools, Lezotte (1992) also expanded and promoted school improvement efforts that included Effective Schools research framework. In 1991, Lezotte introduced the 7 Correlates of Effective Schools which were fundamental characteristics that were common in successful schools. These became the foundation of the Effective Schools Movement. Lezotte (2011) stated:

> Over the years, the Correlates have been refined and expanded to the following: Instructional Leadership, Clear and Focused Mission, Safe and Orderly Environment, Climate of High Expectations, Frequent Monitoring of Student Progress, Positive Home-School Relations, Opportunity to Learn and Student Time on Task. (p. 7)

Reform efforts in the 1990s, focused on improving standards while fostering greater accountability based on student achievement on standardized assessments. Lezotte (1992) reported that proponents of the Effective Schools Movement believed, "First, all students can learn. Second, the individual school has the control of enough of

the critical variables to assure such learning. Third, schools should be accountable to do so" (p. 34). Lezotte (1992) claimed that the Effective Schools Movement had evolved since its origins with the call for more results-oriented accountability of this time, that "virtually every stakeholder group outside of the schools feels strongly that assessing student outcomes is the 'bottom line' of school effectiveness" (p. 34-35). However, Lezotte (1992) questioned, "Who has the legal and moral authority to decide what's worth knowing and how we will know when we know it?" (p. 36).

As the debate surrounding accountability for student achievement continued, educational leaders began to research theories on standards-based assessment. In 1993, Robert Marzano, along with Jay McTighe and Debra Pickering, published *Assessing Student Outcomes: Performance Assessment Using the Dimensions of Learning Model*. According to Marzano et al. (1993), assessment is presented as part of the teaching and learning process where both content knowledge and skills should be taught and competency shown through performance tasks measured by rubrics. The goal was to change the way educators viewed assessment from relying solely on standardized testing scores to show a strong link to the teaching and learning process through feedback on how to improve (Marzano et al., 1993).

Sagowitz (2008) reported that Marzano had focused on translating theory and research, "into clear, practical programs and tools for K-12 teachers and administrators" (p. 3). Sagowitz (2008) claimed Marzano distinguished three pivotal facets to school improvement, including "fostering and sustaining effective instructional strategies system-wide, using classroom and grading practices to provide effective feedback to students, and building strong student academic vocabulary" (p. 3). Marzano also founded

the Marzano Research Laboratory where the U.S. Department of Education Institute of Education Sciences contracted Marzano and colleagues to analyze and disseminate best practices in schools by presenting research in accessible ways so educators could turn the research into action to improve student achievement (Marzano Research Laboratory, 2012).

Rick Stiggins was also an influential educational leader who centered his research on assessment reform to improve classroom instruction (Corwin, 2021b). Stiggins was the founder and president of the Assessment Training Institute which was a professional development company focused on assisting educators with transforming daily classroom assessments into comprehensive and balanced assessment systems (Corwin, 2021b). Stiggins (2007) suggested education reform was possible because the role of assessments has changed from merely ranking students to systems that were focused on helping all students be successful in mastering the standards. Stiggins (2007) claimed, "We need to move from exclusive reliance on assessments that verify learning to the use of assessments that support learning—that is, assessments for learning" (p. 22). Evaluating assessments for the quality of evidence they yield, while engaging students in analyzing their own data and the effect on their future learning paths were the core beliefs of Stiggins' (2007) research.

Educational leaders also sought out ways to connect the standards, assessments, and classroom instruction. Serving as a classroom teacher for 24 years, Larry Ainsworth brought this experience into his research and writing (International Center for Leadership in Education, 2021). After teaching, Ainsworth was the Executive Director of Professional Development at The Leadership and Learning Center for 14 years and then

later joined the International Center for Leadership in Education (2021). Ainsworth focused on "highly effective practices that were applicable across all grades and content areas: prioritizing and 'unwrapping' state standards, planning learning progressions, developing quality formative assessments, designing authentic performance tasks, and creating rigorous curricular units of study" (International Center for Leadership in Education, 2021, p. 1).

Ainsworth (2017) claimed there were timeless practices that educators could utilize to align standards, assessments, and instruction. He reported that classroom teachers were challenged with the difficult task to teach a multitude of standards in several content areas in a school year which led to the "inch deep, mile wide" coverage approach to standards (p. 2). Ainsworth suggested that teachers collaborate on ranking standards as either priority or supporting based on a set of common criteria to instill a system that would foster deeper learning for all students (Ainsworth, 2017).

Educational leaders who experienced success in implementing school improvement measures in school systems were influential in the school reform movement. Richard DuFour and Robert Eaker (1998) co-authored the publication *Professional Learning Communities at Work: Best Practices for Enhancing Student Achievement* in 1998. DuFour, a former principal and superintendent, led one of "the most recognized and celebrated high schools in the United States in the 1990s" (Wachter, 2017, p. 3). His work was seen as an important step into putting the Professional Learning Communities (PLC) concept in the hands of practitioners (Solution Tree, 2021). Mathewson (2016) reported that DuFour claimed PLCs, "have a profound impact on the

structure and culture of schools, as well as the assumptions and practices of educators inside them" (p. 2).

Michael Fullan, who has been referred to as an international authority on education reform, served as educational researcher, author, consultant, and former dean of the Ontario Institute for Studies in Education (Solution Tree, 2021). Fullan (2010) sought out to examine how change could be achieved successfully in education by identifying the right drivers, or factors, of change. Fullan (2010) stated, "The glue that binds the effective drivers together is the underlying attitude, philosophy, and theory of action" (p. 5). In studying the work of PLCs, Fullan claimed that to have an effect on student achievement, educators need to ensure that the qualities of PLCs are purposefully embedded in the culture and are also supported by central office and state authorities of education (Solution Tree, 2021).

Fullan also declared that the work of DuFour set the standard in the development of PLCs because educators could apply the resources and strategies included in Fullan's publications while learning by implementing them into their own practices (Solution Tree, 2021). In 2013, DuFour and Fullan co-authored *Cultures Built to Last: Systemic PLCs at Work*. In this book, three big ideas were credited as the core of the PLC process, "A relentless focus on learning for all students, a collaborative culture and collective effort to support student and adult learning, and a results orientation to improve practice and drive continuous improvement" (DuFour & Fullan, 2013, pp. 14-15).

Another successful educator, author, and researcher who was a proponent of PLCs as an important component of school reform was Mike Schmoker. His work began in the late 1980s with schools to develop strategic plans that were comprehensive and

often included more initiatives and goals than could be implemented or monitored (Schmoker, 2004). In his work, Schmoker (2004) stated educators believed that this process of creating broad strategic improvement plans annually would cast a wide net and serve as a catalyst for change; however, he experienced more success with, "having teams of teachers implement, assess, and adjust instruction in short-term cycles of improvement—not annually, but continuously" (p. 425). In 2004, Schmoker published an article supporting the establishment of PLCs for school improvement, which included research while noting the consensus of many educational leaders, indicating collaboration was the most effective tool to improve instruction.

Schmoker (2006, 2018) urged educators to examine instructional practices that yielded the highest gains in student achievement while only focusing on what is essential to improving student learning. Schmoker (2006) claimed results could occur "by addressing the monumental gap between common and effective teaching practices, and between typical and effective instructional supervision" (p. 3). Focusing on the practices and initiatives that were proven to have the most dramatic effects, while discontinuing unproven methods would allow educators to increase the potential of learning for all students (Schmoker, 2018).

James Nottingham's work as an educational leader focused on teaching students how to think instead of what to think (Challenging Learning, 2021). After not finding success as a student himself, Nottingham was inspired to challenge the educational norms of merely teaching to the standards by instead including the value of explicitly teaching the way to think critically and creatively (Challenging Learning, 2021). He was co-founder and director of Challenging Learning, an organization located in seven countries,

whose mission was to translate research into strategies that thrive in the classroom (Corwin, 2021a). Nottingham's most notable work was in the creation of The Learning Pit, shown in Figure 1., where the process of acquiring new learning was compared to climbing out of a pit through starting with a concept, grappling with it through investigation, and then forming new understanding (Challenging Learning, 2021). Nottingham's teaching framework included four stages, "concept, conflict, construct, and consider" (Nottingham, 2017, p. 4). Hattie stated, "Going through a learning pit tests our abilities, asks us to prove or justify our thinking, questions the truth or validity of ideas, seeks falsifiable hypotheses and tackles challenges with skill, energy and determination" (Hattie, 2017, p. xix).

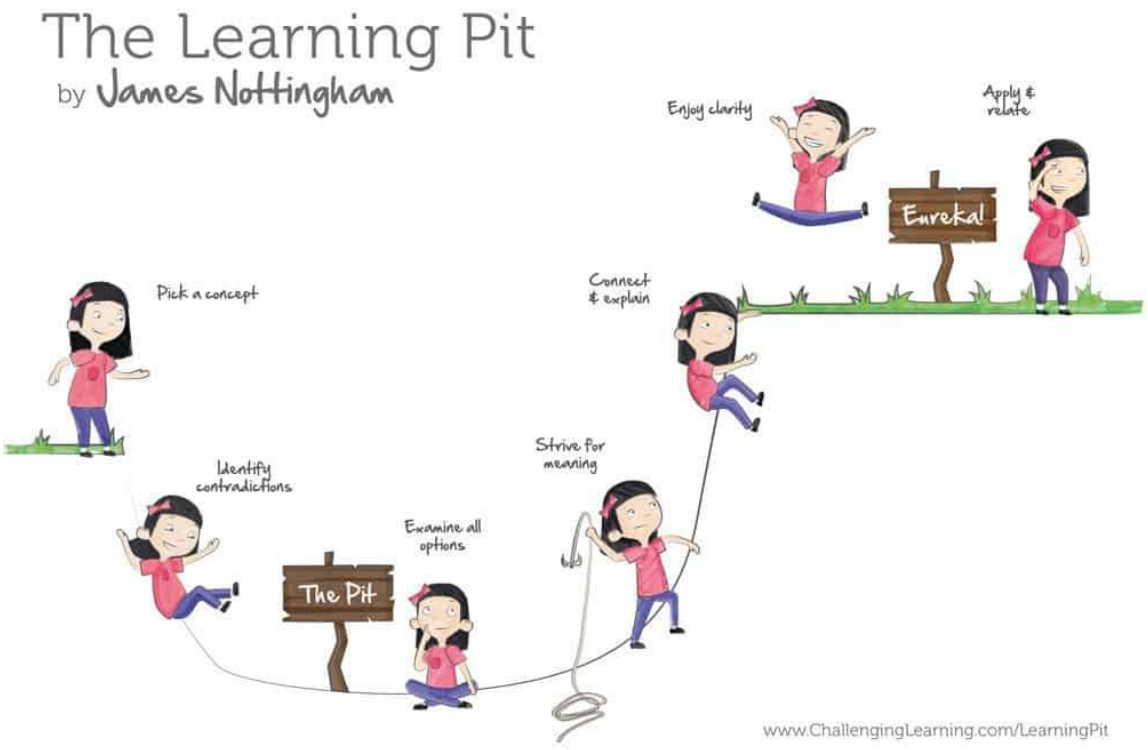

Figure 1. A picture example of The Learning Pit. From "The Learning Pit," by J. Nottingham, 2017, https://www.challenginglearning.com/learning-pit/#indepth. Copyright [2017] by James Nottingham. Reprinted with permission.

Visible Learning

The concept of Visible Learning was developed by Hattie in 2009. Hattie conducted a meta-analysis which compared many educational practices influencing learning outcomes for students that yielded greater results. Visible Learning became known in education after Hattie published *Visible Learning* in 2009 and then *Visible Learning for Teachers* in 2012 (Waack, 2019). According to Hattie and Zierer (2018), Visible Learning research identified specific practices that impacted student learning. According to Hattie and Zierer (2018), the Visible Learning research, which included more than 1,400 studies, for a method or intervention to positively impact student achievement, it needed to yield an average yearly gain, or an effect size of at least 0.40 which is equivalent to one year's learning growth. Hattie and Zierer (2018) reported that the Visible Learning research "seeks to get to the crux of this multitude of findings from educational research and identify the main message…the aim is to move from 'what works' to 'what works best' and when, for whom, and why" (p. xviii). In conjunction with educators exploring what works best, success "is based not only on competencies but more on mindframes; less on what we do and more on how we think about what we do" (Hattie & Zierer 2018, pp. 160-161).

According to Hattie (2012), the visible aspect in Visible Learning was related not only to the evidence of student learning being visible to teachers, but also that teaching was visible to students so they became active participants in their own learning. The learning aspect, "refers to how we go about knowing and understanding, and then doing something about student learning" (Hattie, 2012, p.1). Since the research was based on previous literature and studies, Hattie (2012) claimed that nothing about Visible Learning

was new; it just focused on the significance of proven excellent teaching philosophies and practices. More importantly, it showed educators that there was already excellence in our own educational systems, thus educators merely had to identify these successes in the high-impact zones and find ways to replicate it (Hattie, 2012). Hattie et al. (2016) questioned:

> What is the current impact of a particular teacher, school, or system leader on the outcomes that are sought for the learners for whom they are responsible? If this impact is above what is acceptable, then the aim is to continue this practice. If the impact is not yet where it should be, then the aim is to refine, adapt, and change. Validating the practice of those who systemically get higher-than-agreed effects is a major part of the Visible Learning story. (p. 3)

DeWitt (2018) stated, "Hattie's Visible Learning research has had a profound impact on educators and students around the world. The research has provided educators and leaders with the opportunity to have deep conversations around their practices in the classroom and school" (p. 7).

Visible learning meta-analysis, influences, and effect size. Shanahan (2017) reported the research conducted by Hattie consisted of meta-analyses which quantitatively combined the results of collections of independent research studies. Shanahan (2017) explains that this type of research accounts for, "differing sizes of effects and sample sizes, so what results is a true average—in other words, a better idea of the likelihood that something will work for you and how well it might work" (p. 749). Hattie chose this synthesis approach to avoid the perspective that small scale studies don't translate into results in daily practice (DeWitt, 2018). From the meta-analyses, the

Visible Learning research was used to calculate the effect sizes of 255 factors and the relationship they have on student learning (Arnold, 2011).

Hattie (2012) reported effect size, utilized in the Visible Learning research, was a method for comparing the results of different measures "on a scale that allows multiple comparisons independent of the original test scoring" (p. 3). Hattie (2012) claimed using effect sizes "allows relative comparisons about various influences on student achievement" (p. 3). Hattie (2012) reported that an effect size of 0.40 represents one year's worth of learning growth for students, while effect sizes that exceed 0.40 represent more than one year's growth and can be looked at to accelerate learning. Hattie and Zierer (2019) reported the Visible Learning data is structured into nine domains: "Student, Home, School, Classroom, Curricula, Teacher, Teaching strategies, Implementation methods, and Learning strategies" (p. 25).

Hattie and Zierer (2018) interpreted the distribution of effect sizes of the influences in learning by reporting that almost everything in a school can increase student performance; however, which one of the influences have the greatest impact that is more than the effect size of 0.40, or one-year's growth? Visible Learning research provided educators with more than just influences that had a positive effect on achievement because almost everything works; it's the matter of what can accelerate learning past the typical one year of growth expected (Hattie & Zierer, 2018). What is most compelling is that since the initial reporting of the Visible Learning highest influences on student achievement, not many have changed in over a decade, meaning the high-impact practices stood the test of time (Fisher & Frey, 2018).

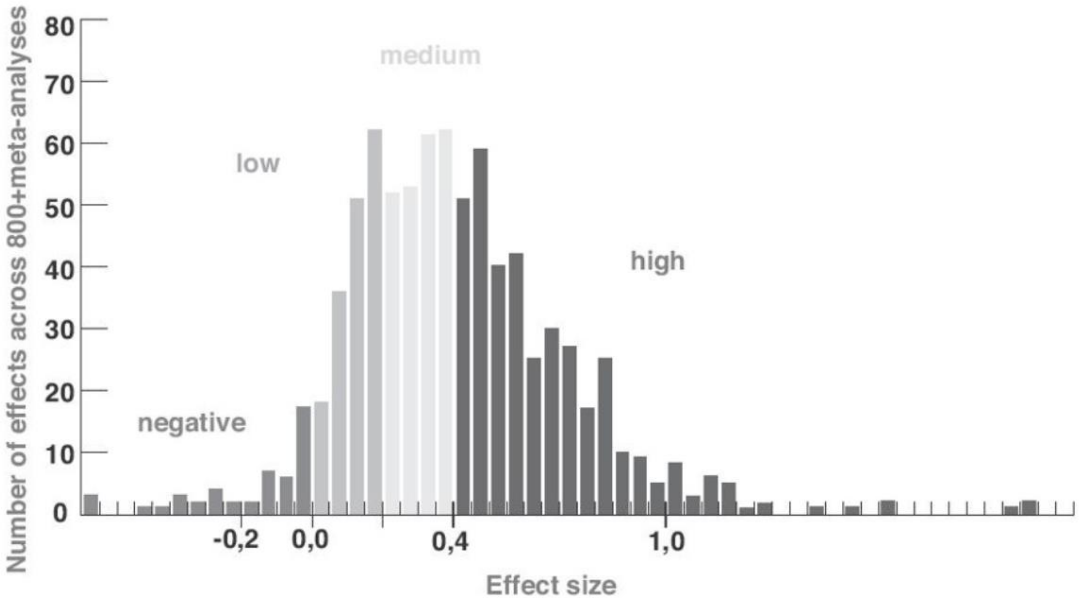

Figure 2. Distribution of effect sizes from visible learning research. From *10 Mindframes for Visible Learning* (p. xx), by J. Hattie and K. Zierer, 2018, New York, NY: Routledge Press. Copyright 2018 by Routledge Press. Reprinted with permission.

Figure 2. displays Hattie's (2009) published effect sizes for the most effective factors along with factors that yielded low to negative effects on student learning according to the Visible Learning research. Hattie and Zierer (2019) reported that when a new data set was published in 2017, Hattie chose not to report the results in a ranked list because Hattie noted, "too many (educators) started to say they were attending to or doing the top influences and stopping the bottom influences – I wish it was this simple…The rankings led to interest, but it is time to move on to focus more on the story" (p. 2). Fisher and Frey (2018) reported on the "unintended consequences" of Visible Learning citing that some educators viewed the ranked effect size lists of factors as, "a top 10 list and administrators focus on the highest effect size influences, irrespective of their complexity in implementation or value to the school" (p. 3). In addition, Fisher and Frey (2018) reported that educators implemented Visible Learning as "a one-shot overview of the evidence base" where the focus was placed on learning one

strategy in the top 10 list at a time and then moving onto the next one instead of matching the highest leverage strategies with the students' evidence of what they are learning or not learning (p. 3). The goal of educators should be to, "move beyond discussions of individual influences that are included on the Visible Learning list and instead use the evidence to think longer-term about the changes that must be made to ensure that all students learn" (Fisher & Frey, 2018, p. 3). Educators should influence the school's narrative by leading ongoing discussions surrounding the evidence of learning to highlight what students demonstrate as factors that have above average outcomes to learning (Hattie, 2015).

Visible learning mindframes. Hattie (2012) reported that a specific set of mindframes guide every decision and action taken in schools and if teachers and school leaders developed these, there was a greater likelihood that they would positively impact student learning. Hattie (2012) also claimed that adopting the mindframes must be done through deliberate efforts to support educators with the tools to know the impact they have on all students. In *10 Mindframes for Visible Learning* (2018), Hattie and Zierer outlined these ten mindframes:

1. I am an evaluator of my impact on student learning.
2. I see assessment as informing my impact and next steps.
3. I collaborate with my peers and my students about my conceptions of progress and my impact.
4. I am a change agent and believe all students can improve.
5. I strive for challenge and not merely "doing your best."

6. I give and help students understand feedback and I interpret and act on feedback given to me.
7. I engage as much in dialogue as monologue.
8. I explicitly inform students what successful impact looks like from the outset.
9. I build relationships and trust so that learning can occur in a place where it is safe to make mistakes and learn from others.
10. I focus on learning and the language of learning. (p. x)

The mindframes are not only about ability and knowledge, but also about educators' resolve and judgement about the learning process and should be the ongoing focus of professional development (Hattie & Zeirer, 2018). Fisher and Frey (2016) claimed these mindframes guide educators to search for evidence of their impact on student achievement and then making adjustments as needed along the way. The mindframes related to growth mindset, or the belief that a person's learning potential is unknown and qualities can be built upon through application and experience, perseverance, and taking risks to improve (Dweck, 2006). Donohoo et al. (2018) reported the mindframes are, "A shared language that represents a focus on student *learning* as opposed to *instructional compliance* often emerges. The perceptions that influence the actions of educators (are the mindframes)" (p. 42). Donohoo et al. (2018) claimed that educators who held these mindframes believed it was essential to measure their practice on the students' progress while also crediting, "success and failure in student learning is more about what they did or did not do, and they place value in solving problems of practice together" (p. 42). Hattie (2012) believed that the

mindframes should encompass educators' view of teaching and learning and would lead to making the most advantageous educational decisions possible.

Research about visible learning. In an effort to explore the "long-view" of the Visible Learning research, Fisher and Frey (2018) conducted a qualitative study as "teacher-scholars who have worked to understand the implications of the research in an effort to help schools improve" (p. 1). The study consisted of examining quotes from 26 teachers interviewed about their experiences in implementing practices from the Visible Learning research. The findings Fisher and Frey (2018) reported were that not one instructional influence was more useful than another. However, what were common themes were about what was essential to the successful implementation of Visible Learning research such as, "focusing on learning, understanding one's impact, ensuring clarity, understanding the science of learning, and using student performance as feedback for teachers" (p. 9). Fisher and Frey (2018) also concluded, "Visible Learning is more than a dataset; it's a way of thinking about the work we do" (p. 9).

In a mixed-methods study, DeWitt (2018) examined the post evaluations of approximately 1,000 participants who completed Collaborative Leadership workshops in the United Kingdom and North America. The Visible Learning research was the content of the workshops and the evaluations were completed immediately after the conclusion of each session (DeWitt, 2018). DeWitt (2018) reported the results showed:

> Over 80% of the participants responded that they strongly agree that the workshop was impactful and 17% answered that it was impactful. Additionally, when asked if they will be able to use the work in their school, over 95% of participants answered likely or highly likely. (p. 7)

DeWitt (2018) also provided another notable finding indicating a lack of support from their leaders and having other initiatives to implement as reasons teachers would not be able to implement their learning into their classrooms. In addition, DeWitt (2018) concluded, "It's not about the top ten influences" (p. 8). DeWitt (2018) noted educators who engaged in Visible Learning first needed to recognize the current reality of their students' learning, choose an influence to impact their learning, and evaluate the impact of that influence. DeWitt (2018) claimed the educators who engaged in this process, "will be able to move on to another influence and have a deeper impact on the learning in their school" (p. 8). In Hattie's (2012) publication, *Visible Learning for Teachers: Maximizing Impact on Learning,* he emphasized that educational leaders needed to concentrate on the effect of all influences in the school and capitalize on the factors with the highest impact. Hattie (2015) reported that educational leaders must choose what not to do as well such as discontinuing programs or initiatives and even abandoning ineffective teaching practices.

A study conducted by Lachner et al. (2018) centered on the effect of teachers' perceptions of the Visible Learning mindframes after engaging in continuing education studies at the University of Augsburg's Department of School Pedagogy. At the beginning and conclusion of the Visible Learning in Practice courses, the participants of various teaching-experience levels were given a questionnaire where they rated their own mindframes on a Likert scale (Lachner et al., 2018). The mindframes were categorized into "ability, knowledge, will, and judgement" and the results of the study indicated a positive increase in all four areas, an increase in teacher efficacy, and a shift in mindframes from the pre-survey to the post-survey (Lachner et al., 2018, p. 10).

Visible learning and school improvement. Schmoker (2006) claimed that educators know how to increase student learning to close the achievement gap by drawing on what they already know that has proven successful. Visible Learning provided researched educational influences and as Fisher and Frey (2018) stated, "A book published more than a decade ago is still being discussed in educational circles. It has something to say that matters. It's not simply that teachers matter, but rather how teachers think that matters" (p. 9). In addition, Pearsall (2018) indicated that improving instruction shouldn't equal more work for educators, however we should instead focus on highly effective instructional practices by eliminating practices of lesser impact. Pearsall (2018) stated, school improvement takes time and, "good teaching isn't just important for increasing student gains—it also has to be *sustainable* for teachers" (p. 34). Successful leadership through the lens of Visible Learning was evident in cultures where educators knew their collective impact and contributions to increased student achievement (Donohoo et al., 2018).

Top influences. Many factors that influence learning listed in the Visible Learning research (Hattie 2009, 2012) have an effect size greater than 0.40, which is equivalent to one-year's growth. These influences have also been consistently found to have notably high effect sizes during Hattie's (2009, 2012) span of research. In addition, several influences had a significant effect size and were prominent in the literature studied: collective efficacy, assessment capable learners, clarity, and feedback.

Almarode and Vandas (2018) reported, "Collective teacher efficacy has a high impact on student achievement with an effect size of 1.57" [which is] "almost four times the average effect size associated with one year of formal school" (p. 172). Donohoo et

al. (2018) claimed one factor to school improvement is building teams with collective efficacy who have shared beliefs that hinge on working together to achieve success and accomplish common goals. Donohoo et al. (2018) stated:

> Collective teacher efficacy is greater than three times more powerful and predictive of student achievement than socioeconomic status. It is more than double the effect of prior achievement and more than triple the effect of home environment and parental involvement. It is also greater than three times more predictive of student achievement than student motivation and concentration, persistence, and engagement. (pp. 41-42)

When a school culture had collective efficacy, educators persisted to overcome challenges, while in contrast where schools lacked collective teacher efficacy, higher levels of stress were present and failure was attributed to external factors outside of instruction (Donohoo et al., 2018). Once present, collective efficacy was sustained due to the improvement in student learning which motivated on-going school improvement efforts (Donohoo et al., 2018).

Another factor with a high effect size that has been studied is developing assessment capable learners. Hattie (2012) reported that assessment capable learners yielded an effect size of 1.33. Almarode and Vandas (2018) stated, "Students can make three years growth in one year's time. It means that kids that are significantly behind can make up three years of learning in one year" (p. 72). Fisher et al. (2018) reported, "Assessment is conventionally thought of as something we *do* to students. We measure their progress and report it to them, their families, and the public" (p. 47). Visible Learning puts the student in the forefront of the assessment cycle through empowering

teachers and school leaders to purposefully nurture skills of "motivation, goal setting, self-regulation, and feedback" in all learners (Fisher et al., 2018, p. 47). Almarode and Vandas (2018) claimed that students who can understand what is to be learned, how to achieve success, articulate their steps towards meeting success criteria, and set goals in the next step of learning are in the center of the assessment process. These students also know the strategies that work best for their learning while monitoring their personal goals (Almarode & Vandas, 2018). Learners who could personally convey their learning journey through assessment could answer the following questions: "Where am I going, how am I doing, and where to next?" (Almarode & Vandas, 2018, p. 72).

Hattie (2009) stated, "Learning is most successful when teachers see learning through the eyes of their students and students see themselves as their own teachers" (p. 238). Teacher clarity was reported by Hattie (2009, 2012) to have an average effect size of 0.75, which is almost double the effect size of 0.40 which marked a year of learning growth in the Visible Learning research. Hattie (2009) noted that the basis for providing clarity for students was to implicitly define the learning intentions along with success criteria so students knew what they were learning, why they were learning it, and what to do when learning was successful. Almarode and Vandas (2018) claimed that teachers needed to also know how all students were making progress in their learning and the next steps in the learning progressions for each student.

According to Hattie and Clarke (2019), feedback is, "information about the task that fills a gap between what is understood and what is aimed to be understood" (p. 3). Feedback was reported by Hattie (2009, 2012) to have an effect size of 0.73 which is also almost double one year's growth, which was determined to be 0.40 according to the

Visible Learning research. Fisher et al. (2016) claimed that students are open to feedback, however meaningful feedback is rare if the environment hasn't been built to foster actionable feedback. Fisher et al. also stated, "Students seek feedback that boosts their self-image. If feedback is vague and personal, they may selectively accept only positive comments…and defensively react to negative comments" (p. 17). Hattie and Clarke (2019) noted that feedback was one of the more inconsistent influences and was dependent on the feedback being actionable and an environment of high self-efficacy and trust existed. However, Hattie and Clarke (2019) explained, "That students are taught to receive, interpret, and use the feedback provided is probably much more important than focusing on how much feedback is provided by the teacher, as feedback given but not heard is of little use" (p. 5).

Summary

The literature review began with an overview of the history of education reform and then described the movement for school improvement. This foundational information was essential to understanding the research, educational leaders and their contributions, and the history of education in the United States. Further literature included the framework for Visible Learning comprised of the meta-analyses study, educational influences, effect size, and the mindframes. The relationship between Visible Learning and assessment, school improvement, along with existing research was reported. Chapter 3 explains the methodology used in the study including the research design, setting, sampling procedures, instruments, data collection procedures, data analysis and synthesis, reliability and trustworthiness, researcher's role, and limitations.

Chapter 3

Methods

The purpose of this qualitative study was to examine educators' perceptions of the impact of implementing the mindframes and practices of Hattie's (2009, 2012) Visible Learning research and their impact on teaching and learning. This chapter includes the research design, the setting, sampling procedures, and a description of the population. In addition, the instrumentation, the data collection procedures, and a description of the data analysis and synthesis are included. To conclude this chapter, the reliability and limitations of this study along with the researcher's role were explained.

Research Design

This study involved the use of a qualitative research design incorporating phenomenological responsive interviews to gather data. According to Lunenburg and Irby (2008), when phenomenological research is conducted, "The researcher is concerned with clarifying the specific and recognizing phenomena through the eyes of the participants" (p. 90). Through phenomenological research, the researcher is focused on interpreting the lived experiences of those interviewed (Bloomberg & Volpe, 2012). This approach was well suited to investigate the educators' perceptions of utilizing Hattie's research on the practices and mindframes of Visible Learning and the perceived impact on the educational experiences of educators and students in classrooms and schools.

Setting

The setting for the study was a single suburban Midwest district that began implementing Visible Learning in all Kindergarten through 12th grade schools during the 2017-2018 school year. The district was chosen because it was past the initial years of

implementation and therefore participants may have had deeper knowledge of Visible Learning methods in practice. The district served 12,550 students in grades K-12 and employed 956 certified staff members ([redacted], 2021). In addition, 84% of teachers had completed six or more years of classroom experience while 82% of teachers held a master's degree or higher ([redacted], 2021).

Sampling Procedures

According to Creswell (2014), for qualitative research, a purposeful selection of participants assists the researcher in understanding the problem and collecting the data. Because participants needed to meet specific criteria for the study, the criterion sampling procedure was used (Lunenburg & Irby, 2008). The members of the sample selected for this study were educators currently practicing in the field of education as K-12 teachers, administrators, and innovation and learning coaches in a single district that began implementing Visible Learning during the 2017-2018 school year. Educators chosen for this study had previous knowledge of the Visible Learning research and practices. This knowledge was gained through professional development sessions, professional readings, or observations in the learning environment. The sample included 18 participants who volunteered for the study that consisted of six teachers, six innovation and learning coaches, and six principals or assistant principals with three of each employed at the elementary and secondary levels. Potential candidates provided the researcher with contact information on the initial Email Invitation for Participation in the Study (See Appendix C). Potential candidates were then contacted via phone or email and consent forms (See Appendix D) were sent to educators who agreed to participate in the interviews. The following is a description of each participant at the time each was

interviewed. Pseudonyms have been assigned to protect individual identities. Each participant was assigned an alphabetic identifier (e.g., Participant A, Participant B, etc.). Employment titles are reflective of the 2020-21 school year. The average years of service of the participants was 18 years with a range of six years being the fewest to 29 years being the most in the sample.

Participant A was a principal at one elementary school.

Participant B was an elementary innovation and learning coach assigned to two elementary schools.

Participant C was a special education teacher at one middle school.

Participant D was an innovation and learning coach who served one middle school.

Participant E was an innovation and learning coach who served at one middle school.

Participant F was a middle school innovation and learning coach assigned to one school.

Participant G was an elementary innovation and learning coach shared between two elementary buildings.

Participant H was an elementary principal who served in one school.

Participant I was an 8th grade U.S. History and 7th-8th Computer Science Project Lead the Way teacher at a middle school.

Participant J was an elementary teacher who taught in a combined classroom of 4th and 5th grade students.

Participant K was an innovation and learning coach who served at two elementary schools.

Participant L was a middle school assistant principal who was assigned to one school.

Participant M was a second grade teacher at one elementary school.

Participant N was an assistant principal at one middle school.

Participant O was a 9th-12 grade Future-Based Framework Design Teacher at one secondary school.

Participant P was a 3rd grade teacher in an elementary school.

Participant Q was an assistant principal in one high school.

Participant R was an elementary principal at one elementary school.

Instruments

The instrument utilized in this study was an interview protocol composed of 12 questions (See Appendix E). These questions were derived from the literature review and the research reported by Hattie (2012) about Visible Learning. The questions centered primarily on the Visible Learning mindframes from *10 Mindframes for Visible Learning* by Hattie and Zierer (2018), to understand educators' perceptions of the impact of implementing Visible Learning. The mindframes are included with the interview questions for reference, but only the interview questions (IQ) and follow-up questions (FQ) were asked by the researcher in the interviews. The following interview questions, along with follow-up questions, were asked to address the research question:

Mindframe 1: I am an evaluator of my impact on student learning.

- IQ1. How do you evaluate your own impact on student learning?

    - FQ1. What methods do you use to assess your impact on student learning.

Mindframe 2: I see assessment as informing my impact and next steps.

- IQ2. How do you utilize assessments to inform your impact on student achievement?
    - FQ1. Tell me about how this information guides the next steps you take as an educator.

Mindframe 3: I collaborate with my peers and my students about my conceptions of progress and my impact.

- IQ3. Talk about how you collaborate with peers.
    - FQ1. Explain how you discuss progress and your individual impact on student achievement.

Mindframe 4: I am a change agent and believe all students can improve.

- IQ4. How would you go about initiating change to improve student achievement?
    - FQ1. Explain how you help students believe they can make progress.

Mindframe 5: I strive for challenge and not merely “doing your best.”

- IQ5. Tell me how you challenge yourself.
    - FQ1. How do you challenge students?

Mindframe 6: I give and help students understand feedback and I interpret and act on feedback given to me.

- IQ6. Explain how you interpret and act on feedback offered to you.
    - FQ1. How do you help students understand feedback?

Mindframe 7: I engage as much in dialogue as monologue.

- IQ7. How do you engage students in their learning?

- FQ1. Describe how student collaboration can impact the learning process.

Mindframe 8: I explicitly inform students what successful impact looks like from the outset.

- IQ8. How do you inform students about what successful achievement criteria looks like?

Mindframe 9: I build relationships and trust so that learning can occur in a place where it is safe to make mistakes and learn from others.

- IQ9. How do you build trust and an environment where it is safe to make mistakes and learn from others?

Mindframe 10: I focus on learning and the language of learning.

- IQ10. Explain how you gauge the prior knowledge and experiences of your students.
- IQ11. Explain how your educational practices have changed or not since you learned about Visible Learning.
- IQ12. What positive or negative impact have you experienced in students' learning related to the Visible Learning research?

An expert panel of 3 educators reviewed the questions individually and provided feedback regarding the relevance of the questions. The panel of educators were volunteers with the same background and requirements as the study participants, but who were not selected to be interviewed. The questions were then revised, based on the expert panel's suggestions, and pretested through a mock interview setting with an educator who volunteered but was also not selected to participate in the study. The

feedback from the panel and the educator who participated in the mock interview resulted in 12 interview questions and seven follow-up questions listed above.

Data Collection Procedures

The request to begin collecting data for this study was made to the Baker University Institutional Review Board (IRB) and granted on February 23, 2021 (See Appendix A). Before data collection began, consent from the school district was attained through email submission of a research proposal. This request was submitted to the superintendent of the school district. A document with consent to conduct this study and send emails to current K-12 teachers and administrators in the district to gather a sample was approved on March 25, 2021, with the stipulation that individual and identifiable information would not be shared (See Appendix B). The researcher sent out emails to educators explaining that there was an opportunity to participate in a research project. The email communication included information regarding the purpose of the study, the requirements of the participants as volunteers, and the next steps if selected (See Appendix C). After a participant agreed to participate in the study, the researcher used the criterion sampling method to select participants based on the pre-determined criteria of having previous knowledge of the Visible Learning research and practices. Criterion sampling was also used to understand the implications of this knowledge and the perceptions of the participants. A consent form (See Appendix D) was issued and collected. The consent form listed the purpose of the study, along with the method the interview would occur, either in person or web-based video conferencing technology. Participants indicated on the form that they agreed to be interviewed by the researcher.

For convenience and preference, each participant selected the format for the interview from in person or web-based video conferencing technology.

Each participant who had volunteered was given a date and time for the interview that was mutually convenient for both the participant and researcher. The 12 interview questions that each of the 18 participants were asked in separate interviews sessions ranging from approximately 20 minutes to 40 minutes were conducted by the researcher following the interview protocol (See Appendix E). Interviews were recorded by the researcher and stored on a secured drive. This was determined to be the most efficient way in gathering participants' responses for this type of study.

Data Analysis and Synthesis

According to Lunenburg and Irby (2008), "Qualitative research examines the patterns of meaning that emerge from data gathered; such patterns are often presented in the participants' own words" (p. 89). After the interviews, recordings were transcribed by the researcher and each transcript was placed in chronological order and assigned an alphabetical identifier (e.g. A, B, C, etc.) to ensure anonymity. To accurately complete the transcriptions of the interviews, the researcher utilized the online tool called Trint. The process of member checking was utilized, transcripts were given to the participants for their review prior to the researcher's analysis. The transcripts of the interview responses were returned to each participant to read and revise. Participants were asked to make any changes they thought necessary, including corrections, deletions, and additions. According to Bloomberg and Volpe (2012), member checking contributes to the credibility of the research by ensuring the participants' ideas have been represented accurately.

To analyze the data, the researcher first read all of the transcripts multiple times. When analyzing qualitative data, the researcher examines the data and seeks out patterns and organizes them into themes in the process referred to as coding (Creswell, 2014). The researcher used the analysis for this study involving the use of coding to identify common themes in participant responses. By examining the transcripts line by line, the researcher identified the prevalent themes. They were then coded and compared to determine the frequency of their occurrences within the responses. The researcher then utilized a system of color-coding to highlight key words and phrases in each response that focused on the research question.

A spreadsheet was created that allowed for all key words and phrases for a specific question from each respondent to be viewed collectively. The researcher was then able to analyze the themes within the data to determine the patterns that existed across participants' responses to answer the research question in this phenomenological qualitative study. The spread sheets were color coded according to themes from key words and phrases while notable quotes were also identified and highlighted. The participants' responses were then grouped together by common themes and organized in the analysis for subthemes.

Reliability and Trustworthiness

In efforts to establish reliability and trustworthiness in this study, the following measures were taken. First, an expert panel of current educators with an understanding of Visible Learning reviewed the questions individually and provided feedback regarding the relevance of the questions. The questions were then revised and pretested through a mock interview with an educator who did not participate in the study. To help ensure the

trustworthiness of the study, member checking was utilized. Once the interviews were completed, a transcript was sent to the participants for review. The researcher requested that participants make any changes needed to be as clear and as truthful as possible prior to the analysis of the data. This process optimized accuracy in representing the responses to the interview questions.

Researcher's Role

At the time of the study, the researcher was an elementary principal in a suburban school district. Within the 20 years of the researcher's career in education, a wide variety of valuable responsibilities were experienced such as classroom teacher, instructional coach, and assistant principal. Leading up to and during the study, the researcher presented at the National Visible Learning Conference in 2018 and 2019. In addition to this, the researcher also presented the school's experience with Visible Learning mindframes and practices at the district level.

Two elements, objectivity and truthfulness, are key for a researcher to maintain at all stages in the qualitative study process (Cresswell, 2014). Because the nature of this study required at least a base of knowledge of Visible Learning practices and research, the researcher had preconceived ideas based on personal experiences in education. The researcher imparted a specific script for the interview questions (See Appendix E) in order to observe and listen closely to the interviewees. In an effort to avoid personal bias, the researcher continually maintained objectivity while also being cognizant of potential bias and was intentional to avoid this during all aspects of the research process.

Limitations

There were factors that "may have an effect on the interpretation of the findings or on the generalizability of the results" (Lunenburg & Irby, 2008, p. 133). In this study, one of the limitations was that the research was dependent upon the participants having knowledge of the research and practices of Visible Learning. The extent of this knowledge may have varied due to the amount and type of professional development each participant experienced. Finally, participants were not directly observed by the researcher in their current educational settings. Findings were solely based on the subjects' perceptions and understanding of Visible Learning and the honesty of the verbal responses.

Summary

This chapter described the research methods used for the study, including the research design, the sampling procedures, and instrumentation. The data collection procedures, along with the plan to analyze this data was reviewed. This chapter also described the reliability and trustworthiness of the study, the researcher's role, and the limitations outside the control of the researcher. In Chapter 4, the results of the study are presented by delivering the research findings derived from the results of the interview questions.

Chapter 4

Results

This chapter includes the results of analysis of the transcription of the study interviews of the participants. The purpose of this qualitative study was to examine the perceptions of implementing the mindframes and practices of Hattie's (2009, 2012) Visible Learning research and their impact on teaching and learning in their current field. This study was also conducted to gain an understanding of how these educators perceived the impact of implementing Visible Learning on instruction and the experiences for their students, along with themselves, in classrooms and schools. Finally, this study examined the educators' perceptions of the impact of the mindframes, or core beliefs, of Visible Learning used by these educators. The sample selected in this study were 18 educators currently practicing in the field of education as building leaders, innovation and learning coaches, or teachers in a Kindergarten through 12th grade setting in a single district that began implementing Visible Learning during the 2017-2018 school year. Educators chosen for this study possessed previous knowledge of the Visible Learning research and practices.

The analysis of responses to the interview questions uncovered common themes related to the mindframes of Visible Learning. Five major themes were indicated in the data: impact on beliefs, impact on the learning process, impact on instruction, impact on assessment, and overall impact on teaching and learning. The themes that emerged from the coding and analysis of the interview transcripts are identified and explained in the findings.

Finding 1: Impact on Beliefs

The 10 Visible Learning Mindframes were used to develop the interview questions to gain a perspective about how educators' beliefs were affected since gaining knowledge of Visible Learning. Four subthemes emerged regarding beliefs of educators: growth mindset, learner dispositions and common language, culture and relationships, and collaboration. To demonstrate participants' perceptions about the impact on their beliefs, direct quotations are included.

Growth mindset. Thirteen respondents indicated having a growth mindset was imperative to implementing Visible Learning and was directly related to mindframe 4, "I am a change agent and believe all students can improve", mindframe 5, "I strive for challenge and not merely 'doing your best'", and mindframe 6, "I give and help students understand feedback and I interpret and act on feedback given to me" (Hattie & Zierer, 2018). Participants I, J, and R mentioned that education is constantly evolving and believed it was important to continuously look for ways to improve. Participant I stated, "This is my twenty-seventh year…and I'm not teaching the same year 27 times. So, I am constantly trying to revamp my curriculum using new content and new techniques." Several participants indicated they were quick to initiate change when needed, sought out professional growth in areas of opportunity, and valued continuous learning. Participant K remarked,

> I challenge myself just to make sure I always maintain that stance of a learner. I also throw myself into situations that force me to be a learner. If I just stay in a comfort zone, I am always doing something that I know I can do, I'm not going to grow at all. I think to take that to the next level, I think it's important for

> teachers, and ultimately students, to see me put myself in positions that I'm going to have to be a learner.

Participants D and Q referred to growth mindset as a collective effort in their schools. Participant D stated, "We're here to grow and learn. That's what we've realized even as a staff. We've had to go back to step one and build up the mindset for change before we've been able to tackle the work." In participant Q's school, the staff encouraged students to take steps towards growth by utilizing a, "growth mindset and asset-based language and really trying to always encourage kids to take that next step. Maybe you weren't ready then, but we think you're ready now and let's go for it."

Learner dispositions and common language. Another factor that was categorized as a subtheme several participants indicated as impactful was the language used in Visible Learning by students and staff which was linked to mindframe 5, "I strive for challenge and not merely 'doing your best'" and mindframe 10, "I focus on learning and the language of learning." (Hattie & Zierer, 2018). Participant E, N, and Q noted the language used regarding learning, either formally or casually, made an impact on student learning and their learning environments. Seven participants believed learner dispositions, or the common language about the traits used by successful learners, impacted learning. Participant D noted teachers were intentional about instructing dispositional thinking by discussing, "problem solving and perseverance, and grit. Naming those as they're learning, celebrating their mistakes, celebrating when it's hard and when they overcome." Participant H explained, "the last two years, we have really seen the power of dispositions come into play. As we have started to infuse it in many components of our day…the vocabulary of dispositions is growing and kids are latching

on." Participant K claimed that teaching students to use the learning dispositions was as valuable as teaching the content and stated, "If they don't have that (learning dispositions), they're not going to believe in themselves and it's such an uphill battle for them."

Another term that emerged as common language from the participants' data was being in The Learning Pit, which is the process of making mistakes and grappling with the learning challenges while utilizing strategies to be successful. Out of the nine participants who discussed this, participant I claimed by using the same vocabulary, "it doesn't matter if it's math or science. Kids know what the pit is and the vocabulary part is what's really important because then everybody knows what you're talking about." Half of the 18 participants indicated the importance of students understanding that mistakes are a part of learning and modeling this process had been powerful. Participant E specified, "It's really just differentiating between the performance zone and the learning zone and really using those experiences to drive the language we use with kids so they know, hey, this is a practice, this is a try." Participant P explained modeling mistakes and being in The Learning Pit was, "my best growth mindset learning moments when something's just not working…So just showing we're constantly learning and figuring things out and we have to be able to work through them."

Culture and relationships. The educators' perceptions of their beliefs on the impact on the culture of the classroom or building, and on relationships with educators and students, were cited frequently during the interviews and correlated with mindframe 2, "I see assessment as informing my impact and next steps", mindframe 3, "I collaborate with my peers and my students about my conceptions of progress and my impact", and

mindframe 9, “I build relationships and trust so that learning can occur in a place where it is safe to make mistakes and learn from others” (Hattie & Zierer, 2018). Of the 18 participants, 12 noted these as impacted since learning about Visible Learning with ten participants citing this more than once during their interview. Participants H, L, M, and N highlighted building strong relationships with students. Participant N stated, “It’s creating that relationship with students; making sure that it’s a two-way conversation. It’s not what we’re doing to them, it’s what we’re trying to do to support them.” Participant N also commented that students were more willing to take risks when they trust adults and have built positive relationships with them. Additionally, participants D, E, F, K, and L claimed that the culture of the school and classroom was important to student learning. Fostering a sense of belonging and a safe environment to take risks was noted. Participant E stated, “If you provide experiences where students can be open and honest, give their perspective, everyone feels heard.” While participant K claimed the importance of having, “that culture in your classroom where students feel like they belong and they feel like they are connected to not only the teacher, but also to the students around them.”

Several participants also mentioned building relationships and a culture with adults was evident. Participants A, L, O, Q, and R shared the value of building relationships as a staff while participants R and E noted those relationships led to building collective teacher efficacy, which is one of the highest effect sizes noted in Hattie’s research. Participant E commented, “In partnership with Visible Learning, we really just had to start at the core of teaching and learning and really identify what self-efficacy meant, what collective teacher efficacy was, and how to gain that.” Participants

A, N, O, and Q noted that a culture that was supportive of risk taking and innovation for educators was also evident since implementing Visible Learning. Participant O remarked,

> Every single day, we talk as a staff about things we're seeing with our kids, with different groups of kids, with kids involved in a certain project…We all value the same thing philosophically and we all believe the same things philosophically. As a result, that allows us to really have a ton of autonomy and trust in each other with how we go about our processes. But we also have to always come back and challenge each other all the time with what we are doing and talk about new ideas.

Collaboration. The participants' perceptions of collaboration, whether it is from student-to-student or adult-to-adult, was repeated frequently in the data. Collaboration was linked to mindframe 3, "I collaborate with my peers and my students about my conceptions of progress and my impact", mindframe 7, "I engage as much in dialogue as monologue" and mindframe 10, "I focus on learning and the language of learning" (Hattie & Zierer, 2018). The majority, 16 out of 18 participants, mentioned student collaboration. Half of those participants noted that student collaboration was a skill that students needed to learn and practice in order for collaboration to be valuable. Participant C claimed, "It can be very valuable and it can also be destructive if it's not closely monitored and watched." while participant A noted, "It could impact (learning) negatively or positively or (it) might not have an impact at all. I really think it matters how the teacher sets it up…There is upfront training on student-to-student feedback." Two participants noted how student collaboration had evolved since focusing on Visible Learning. Participant F claimed, "We grow as learners through collaboration…Years

ago, collaboration was going to be group work. You're just jumping into what you're doing, but there is so much more." Participant Q also explained, "Student collaboration is incredibly meaningful when learning is designed around authentic problems that don't have one answer, that allow for the synthesis of multiple ideas (and) multiple resources."

Thirteen participants discussed the value of collaboration among educators in the interviews. All of the participants noted that collaboration was more than a conversation with other educators. Participant K stated,

> As far as what it looks like, I think having it (collaboration) grounded and focused on what that specific learning intention is, then what we're seeing from the student based on evidence, and then what we need to be doing moving forward. To me, those are the important pieces of collaboration. Otherwise, it's just talking about stuff. I'm not a fan of just talking about stuff.

Eight participants indicated that collaboration among educators should be focused on students. Participant G explained, "I think that when we are doing it (collaboration) at the highest level, we're having conversations about individual students and what they're doing. That's something that informs my work and lets me know that we're doing the right work."

Finding 2: Impact on the Learning Process

Four subthemes emerged regarding the impact of Visible Learning on the learning process: learner agency, engagement and relevancy, student evidence, and clarity. To demonstrate participants' perceptions about the impact, direct quotations have been included. The mindframes of Visible Learning that related to the subthemes were also reported.

Learner agency. The process of students being the central person in charge of the learning process was stated in 10 participants' interviews. Learner agency was related to mindframe 5, "I strive for challenge and not merely 'doing your best'" and mindframe 8, "I explicitly inform students what successful impact looks like from the outset" (Hattie & Zierer, 2018). The participants noted since initiating Visible Learning, their practice had shifted to having students take ownership of their learning. Participant R claimed, "Our Visible Learning initiative has helped with that. It's given us a focus and permission to have learner agency" while participant H mentioned,

> I would say the biggest thing that has changed for me, and I was never a lecturer (and) I felt like my kids were the ones doing the thinking. But as far as what I hadn't done that I would say I do now is having the kids own every step of their learning along the way.

Participant H reported that since initiating Visible Learning, "the last three years, I have learned more and seen more student agency and ownership in learning than I ever have."

Other participants realized learner agency needed to be included intentionally by educators in the learning process. Participant B claimed,

> I think we do need to set aside time for it; for students and teachers to understand the whole mentality behind learner agency and that we do have the power to take control and make a difference for ourselves and not have to wait on someone else.

Participant R claimed that the impact of learner agency has been a realization at the school level, but educators were still investigating ways to make it more universal. Participant E noted that learner agency had been a challenge because, "we have created

such a compliant system for them that they're comfortable just letting us tell them. Students are accustomed to teachers telling them what to do."

Engagement and relevancy. Student engagement and making the learning process relevant was connected to mindframe 4, "I am a change agent and believe all students can improve", mindframe 5, "I strive for challenge and not merely 'doing your best'", mindframe 8, "I explicitly inform students what successful impact looks like from the outset", and mindframe 9, "I build relationships and trust so that learning can occur in a place where it is safe to make mistakes and learn from others" (Hattie & Zierer, 2018). Of the 18 respondents, 14 mentioned these components as having had an impact after the Visible Learning initiative began. Seven participants remarked engagement was a process of not only finding out student's interest, but also finding out what concepts they had already mastered. Participant N stated engagement was finding out, "what is it that they want to learn, how are they going to learn it, and then having them be a part of the solution." Another finding was that engagement starts with relationships, but participant E noted engagement can come when, "you expose them to content, project-based learning, real-world learning, critical thinking (and) problem solving. Those things are going to get the students more actively engaged in the process…The learning has to go somewhere." Participant G explained,

> I think that engagement is not something you can do to kids through an exciting lesson plan or through entertainment value. I think kids are engaged in their own learning when they deeply understand the learning process and where they are in the learning process…Then it comes back to those mastery moments where

> they're seeing themselves move through the learning process and move through mastery of new skills.

Making the learning relevant to the learner was noted by 8 participants. Participants mentioned that there needed to be a personal connection established with the learner and the content to be gained. Participants D, I, and P commented that students needed to see how learning was applicable to the real world and connected to their personal lives. Participant I stated, "When we do a project, there's always that personal connection back to the student. If they can show me that they have a personal connection to it, that generally tells me that they have a better understanding." Participant Q reported that making learning relevant is also an intentional process for teachers. Participant Q cited,

> Teachers that do it best are masterful at making it relevant to the kids in some way, whether that is through a personal connection or through a really engaging, authentic problem…It's just a really strong command of highly effective instructional strategies that actively engages kids. I don't have a lot of patience for, "I put it out there, and so they should just get it. They should just figure it out." Yes, we want kids to wrestle with things, but there's a really masterful art to designing learning to make that happen that really engages kids deeply.

Student evidence. Another subtheme was that students shared their learning through providing evidence. Mindframe 1, "I am an evaluator of my impact on student learning" and mindframe 7, "I engage as much in dialogue as monologue" were related to this finding (Hattie & Zierer, 2018). From the data collected, 12 participants, some who commented more than once, said that student evidence was impacted through the

initiation of Visible Learning. Seven participants explained that evidence of student learning has shifted from completing a product to students describing the learning process as evidence. Participant B stated, "Student evidence is at the core of everything we do and guides and facilitates all of our next steps based on the criteria and based on what's best for that student or group of students." Participant B continued with, "Everything goes back to student evidence and not necessarily meaning assessment scores or grades; perhaps just the growth that you're seeing based on the criteria that's been set or constructed with students." Participant E mentioned, "I try to look more at student evidence, not necessarily assessment." Participant R said students had started to focus on the product as influenced by criteria met or skills mastered instead of earning points on a project. Participant F noted,

> That is a new mindset for many teachers…Why don't we give the kids all the answers to this math test and just say here it is. Here are the answers and then (have them) show the work. I think it's just a completely different idea that seeing something at the end is not cheating."

Another aspect that was mentioned in the data by eight participants was the process of allowing students to show learning evidence in multiple ways. Participants A, F, and H recounted experiences with students showing evidence of learning through recording videos, listening to student conversations and interviews, and students tracking mastery on goal record papers or boards. Participant P claimed, "The ultimate learning is when they're able to prove it in multiple ways, or show it in multiple ways, or just even have a clear understanding that we can do things differently and it's still right."

Participant H stated,

> With Visible Learning, the last three years have been so good for me to see that kids learn in different time frames and in different ways. But what's been powerful for me to see is, instead of me giving a paper pencil test, there are so many more ways to track what they know and how they can explain they know it.

Clarity. Mindframe 8, " I explicitly inform students what successful impact looks like from the outset" and mindframe 10, "I focus on learning and the language of learning" connected with the process of adults and students gaining clarity in the learning process (Hattie & Zierer, 2018). Six participants noted the process of gaining clarity in the data with four of them citing clarity multiple times. Participant K claimed,

> I think out of all of it (Visible Learning)…the thing that has impacted me the most has just been that clarity piece. Not just student, but teachers too. Teacher clarity and student clarity has really opened my eyes and has really changed my view so much on education over these last couple of years.

Participant C stated, "I think their (students') input on clarity is the most valuable…Now that I think of it, clarity has been one of the biggest roadblocks and if you don't know what you're looking for, they don't know what you're looking for." Participants F and K noted that students were active in the process of gaining clarity and participant K mentioned, "I am all in when it comes to clarity and it has kind of turned into ultimately the most important thing right now when it comes to student learning."

Participants E, F, H and Q explained the process for students to gain clarity for their learning was by focusing on the following questions: Where am I going, How am I

doing, and Where to next? Participant H explained students were able to describe their learning process when the school focused on asking students these questions throughout the school year. Participant Q also stated, "For students, it goes back to that clarity piece of really understanding here's where I am, here's where I could be, (and) here's where that next move is."

Finding 3: Impact on Instruction

Three subthemes emerged regarding the impact of Visible Learning on instruction: learning progressions and success criteria, exemplars and goal setting, and feedback. To demonstrate participants' perceptions about the impact, direct quotations were included. The mindframes of Visible Learning that related to the subthemes were also reported.

Learning progressions and success criteria. Sixteen participants indicated instruction was impacted by Visible Learning practices where students not only knew the standards as learning goals, but also were aware of the skills included to achieve success in mastering those standards. Mindframe 5, "I strive for challenge and not merely 'doing your best'" and mindframe 8, "I explicitly inform students what successful impact looks like from the outset" were linked to using learning progressions and success criteria (Hattie & Zierer, 2018). Participants E, F, G, and I highlighted the impact of learning progressions. Participant E claimed,

> My practices have gotten more intentional…When I think about learning targets (progressions), I used to think of them as a simplified version of the standard, and now I look at it more as not really stepping stones, but more like rocks on a pond.

> Like you could go this way, but at the end, you're still going to end up in the same place.

Participant G claimed that learning progressions allowed teachers to identify pre-requisite skills to a standard when identifying students' missing skills and the next steps for learning. Participant F stated the best part of the learning progressions is, "the students visibly see where they have started and where they are right now…We had a conversation with a student and they now understand the reason for our pretests" and added students found out what they know or don't know and also what they will learn.

In addition, 16 respondents indicated that success criteria was also an impactful instructional tool after implementing Visible Learning. Participant R stated that if teachers knew the outcome of a unit, "we need to give them (students) criteria in which to get there." while participant L noted, "With the success criteria, students know exactly where they need to be and progress to." Participant E claimed teachers' conversations were,

> Always surrounded by the success criteria. We keep the success criteria at the foremost part of the conversation and then we just match the different experiences. So if we're talking about data, we match the data with the success criteria. If we're talking about planning for instruction, we pair it with the success criteria.

Out of the 16 respondents, 8 claimed that co-creating the success criteria with the students was more impactful than simply providing the success criteria created by the teacher. Participant G stated, "Informing students of the success criteria is kind of the baseline where you might start…I think that if you truly want them to have a deep

understanding, the co-creation of success criteria is where you want to be." Participants D and N noted that having students as a part of the process in creating what success looked like increased engagement more than students being told what they need to learn. Participant H claimed,

> What we've seen and learned through Visible Learning, but what we see and are starting to see in our classrooms, is the teacher and the students are building that (learning) by co-constructing the criteria together. It's pulling in what the kids know needs to happen and where they're learning, but it's adding their voice and choice too.

Exemplars and goal setting. Fourteen participants indicated instruction was impacted by Visible Learning practices when teachers provided students with exemplars, or examples of student work that matched the learning progressions and success criteria, and then used in the process of students setting goals for their learning. Mindframe 2, "I see assessment as informing my impact and next steps", mindframe 4, "I am a change agent and believe all students can improve", mindframe 5, "I strive for challenge and not merely 'doing your best'", and mindframe 8, "I explicitly inform students what successful impact looks like from the outset" were linked to the practices of utilizing exemplars and having students involved in setting goals (Hattie & Zierer, 2018). Nine of the participants mentioned the use of exemplars was an important instructional factor. Participant I stated, "Having anchor examples (exemplars) is so big because they need to know a little bit of where they need to at least start." while participant E claimed, "It's really great when you have exemplars because then it's visible to them. We could talk all day just about what we expect from kids, but until they see it, it makes it that much

harder." Participant F highlighted a shift in thinking when stating, "We used to feel like if we showed them what we wanted at the very end, that was cheating." Participant C claimed that it was important to be intentional about the exemplars chosen because, "exemplars are not the same thing as one example and one example can't be a collegiate-level-teacher example." Participant Q continued with the importance of,

> Giving kids a range of exemplars of some that are quality and some that are not. The power of them (students) being able to evaluate that and to discern what makes this better of more quality…that's when kids best know what success looks like and are most able to make that happen.

Nine participants shared their perspective on the value of students who had engaged in the process of goal setting. Participant C shared that although this was a valuable process, it was, "challenging for them to understand that you can grow without being perfect. I've challenged them to look at growth and measure it in increments." Similarly, participant R noted, "We tell them that we're trying to work toward improvement. We've come a long way and students are taking ownership of setting goals." Participant A claimed,

> A lot of time is spent on unpacking and understanding how to set goals, how to measure goals, how to reflect upon goals, and how to set new ones…It's more than just posting it up and having a paper chart or having kids write it on a sticky notes.

Participant E stated the impact of goal setting was, "having those types of conversations that really push students into understanding here's what I'm learning and this is why I'm learning it." Participant L highlighted the use of color data tracking sheets used by

students when setting, making progress towards, and meeting their goals. Participant L claimed, “That’s true Visible Learning as they progress on their different goals.” Participant J stated,

> I found that when students can track their progress with their learning and they can see what their goal is, where they’re going, where they want to be, and where they’re at, they’re a lot more motivated. When they’re motivated with their learning, even when they’re not doing well, they want to stay on it and they want to keep going and they want to get better. That confidence really helps them keep going.

Feedback. All 18 participants indicated instruction was impacted by Visible Learning practices when feedback was given to students about their learning. Mindframe 6, “I give and help students understand feedback and I interpret and act on feedback given to me” and mindframe 7, “I engage as much in dialogue as monologue” were linked to the strategy of feedback (Hattie & Zierer, 2018). Participant R claimed Visible Learning has, “brought back an emphasis on feedback for us that (it) has a very high effect size. We want (it) to be intentional and meaningful and specific to kids.” Participant Q stated feedback, “creates that picture for a kid to say, here’s where I am, but with this feedback, here’s where I can be and I know what I need to do next.” Participant N noted, “You have to normalize it in a classroom through those relationships; through doing it (feedback) on a daily basis removing the stigma of a percentage or a score to where it is right now and how can you do better?” Participant A mentioned, “We show them the progress that they’re making at the pretest, checks, posttest, focusing on growth and the feedback along the way; very good feedback, not just a score, but meaningful

feedback to help them." Participant O claimed that feedback should be based on something that's personal to the students and also, "the environment you create and the opportunities you give kids and then the authenticity of the feedback you give them." Another way participant D recalled making feedback meaningful and authentic was through, "showing them and giving them examples (of) how people out in the workforce are constantly using feedback and constantly reflecting and constantly changing their product. It's more of a skill that we are doing and teaching the students."

Six participants claimed feedback was successful when the language used was intentional. Participant N stated, "I think that if you give feedback in a way that makes them feel like they're not good enough, they will start to retreat. It's all in the way that you create the language within your classroom." Participant D noted,

> You don't have to say, "You need to do this." I think whenever you frame it from the exemplar standpoint and say, "What do you notice?" and have them compare and have them name and use that student evidence, that's self-reflection.

Participants C and P observed feedback was successful when they modeled and practiced what to do with feedback. Participant C said, "I think that teachers have to be very purposeful with specific language in the classroom." while Participant P noted the importance of modeling what to do with, "feedback that you don't love because that's what makes your work better." Additionally, four participants expressed the importance of detaching emotions when educators gave feedback to students. Participant K stated, "If we can get them to see the value in the fact that it's not about you personally, it's about the evidence that is right here…that's when it's going to be beneficial." Participant

E added that the goal was, “being really intentional with questioning and the language used in feedback and not making it personal.”

Feedback from peers was mentioned by five participants. Participant D claimed, “The feedback before always had to come from me, where now I know kids can give themselves feedback as long as I give them a process, whether through exemplars or rubrics or something, as well as student feedback.” Participant P noted, “I think one of the best ways for them to learn feedback is through their peers. I think they’re more apt to accept it from their peers first.” Participant H stated, “I think students appreciate hearing feedback from different avenues. Whether it’s teacher to student, but right now I think what is most coming alive is that ability to give feedback to each other.” Participant I observed, “Most students at first have to be very, very cautious (and) use kid gloves. They don’t want to be too real. Then they start to realize that critiquing isn’t necessarily negative, it’s just feedback.”

Finding 4: Impact on Assessment

The implementation of Visible Learning impacted the participants’ perceptions of the purpose of formative and summative assessments. To demonstrate participants’ perceptions about the impact, direct quotations were included. Mindframe 1, “I am an evaluator of my impact on student learning”, mindframe 2, “I see assessment as informing my impact and next steps”, mindframe 5, “I strive for challenge and not merely ‘doing your best’”, and mindframe 7, “I engage as much in dialogue as monologue” correlated with the perceived impact on assessment (Hattie & Zierer, 2018).

Formative vs. summative assessments. Thirteen participants, indicated their beliefs in assessing students using more formative methods instead of summative

assessments with many repeating comments in the data more than once. Participants C, D, F, I, N, and O reported a movement away from the traditional grading model where students have limited opportunities to display final learning typically at the end of a unit or at a predetermined timeframe when learning should be complete. Participant F stated, "It has completely changed my mindset of testing and grading and in all those pieces a letter grade is…There's so much more in sharing your learning rather than striving for point and striving for a letter grade." Participant N reported,

> The grade was more about are they compliant, can they do the homework, can they do the practice? What I started to realize is that you could have an F student, but a master at the content. I really started to look at how that letter grade really didn't have an impact on anyone but me or the parent.

Participant O claimed, "For the most part, our grades are just something we have to do to put in based on a credit…We don't use the term 'grade' here very much…Everything is just feedback-based." Participant I explained,

> One of the things that we have talked about more specifically is moving away from grading and moving more towards progression charts, things that students have more ownership in…We're trying to get away from the traditional they have an 82 or they have a 93 because that really just doesn't show how much students have learned…We can communicate that not only to the student, but the parent as well. That really shows them what is happening since the number can be just such an arbitrary thing.

Participant D noted, “One of the biggest steps that we had with kids was trying to get them to rethink the purpose of the learning. That it wasn’t about chasing the grade; that it really is about them growing as a learner.”

Participants N, Q, and R discussed summative assessments such as the end-of-the-year state tests. Participant R indicated, “We’re not just administering assessments and the kids are sending them back to us and then nothing else is done. It’s the culture; what we do to inform our instruction.” Participant R also claimed, “State tests used to be something we would use quite a bit. I think that’s kind of paled because it’s annual and we get the results so far after the test is taken.” When students discussed the levels of performance on state testing with participant Q, they stated, “Don’t say ‘basic’ because I feel like you’re labeling me and I can’t get better” and participant Q claimed, “Standardized testing has ruined our culture…The goal is not, ‘sorry, we’re at the end of the unit and too bad and moving on’. There’s a lot to shift with our culture to get there.”

Participants D, E, G and J noted practices used to shift toward formative assessments. Participant E stated, “I don’t believe that we necessarily use them (assessments) as we always have. Assessment impacts student learning through the formative process; dipsticks along the way…Assessment is used to plan for instruction and identify gaps in a student’s learning.” Participant J explained the experience of, “Trying to come up with different ways to assess…pulling kids and working in small groups and showing me what you know and keeping track of it and going from there.” while participant G noted that daily reflection was important to formative assessment. Similarly, Participant C stated, “I use written samples, but I also allow them (students) to verbally explain it (learning) to me, teach it to your neighbor, like just a multitude of

ways of getting to that understanding, not just the test." In addition, participants C, O, I and Q responded that formative assessments happened through discussions. Participant O claimed, "You cannot get better at something unless you have a conversation…It's the conversations we're having with them about their ideas, about how to make their ideas better and the things they want to do." Participant G noticed,

> More and more teachers are assessing student learning daily through conversations, through peering over their shoulder and watching as they scribble through a math problem. A lot of teachers have gotten comfortable with students submitting verbal answers over See Saw and sharing their thinking that way. So really, any time students are able to share their learning with us, that's an assessment.

Twelve participants discussed their perceptions on the use of formative assessments to measure prior knowledge before starting instruction. Participants A, C, E, H, O, and R noted the importance of having familiarity of student knowledge prior to teaching and participant H claimed, "You may have a first grader who can read one sentence and you have a first grader who can read a chapter book. So it's identifying where each learner is, meeting them where they're at, and finding out how to move them forward." Participant H stated, "I think once you know where they're at, you then can start grouping where you can start tailoring the instruction to build personal learning plans for each student or group of students."

Not only did participants share perceptions of how they assessed formatively, but also claimed assessment was ongoing after implementing Visible Learning. Participants

D, F, I, P, and R noted students learned in different timeframes and were at different proficiency levels. Participant R stated,

> At one point in time, the learning felt final. You did the math test. The conclusion is you got to 78% and now we're done with that and we're moving on to the next. Whereas now, it's where you don't have it yet…Yet is an important word (meaning) that we're going to keep working on it. Just because that unit might be over…It doesn't mean that we're necessarily finished with the learning.

Participant F believed students, "can take a test at the very end and if they're still not ready after that level, then we have (an) alternate path for them to go relearn that topic and then let's assess them again." Participant I claimed students are, "not going to get to the same point at the same time…I've always been big on thinking I don't care when you learn it, I just want you to learn it." Participant D noted, "It's not necessarily at having all kids at a particular grade level, but knowing where they are and seeing that their learning has moved forward."

Finding 5: Impact on Overall Teaching and Learning Experiences

All 18 participants responded to IQ11, "Explain how your educational practices have changed or not since you learned about Visible Learning." To demonstrate participants' perceptions about the impact, direct quotations have been included. Fifteen participants expressed that their practices had changed. An area participants B, E, G, K, L, and P reported teaching had been impacted was being intentional with instruction and the language utilized in the learning process. Participant E stated, "I'm able to use more specific language with kids because I know where we are with Visible Learning and so I'm able to just scaffold better, ask better questions, and then be more intentional with

that next conversation." while Participant G reported, "Visible Learning has just given me language to talk about a lot of the things that I already deeply believed in." Participant P claimed,

> Since learning about Visible Learning, I'm more cognizant of the planning part…to really nail down ahead of time what we are looking for. What we are expecting to see in all three of those areas of skills, knowledge, dispositions and outlining that has been really helpful.

Participant B noted, "This is how we learn…The more that I read the research about Visible Learning and its components, the more I'm likely to reflect back on myself as an adult learner." Participant B continued by describing their observation of their own children's learning process and how they problem solved real-world problems in their lives out of school and stated, "Then we come to school, and…that's not how we learn. That's not natural learning."

Participants A, H, N, Q, and R claimed a major shift in their practices was the awareness and utilization of highly effective instructional strategies. Participant R cited, "It's brought back an emphasis on feedback for us that has a very high effect size" and also noted that learner agency and collective teacher efficacy were studied because of their high effect sizes. Participant Q declared,

> Being really cognizant of trying to double down on the strategies that through their research have been proven to be highly effective. I think that's really powerful because we all know there's a million decisions we're making every day about how we approach kids and knowing what works the best and trying to learn more about those strategies and use those is money.

Participant Q also noted, “With Hattie’s work, I feel like where it’s really informed our practices…Being able to target those practices and engage in reflective reviews of goal setting and data and seeing if we are achieving what we want.” Participant A reported, “I feel like I’m a stronger leader as far as having a greater understanding about Visible Learning or the mindframes…I just have more tools to be able to share.” Participant N claimed, “I’ve always been about the research base and looking for high leverage instructional strategies…(like) the work that John Hattie did with Visible Learning.” Participant H shared, “What I love about Visible Learning is that the practices transcend the grade levels.”

Participants C, D, F, H, and J claimed their practices changed by increased student ownership of their learning. Participant D claimed that their practices included students owning the learning and feedback didn’t always need to come from the teacher as long as there was a process in place. Participant D shared a reflection from a previous Twitter post of their previous practices of, “a line of kids sitting next to my desk…They needed my approval to move forward, but they wanted to keep going and at the time I didn’t know any better. They could have moved forward without me.” Participant H stated, “I always knew that student voice and choice was important, but since Visible Learning, it is even more so because it’s pulling them into the process.” Participant J claimed,

> Since learning about Visible Learning, definitely my students have owned their own learning a lot more. It’s taking it more out of my hands and putting it more on the students. Whereas, the first few years of teaching it was, I’m the teacher. I’m supposed to teach them and they’re supposed to get the knowledge.

Participant A, C, D, M, N, and Q shared since implementing Visible Learning, the process to shift their practices had been challenging. Participant A questioned, "How do I make all those connections so it doesn't feel like they're (teachers) are getting bombarded with different things." Participant A continued, "There's so much. They (teachers) need to know their standards. They need to know the success criteria from their standards. They need to understand feedback; how to give feedback, how to use feedback. It's so complex." Participant M expressed that there were inconsistencies with common language in the district and in the building. Participant M claimed it would have been beneficial if Visible Learning language was, "consistent across at least within your own school if it's not within the district." Participant N explained, "It's a lot of work to get there. It's a lot of work not to just say, I'm going to teach this today and everybody's going to do the same thing." Participant C observed, "People really are confusing the concept of Visible Learning with self-paced checklists…There's so many big question marks that I think fundamentally, there's a disconnect with what all of these things mean and how they can tie together." Participant C also stated, "It's hard to unweave the blanket we've woven…For some reason in the end, it (learning) still ends up looking like what it usually does. It's got a different name tag on it."

Participants C, D, F, I, J, and O also shared how the implementation of Visible Learning practices were complex to manage and required a considerable amount of time. Participant D stated they realized a lot of teachers, "have to have everything perfectly aligned before they can get there." Participant O stated, "In order to get to that place, you have to completely redesign every facet of a traditional school, break it apart, rebuild it and then sync it back up…It's been hard and taken some time." Participant C noted,

> The only time I ever go back to it, an old system, is when something needs development that I haven't had time to develop and then I'll revert. I still try to implement as much as I can, but you can't do it halfway. It's just really time consuming.

Participant J, challenged by process and time, declared, "Scheduling my time to be able to go back and hit those skills that they (students) haven't mastered within the overall block of time that we have and constantly looking at it daily and weekly. It's ever changing." Additionally, participant F claimed, "It's just wanting to make sure our students are progressing and learning and it's messy…(and) trying to bring that clarity to this whole process is the challenging part." Participant I indicated, "One criticism is that we seem to really do a lot of different initiatives; like every two years we're doing something else."

All 18 participants responded to IQ12, "What positive or negative impact have you experienced in students' learning related to the Visible Learning research?" To demonstrate participants' perceptions about the impact, direct quotations have been included. Participants A, B, I, K, N, and O claimed there was a positive impact in student learning after students owned their learning process. Participant A commented, "I think they're (students) more in tune with what they know and what they want to achieve." while participant B stated, "I've interviewed a few kids myself and they are just really saying, 'My teacher really values what I have to say in the way that I want to learn and what I need next. It's not that I'm sitting and waiting.'" Participant I claimed,

> The fact that students feel more successful because it's more individualized…If a student does the best they can in the traditional model, they might get a 70…But

if they're doing the best they can and they're on a learning progression chart and you can see that you have accomplished things, that's just a lot more positive.

Seven participants stated that student learning was positively impacted and noticed that students were motivated and were willing to persevere in challenging situations. Participant R claimed, "The level of engagement is strong." while participant C stated, "The positive impact has been that students who before were unmotivated are actually becoming a little more motivated. The judgement is only against their previous work." Participant D noted, "Once you can hook them (students) and they can change that mindset, they're all in and they love to go at their own pace…They feel so empowered." Participants G, L, and M experienced students who were more willing to persevere. Participant G observed, "I've seen a positive impact in terms of kids' willingness to take risks and be comfortable with being uncomfortable in their learning. Participant M stated, "My kids have really latched on to being persistent and that we can do these hard things and it's OK if we fail. I think that all goes along with being a visible learner."

Participants E, F, H, P, Q, and L claimed the common language of Visible Learning impacted student learning positively. Participant E noted it was, "that consistent language that leaves a lasting impact for students and teachers. Stay the course with that same language that provides clarity, consistency, and specificity when planning and meeting with students." Participant H stated that the language was important when students felt challenged in their learning. Participant Q claimed, "It has been the most fun to see the language of our kids…how they talk about some of those dispositions and even thinking about the learning pit and that it's OK to be stuck." Participant L declared,

"If they (students) get in a rut and they don't understand something, they don't want to give up…They actually enjoy using that terminology that they're climbing out of the pit."

Seven of the 18 participants observed some negative factors that impacted student learning. Participant F claimed,

> The path is not clear…That's a very tough message to deliver to teachers and students; to say I don't know what's going to happen. You know, with the traditional model, we could tell you by the end of chapter 3, this is what it's going to look like and that's not the case anymore…So, you are just constantly grabbling at things.

Participant D stated, "We're trying to meet teachers where they are with their own journey versus everyone being in the same place." and participant D mentioned, "We're trying to give teachers some choice…we gave teachers the option of where they wanted their entry point to be." However, Participant O claimed,

> I think that if you throw Visible Learning as just another initiative inside a traditional school that doesn't want to change, then you're going to definitely see negative things because some people do it right, some people complain about it…and then it trickles down to the kid and then the kid is caught in the middle of somebody else's initiative.

Participant P indicated that although there were benefits to, "embed it (Visible Learning) organically and not force it," but there were not methods to ensure it was being utilized with all students and with the same learning expectations.

Participants C, D, J, and Q claimed that other factors such students and teachers with traditional mindsets and the management of Visible Learning practices were negative factors that impacted student learning. Participant D stated,

> There's still some kids who are stuck in that mindset of I just need you to tell me what to do and I've always done it this way and I've been successful this way. What's been hard is trying to shift students' mindsets when they're not ready or they don't know…When we are trying to encourage teachers to…have students own the learning and the pacing is just to wrap their heads around how to manage all this data and I have all these kids in all this different places. I think that's been hard.

Participant C expressed the challenge of students who still craved a grade over making progress toward a goal while participant Q noted, "Part of it is the sheer number of kids and where kids are. Teachers are figuring out different ways to efficiently manage how to address all those needs." Participant J claimed the challenge when implementing Visible Learning was the management of new learning strategies, adopting new mindsets and teaching these to students while still positively impacting student learning.

Summary

This chapter included a synthesis report of the results from the analysis of the interviews conducted with 18 participants currently practicing in the field of education as building leaders, innovation and learning coaches, or teachers in a Kindergarten through 12^{th} grade setting. Interview questions examined the perceptions of practicing educators and their experience utilizing the research and practices of Hattie (2009) in their current field. Questions also assessed how these educators perceived the impact of Visible

Learning along with perceptions of the mindframes. Five major themes were indicated in the data: impact on beliefs, impact on the learning process, impact on instruction, impact on assessment, and overall impact on teaching and learning. Chapter 5 provides a study summary, findings related to the literature, and conclusions.

Chapter 5

Interpretation and Recommendations

The purpose of this qualitative study was to examine educators' perceptions of the impact of implementing the mindframes and practices of Hattie's (2009, 2012) Visible Learning research and their impact on teaching and learning. Chapter 5 is organized in three main sections. The first section includes the study summary with an overview of the problem, purpose statement and research question, review of the methodology, and major findings. The next section contains the findings related to the literature. The final section, the conclusions, consists of implications for action, recommendations for future research, and concluding remarks.

Study Summary

This section provides an overview of the study of the perceptions of educators after implementing the research, practices, and the mindframes of Visible Learning including the overview of the problem. The purpose statement and the research question describe why the study was conducted. Eighteen practicing educators from a single district were interviewed for this study. This section concludes with the review of the methodology and major findings.

Overview of the problem. The United States continues to perform lower on educational performance measures and the gap between students who have high academic achievement or low academic achievement measures is expanding (DuFour & Fullan, 2013). In addition, there is a need for widespread, systemic change to increase student achievement. Along with this, there is also a concern that resources are becoming even more scarce as budgets at the federal, state, and local levels have been decreased

with 29 states' per pupil funding less in 2015 than in 2008, while 19 of these states also experienced decreased local funding (Figueroa et al., 2018). The time for clarity, investigating what improves student achievement at all levels, and replicating these processes in a systematic way, is crucial.

It is clear there is a need for widespread, systemic change. DuFour and Marzano (2011) reported the following regarding education in America:

> A system that has 30 percent of its students drop out of high school, that has one-third of its graduates who enter higher education requiring remediation, that has one of the highest college drop-out rates in the world, that contributes to enormous gaps in achievement for minority and poor students, and that has seen its relative success in educating its population plummet compared to other nations cannot assume the position that all is well. (p. 9)

In other countries, teams of educators learn alongside one another as they monitor student progress and provide interventions when needed (Fullan, 2014). In American education, districts frequently change programs, without securing the data necessary to determine if students are achieving. Hattie and Zierer (2018) claimed, "Reformers too often propose more resources, more autonomy, more international competition, better comparative studies, more statistics, innovative technology, and much more as sure means of revolutionizing school and instruction" (p. 166). Hattie and Zierer (2018) also reported that educators often too quickly leap from factor to competing factor in what makes a difference in education.

Another hurdle for educators in America is the achievement gap. The CPE (2015) reported that not every child entering school has advantages that set them up for success.

Now, more than ever, teachers need to collaborate about students' data; utilize ongoing, meaningful assessments; and research the best instructional practices for all students' ability levels. Schmoker (2018) argued that because of a lack of clarity for teachers, they are instead coerced to try to find quick fixes for learning improvement by implementing the next new trend without any reassurances of validity. Schmoker (2006) went on to claim, "Educators in overwhelming majorities have agreed that there is indeed a yawning gap between the most well-known, incontestably essential practices and the reality of most classrooms" (p. 2). If educators don't know how to capitalize on the practices that yield a high impact on student achievement, and if reflective and collaborative practices are not evident amongst the practitioners, then the education system will fail to elevate every student to their highest potential (Donohoo et al., 2018). Researchers, such as Hattie, have suggested evidence of effective practices and beliefs in education through the meta-analysis of many studies. There is a need for qualitative research focusing on current educators' perceptions about perceptions of the effects of the mindframes, or beliefs, and practices of Visible Learning.

Purpose statement and research question. The purpose of this qualitative study was to examine the perceptions of the impact of implementing the mindframes and practices of Hattie's (2009, 2012) Visible Learning research and their impact on teaching and learning in their current field. This study was also conducted to gain an understanding of how these educators perceived the impact of Visible Learning on instruction and the experiences for their students, along with themselves, in classrooms and schools. Finally, this study examined the educators' perceptions of the impact of the mindframes, or core beliefs, of Visible Learning used by these educators. One research

question was studied with the 12 interview questions that comprised the instrument by which data was collected. The research question investigated was: What are educators' perceptions of the impact of implementing the mindframes and practices of Visible Learning and their impact on teaching and learning?

Review of the methodology. The researcher utilized a qualitative design incorporating phenomenological responsive interviews to gather data. Through phenomenological research, the researcher is focused on interpreting the lived experiences of those interviewed (Bloomberg & Volpe, 2012). The qualitative research approach provided an opportunity to investigate the perceptions of educators' experiences utilizing the practices and mindframes of Visible Learning and the impact on the educational experiences for their students, along with themselves, in classrooms and schools.

Educators selected for this study had previous knowledge gained through professional development sessions, professional readings, or observations in the learning environment. The researcher sent out an email to educators in a single district that began implementing Visible Learning in the 2017-2018 school year. The sample was comprised of 18 participants including six teachers, six innovation and learning coaches, and six principals or assistant principals with three of each employed at the elementary and secondary levels. The interviews were recorded and transcribed using an online program. Each transcript was assigned an alphabetic identifier (e.g., Participant A, Participant B, etc.) to preserve anonymity. Member checking of the transcript was completed by each participant after the interviews were completed. The researcher then

coded the transcripts for key words and phrases and organized the data into themes to determine patterns existing throughout the data.

Major findings. The analysis of responses to the interview questions revealed common themes aligned with the mindframes of Visible Learning. The first major finding included the perception that implementing Visible Learning had an impact on educators' beliefs. Participants indicated that developing a growth mindset became stronger after implementing Visible Learning. Several participants also indicated that by utilizing the common language of learning and the discussions of learner dispositions, students' common language and learning processes were enhanced, along with building positive relationships and improving the overall culture of the school environments. The participants' perceptions of increased collaboration, whether it involved students or adults, was another belief that was supported after the implementation of Visible Learning. For example, the majority of participants mentioned the belief in student collaboration was important, while several participants discussed an increased value placed on collaboration among educators.

The second major finding was the participants' perceptions the learning process was impacted by utilizing Visible Learning. Building learner agency during the learning process was a perceived outcome of the study. Participants also indicated an increase in student engagement and the relevant learning processes were impacted after the Visible Learning initiative began. Students sharing multiple forms of evidence as a part of their learning process was also perceived as a vital component to the study participants. Clarity for both adults and students during the learning process was also observed in the perceptual data.

A third key finding was that the participants recognized an impact on instruction after the implementation of Visible Learning. Participants observed students not only knew the standards as learning goals, but also were aware of the skills in the standards to achieve success as a part of Visible Learning. Several participants believed utilizing exemplars and the process of students setting goals were instructional components that were enhanced after practicing Visible Learning. All 18 participants indicated instruction was more intentional after the Visible Learning practice of students receiving feedback about their learning goals was implemented. Participants reported that feedback became more intentional, authentic, and focused on individual student learning that facilitated the students' next steps in the learning process.

The fourth finding of the study was the perception that the use of assessment was impacted after implementing Visible Learning. Several participants experienced a shift from using summative assessment to more formative methods to measure student learning growth. Not only did participants share perceptions of how they assessed more formatively, but also claimed assessment was more of an ongoing process after beginning Visible Learning. Participants also realized more formative assessment occurred to measure prior knowledge before the onset or within the early phases of instruction.

The final finding included all 18 participants' perceptions of the impact on their overall teaching and student learning experiences after district implementation of Visible Learning. Fifteen participants perceived positive changes to practices involving the use of more intentional practices based on student learning, being reflective while instructing, being cognizant of highly effective instructional strategies, and valuing student ownership of learning. Other participants perceived utilizing Visible Learning was

complex to manage, required significant amounts of time, and was challenging to balance with other initiatives. Other perceptions included Visible Learning challenging the traditional mindsets of teachers and students. Implementation efforts were not systematic across the system.

Findings Related to the Literature

This section provides a comparison from the results of the current study and previous research findings and conclusions. Chapter 2 encompassed a review of the prominent literature related to the study. Findings of the study were presented in Chapter 4.

The mindframes of Visible Learning are related to growth mindset, or the belief that a person's learning potential is unknown and qualities can be built upon through application and experience, perseverance, and taking risks to improve (Dweck, 2006). Fullan (2010) stated, "The glue that binds the effective drivers together is the underlying attitude, philosophy, and theory of action" (p. 5). In conjunction with educators exploring what works best, success "is based not only on competencies but more on mindframes; less on what we do and more on how we think about what we do" (Hattie & Zierer 2018, pp. 160-161). Fisher and Frey (2018) stated the Visible Learning research, "published more than a decade ago is still being discussed in educational circles. It has something to say that matters…It's not simply that teachers matter, but rather how teachers think that matters" (p. 9). Thirteen study participants indicated a deepened growth mindset was evident after implementing Visible Learning. Therefore, the results of this study supported the claims of Fullan (2010), Hattie and Zierer (2018), and Fisher and Frey (2018).

Donohoo et al. (2018) reported the mindframes are, “a shared language that represents a focus on student *learning* as opposed to *instructional compliance* often emerges. The perceptions that influence the actions of educators (are the mindframes)” (p. 42). Nottingham’s most notable work was in the creation of The Learning Pit (Challenging Learning, 2021). The Learning Pit visually depicted a process of acquiring new learning with the analogy of climbing out of a pit by starting with a concept, grappling with it through investigation, and then forming new understanding to overcome being in the pit (Challenging Learning, 2021). Hattie (2017) stated, “Going through a learning pit tests our abilities, asks us to prove or justify our thinking, questions the truth or validity of ideas, seeks falsifiable hypotheses and tackles challenges with skill, energy and determination” (p. xix). Participants in the current study noted the common language of Visible Learning used made an impact on student learning and their learning environments. Another term that emerged as common language from nine of the participants’ data was being in The Learning Pit. The findings of the current study indicated that participants used a shared language and common terminology, The Learning Pit, when acquiring new learning after implementing Visible Learning.

Donohoo et al. (2018) claimed successful leadership through the lens of Visible Learning was evident in cultures where educators knew their collective impact and contributions to increase student achievement and school improvement is building teams with collective efficacy. Almarode and Vandas (2018) reported, “Collective teacher efficacy has a high impact on student achievement with an effect size of 1.57 (which is) almost four times the average effect size associated with one year of formal school” (p. 172). If a school culture had collective efficacy, educators persisted to overcome

challenges, while in contrast where schools lacked collective teacher efficacy, higher levels of stress were present and failure was attributed to external factors outside of instruction (Donohoo et al., 2018). DuFour and Fullan (2013) found that successful schools had, "a relentless focus on learning for all students, a collaborative culture and collective effort to support student and adult learning, and a results orientation to improve practice and drive continuous improvement" (pp. 14-15). In the current study, nine participants indicated fostering the culture and relationships among educators led to building collective teacher efficacy. Therefore, the findings in this study aligned with the research about Visible Learning, specifically fostering a culture that led to developing collective teacher efficacy.

Collaboration between educators was also discussed by 13 participants of the current study. Previous research indicated that collaboration is an important factor for school improvement. Schmoker (2004) published an article supporting the establishment of PLCs for school improvement, which included research while noting the consensus of many educational leaders, indicating collaboration was the most effective tool to improve instruction. Donohoo et al. (2018) claimed that educators who held these mindframes believed it was essential to measure their practice on the students' progress while also crediting, "success and failure in student learning is more about what they did or did not do, and they place value in solving problems of practice together" (p. 42). The findings of the current study supported the previous research, specifically that effective teacher collaboration was centered on student learning.

In the current study, 10 participants discussed learner agency. The analysis of the current study's interview data revealed participants perceived students became more

central in the learning process as well as more engaged in monitoring their own progress and setting goals as a result of implementing Visible Learning. Fisher et al. (2018) claimed that Visible Learning puts the student in the forefront of the assessment cycle through empowering teachers and school leaders to purposefully nurture skills of "motivation, goal setting, self-regulation, and feedback (in all learners)" (p. 47). Evaluating assessments for the quality of evidence they yield, while engaging students in analyzing their own data and the effect on their future learning paths were the core beliefs of Stiggins' (2007) research. According to Hattie (2012), the visible aspect in Visible Learning was related not only to the evidence of student learning being visible to teachers, but also that teaching was visible to students, so they became active participants in their own learning. Almarode and Vandas (2018) claimed that students who can understand what is to be learned, how to achieve success, articulate their steps towards meeting success criteria, and set goals in the next step of learning are in the center of the assessment process. These students also know the strategies that work best for their learning while monitoring their personal goals (Almarode & Vandas, 2018).

Teacher clarity was reported by Hattie (2009, 2012) to have an average effect size of 0.75, which is almost double the effect size of 0.40 which signified a year of learning growth according to the Visible Learning research. DeWitt (2018) stated, "Hattie's Visible Learning research has had a profound impact on educators and students around the world. The research has provided educators and leaders with the opportunity to have deep conversations around their practices in the classroom and school" (p. 7). Almarode and Vandas (2018) claimed that teachers needed to also know how all students are making progress in their learning and the next steps in the learning progressions for

each student. The research of the current study found the importance of gaining clarity about for both teachers and students about what is being taught and learned was evident after implementing Visible Learning. Six participants noted the process of gaining clarity in the data with four participants citing clarity multiple times. Other participants reported evidence of students acquiring clarity about what was being learned, when they had learned the content, and what they were learning next in the learning process.

Ainsworth suggested that teachers collaborate on ranking standards as either priority or supporting based on a set of common criteria to instill a system that would foster deeper learning for all students (Ainsworth, 2017). Schmoker (2006, 2018) urged educators to examine instructional practices that yielded the highest gains in student achievement while only focusing on what is essential to improving student learning. Hattie (2009) noted that the basis for providing clarity for students was to implicitly define the learning intentions along with success criteria so students knew what they were learning, why they were learning it, and what to do when learning was successful. Sixteen participants in the current interviews indicated instruction was impacted when students not only knew the standards as learning goals, but were also aware of the learning progressions and success criteria.

Feedback was reported by Hattie (2009, 2012) to have an effect size of 0.73 which is also almost double one year's growth of learning, which was determined to be 0.40 according to the Visible Learning research. Hattie and Clarke (2019) explained, "That students are taught to receive, interpret, and use the feedback provided is probably much more important than focusing on how much feedback is provided by the teacher, as feedback given but not heard is of little use" (p. 5). All 18 participants stated they

experienced more successful instruction and teaching was more personalized towards students' learning when feedback was given to students about their learning.

In the current study, 13 participants indicated having utilized more formative than summative assessment methods after implementing Visible Learning. According to the findings in the current study, participants reported that assessments were used to display evidence of student learning growth rather than to attain a percentage or grade. According to Marzano et al. (1993), assessment was presented as part of the teaching and learning process where both content knowledge and skills should be taught and competency shown through performance tasks measured by rubrics. The goal is to change the way educators viewed assessment from relying solely on standardized testing scores to show a strong link to the teaching and learning process through feedback on how to improve (Marzano et al., 1993). Stiggins (2007) suggested education reform was possible because the role of assessments has changed from merely ranking students to systems that are focused on helping all students be successful in mastering the standards. Fisher et al. (2018) claimed, "Assessment is conventionally thought of as something we *do* to students. We measure their progress and report it to them, their families, and the public" (p. 47). Visible Learning puts the student in the forefront of the assessment cycle through empowering teachers and school leaders to purposefully nurture skills of "motivation, goal setting, self-regulation, and feedback" in all learners (Fisher et al., 2018, p. 47). Stiggins (2007) claimed, "We need to move from exclusive reliance on assessments that verify learning to the use of assessments that support learning—that is, assessments for learning" (p. 22).

Pearsall (2018) indicated that improving instruction shouldn't equal more work for educators, however we should instead focus on highly effective instructional practices by eliminating practices of lesser impact. Pearsall (2018) reported, school improvement takes time and, "good teaching isn't just important for increasing student gains—it also has to be *sustainable* for teachers" (p. 34). Focusing on the practices and initiatives that were proven to have the most dramatic effects, while discontinuing unproven methods would allow educators to increase the potential of learning for all students (Schmoker, 2018). DeWitt (2018) also provided another notable finding indicating a lack of support from their leaders and having other initiatives to implement as reasons teachers would not be able to implement their learning into their classrooms. Hattie (2015) reported that educational leaders must choose what not to do as well such as discontinuing programs or initiatives and even abandoning ineffective teaching practices. In the current study, respondents shared since implementing Visible Learning, the process to shift their practices has been challenging and was difficult to manage citing the complexities of transforming traditional practices while also continuing other initiatives or adding even more. This supported the research in that teachers need initiatives that are the most impactful and meaningful to student growth while also being sustainable to implement and manage.

In the current interviews, some participants also discussed some negative factors related to implementation and student learning such as the lack of a clear path for putting practices into place with educators at different levels of proficiency and use of Visible Learning. Fisher and Frey (2018) reported that not one instructional influence was more useful than another. However, the common themes were about what was essential to the

successful implementation of Visible Learning research such as, "focusing on learning, understanding one's impact, ensuring clarity, understanding the science of learning, and using student performance as feedback for teachers" (p. 9). DeWitt (2018) concluded, "It's not about the top ten influences" and noted educators who engaged in Visible Learning first needed to recognize the current reality of their students' learning, choose an influence to impact their learning, and evaluate the impact of that influence" (p. 8). DeWitt (2018) claimed the educators who engaged in this process, "will be able to move on to another influence and have a deeper impact on the learning in their school" (p. 8). Hattie and Zierer (2019) reported that when a new data set was published in 2017, Hattie chose not to report the results in a ranked list because Hattie noted, "too many (educators) started to say they were attending to or doing the top influences and stopping the bottom influences – I wish it was this simple…The rankings led to interest, but it is time to move on to focus more on the story" (p. 2).

Conclusions

This qualitative study was designed to examine educators' perceptions of the impact of implementing the mindframes and practices of Hattie's (2009, 2012) Visible Learning research. This study also examined educators' perceptions of the impact of Visible Learning on teaching and learning. This section includes the implications for action, recommendations for future research, and concluding remarks.

Implications for action. The findings of the study provided evidence regarding educators' perceptions following the study and implementation of Visible Learning research and practices, along with the mindframes, from a single district. The information shared by participants in the current study indicated the value of the study

and implementation of Visible Learning research and practices. The data also indicated an impact on beliefs, learning processes, instruction and assessment methods, and overall impact on teaching and learning. The results of this study led the researcher to recommend that education leaders provide opportunities for professional development to instill Visible Learning beliefs and practices.

Participants also shared their perception of the success and challenges of implementing Visible Learning research and practices. Educational leaders should investigate the methods to systemically instigate Visible Learning into schools and districts to ensure it is embedded into the culture and daily practice. In addition, leaders need to narrow the focus on initiatives to allow educators to deeply entrench the research and allow for time to gain clarity on what methods are specific to students' need. Long-term commitments and supports need to be considered to warrant the longevity of successful implementation of Visible Learning research and practices.

Recommendations for future research. The analysis of the findings of the current study suggested there are possibilities for future research. Researchers could extend this study to determine if the experiences of these educators utilizing Visible Learning were similar to educators in other school districts who have implemented Visible Learning practices and research. The sample could be extended to other states and regions of the United States to determine if the findings would be the same.

Further research could also include other educators who are not aware of Visible Learning research and practices. The participants in this study were volunteers who had received professional development beginning in the 2017-2018 school year and therefore had implemented this into practice. This research could indicate if educators utilized the

mindframes and practices of Visible Learning without being exposed to the research. By researching educators who are not aware of Visible Learning, the results of this study could be validated that the study and implementation of Visible Learning had a perceived impact on teaching and learning.

In addition, a mixed methods study could be explored by adding a survey as an additional step in the instrumentation and data collection process. Not only would this data be useful in determining further interview questions, but this quantitative information could be compared to the qualitative data. The results from the quantitative survey data could be used to support common findings in the qualitative interview data.

Another recommendation for future research could be to conduct a quantitative study of students' achievement after educators implemented the research and practices of Visible Learning. This study could include student achievement measures from pre and post implementation to determine if the application of Visible Learning effected achievement data. This data could be compared to another group of students where the educators did not enact Visible Learning research practices.

Students could also be included in future research. Through interviews, student perceptions could allow for comparisons of viewpoints of educators' and students' lived experiences after the implementation of Visible Learning. This research could provide a comprehensive study at both the perception of the educator who is utilizing Visible Learning research as the practitioner, and the student who is the individual experiencing the learning processes.

One of the themes of the current study was the different perceptions of the successes and challenges to implementing Visible Learning. A study could be conducted

solely on how educators determined the process for implementation into their current districts. Different groups of educators including superintendents, curriculum directors, and curriculum specialists could add their perceptions of implementing Visible Learning to uncover successful common practices of implementation for replication by other education leaders. This study could also be completed at different grade levels to investigate the various ways elementary and secondary implemented Visible Learning to reveal the more effective methods of implementation.

Concluding remarks. Education reform and the movement to improve education continues with the primary goal of improving teaching and learning practices to improve academic achievement. Visible Learning research and practices could provide educators with a set of common beliefs (the mindframes), successful instructional methods in the learning process, and methods for assessing to inform teaching and learning that could enhance learning for all students. District and school leaders could transform traditional learning environments into environments where the student is in the center of the learning process and the educator becomes the catalyst for deeper and authentic learning experiences. When educators study and implement the research and practices of Visible Learning, the learning environment could be enriched for learners and educators.

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Appendices

Appendix A: IRB Approval

Baker University Institutional Review Board

February 23rd, 2021

Dear Valerie Utecht and Verneda Edwards,

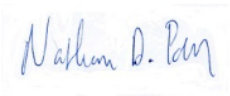
The Baker University IRB has reviewed your project application and approved this project under Expedited Status Review. As described, the project complies with all the requirements and policies established by the University for protection of human subjects in research. Unless renewed, approval lapses one year after approval date.

Please be aware of the following:

1. Any significant change in the research protocol as described should be reviewed by this Committee prior to altering the project.
2. Notify the IRB about any new investigators not named in original application.
3. When signed consent documents are required, the primary investigator must retain the signed consent documents of the research activity.
4. If this is a funded project, keep a copy of this approval letter with your proposal/grant file.
5. If the results of the research are used to prepare papers for publication or oral presentation at professional conferences, manuscripts or abstracts are requested for IRB as part of the project record.
6. If this project is not completed within a year, you must renew IRB approval.

If you have any questions, please contact me at npoell@bakeru.edu or 785.594.4582.

Sincerely,



Nathan Poell, MLS
Chair, Baker University IRB

Baker University IRB Committee
Sara Crump, PhD
Nick Harris, MS
Christa Manton, PhD
Susan Rogers, PhD

Appendix B: District Approval for Research

[redacted]

Research Checklist and Approval

Date: 3/4/21

Submitted to: [redacted] - Director of Assessment, Evaluation, and Testing

Submitted by: Valerie Utecht

Research Proposal Title: Educators' Perceptions of the Mindframes of Visible Learning

Principal Investigator(s): Valerie Utecht

Checklist

- ☒ Completed "Application to Conduct Research in [redacted]"
- ☒ Copy of "Informed consent" letter to study population/parents
- ☒ Copies of measurement instruments
- ☒ Approval from university human subjects committee (IRB) if applicable
- ☒ Three (3) copies of your complete application package

Approval of this research is contingent on adherence to district procedures as outlined in the document entitled "Application to Conduct Research" and the information provided with the application. The district must be notified of any substantive changes to the information contained in the application. The district reserves the right to withdraw approval of research if the research is deemed to no longer be in the best interests of the [redacted] students, staff, or the district.

Research Application: ☒ Approved ☐ Denied Date: 3/25/21

Signatures

[redacted]
Director of Assessment, Evaluation, and Testing

X [redacted]
Principal

X [redacted]
Principal

[redacted]

Application to Conduct Research in [redacted]

Name	Organization	Department
Valerie Utecht	[redacted] / Baker University	Elementary
Address	**City**	**State / Zip Code**
[redacted]	[redacted]	MO [redacted]
Phone Number	**Fax Number**	**E-mail**
816- [redacted]	816- [redacted]	eu4294@ [redacted]

I have read and understand the process of application to conduct research in [redacted]. I also verify that the information provided in this application is accurate to the best of my knowledge.

Signature

x Valerie Utecht

Date 3/4/21

Is this study part of your work for a degree?

☒ Yes ☐ No

If Yes, complete the following:

☐ Ph.D. ☒ Ed.D. ☐ M.A./M.S

☐ Undergraduate ☐ Other

University or College_ Baker University

Date of IRB Approval (or date of application if pending)_ 2/23/21

Advisor's Name Dr. Verneda Edwards

Advisor's Telephone Number 913- [redacted]

Attach a concise, yet thorough, response to each of the following items.

1. **Title and purpose of study** * See attached documentation *
2. **Timeline**
3. **Benefits to the district**
4. **Research Design Summary**
5. **Assurance of anonymity of [redacted] students & staff**
6. **Risks of the research**
7. **District involvement**
8. **Funding Sources**
9. **IRB approval**

[redacted] SCHOOLS

Application to Conduct Research in [redacted]
Attached Documentation from page 6

Date: 3/4/21

Submitted to: [redacted] - Director of Assessment, Evaluation, and Testing

Submitted by: Valerie Utecht

Research Proposal Title: Educators' Perceptions of the Mindframes of Visible Learning

Principal Investigator: Valerie Utecht

Attach a concise, yet thorough, response to each of the following items.

1. **Title and Purpose of Study**
   a. Educators' Perceptions of the Mindframes of Visible Learning
   b. The purpose of this qualitative study is to examine the perceptions of practicing educators' experiences utilizing the research and practices of Hattie (2008) in their current field. This study is also being conducted to gain an understanding of how these educators perceived the impact of the Visible Learning concepts in the experiences for their students, along with themselves, in classrooms and schools. This study will also examine educators' perspectives of the mindframes, or core beliefs, of Visible Learning used by these educators.

2. **Timeline**
   a. Due to the approval of the IRB on 2/23/21 from Baker University, the final step prior to beginning the research is to receive LPS approval to conduct the research. Depending on the date of approval, the research window will be during the spring semester of 2021 primarily in the months of April and May. The research may extend into the month of June depending on the response and availability of the participants.
   b. Subjects will be asked to participate in one interview session. Each interview session will last no longer than one hour. In addition, following the interviews, member checking, which will occur by following up with each participant by sharing the major findings and themes of the study, will take an additional session of less than 30 minutes.

3. **Benefits to the District**
   a. [redacted] began focusing on Visible Learning in the 2017-18 school year. Administrators and teachers participated in various district and building professional development sessions and have continued with this focus since this initial year. Visible Learning is a district initiative and is a part of the [redacted] Strategic Plan which provides a springboard for the [redacted] research study will provide [redacted] with evidence of how cu[redacted] educators in the district view the impact of Visible Learni[redacted] mindframes, on student learning. This study could provi[redacted]

leaders with information regarding the scope of implementation of Visible Learning practices as they translate into the learning environments. The research will also inform leaders of what areas of Visible Learning are opportunities for future or continued learning for staff.

4. **Research Design Summary**
   a. This study is a qualitative research design incorporating phenomenological responsive interviews to gather data. According to Lunenburg and Irby (2008), "The researcher is concerned with clarifying the specific and recognizing phenomena through the eyes of the participants" (p. 90). Through phenomenological research, the researcher is focused on interpreting the lived experiences of those interviewed (Bloomberg & Volpe, 2012). This approach is well suited to investigate the perceptions of educators' experiences utilizing Hattie's research and practices of Visible Learning and the impact on the educational experiences for their students, along with themselves, in classrooms and schools.
   b. An interview will be conducted with each subject that lasts 45 minutes to 1 hour. The interviews will take place in person, by phone call, or web-based video conferencing technology tools. The subjects will be asked a series of questions regarding their perception of the impact of Visible Learning mindframes including the benefits and drawbacks they perceive with that usage. Since the focus of the study is to explore subjects' lived experiences, no direct observations are required.

5. **Assurance of Anonymity of [redacted] Students & Staff**
   a. Each participant will be presented an informed consent form that must be signed prior to participating in the study. To assure the subjects' confidentiality, each signed informed consent forms will be safeguarded in a place by the principal investigator.
   b. No aspect of the data collected for the study will be part of a permanent record identified with the subjects. Study participants will be assigned alpha-numeric pseudonyms to help protect their identities as a condition for participating in the study.
   c. While the study is in process, each subject will be assigned a pseudonym. All other data—electronic and otherwise—will be stored on an external hard drive that is password-protected and in the principal investigator's custody. The drive and the data contained therein will be destroyed three years after the conclusion of the study.

6. **Risks of the Research**
   a. Participating in this study will not expose the subjects to any psychological, social, physical, or legal risk.
   b. Study subjects will not encounter any stress as a result of their participation in this study.
   c. Subjects will not be deceived or misled in any way [redacted]CHOOLS

d. Subjects will not be presented with any material—written or otherwise—that might be considered offensive, threatening, or degrading as a part of this study.
e. There are no risks involved in this study. Further, there are no benefits accruing directly to the participants. However, the findings of the study will add to the emerging research into educators' use of Visible Learning.

7. **District Involvement**
   a. There is no district involvement required. Participation in the study is voluntary and participants have the right to withdraw consent at any time. Participants may also choose to not answer particular questions with no penalty or repercussions.

8. **Funding Sources**
   a. This study does not have any monetary inducements to participants, nor does the principal researcher receive any monetary incentive for completing the research.

9. **IRB Approval**
   a. The IRB for this study was submitted on February 12, 2021 and was approved on February 26, 2021. This approval was granted for one year to complete the research. Both the IRB and the approval letter are attached.

Dear Fellow Educator,

I am a doctoral candidate to complete my Ed. D. at Baker University in Kansas. You are invited to participate in a research study related to Visible Learning practices in education. The purpose of this qualitative research project is to find out educators' experiences with Visible Learning practices and their perception of the effect of these practices.

I am asking permission to conduct and record an interview with you as a part of this research. The interview session will last approximately 30 minutes. The recording will be used to assist in writing field notes and will be stored on a secure digital file that will be discarded after the dissertation has been defended. The information you provide will not be used for any other purpose outside of this qualitative research study. Your answers will be confidential and combined with the responses of other participants in summary form. Information reported will not include any individuals or school districts. In addition, your individual privacy will be maintained in all data in this study.

Your signature on this form grants me, as the investigator, permission to record your answers for the qualitative research study. If you determine that you would like to participate in this research study, please understand that your participation is strictly voluntary and you have the right to withdraw your consent at any time. You have the right to withdraw your consent at any time or refuse to answer particular questions with no penalty or repercussions. If you withdraw from the study, your data will not be used.

If you agree to participate in this study, please sign and complete the contact information below and I will be in contact soon. You may also contact me if you have questions about participation in this study.

Valerie Utecht
valerie.utecht@[redacted]
(816) [redacted] (cell)
(816) [redacted] (office)

_____ _____
Signature Date

_____
Printed Name

_____
Email Address

_____
Phone Number

SCHOOLS

[redacted]

Educators' Perspective of the Mindframes of Visible Learning

Valerie Utecht Study for Dissertation Report – Baker University

Interview Questions

- IQ1. How do you evaluate your own impact on student learning?
    - FQ1. What methods do you use to assess your impact on student learning?
- IQ2. How do you utilize assessments to inform your impact on student achievement?
    - FQ1. Tell me about how this information guides the next steps you take as an educator.
- IQ3. Talk about how you collaborate with peers.
    - FQ1. Explain how you discuss progress and your individual impact on student achievement.
- IQ4. How would you go about initiating change to improve student achievement?
    - FQ1. Explain how you help students believe they can make progress.
- IQ5. Tell me how you challenge yourself.
    - FQ1. How do you challenge students?
- IQ6. Explain how you interpret and act on feedback offered to you.
    - FQ1. How do you help students understand feedback?
- IQ7. How do you engage students in their learning?
    - FQ1. Describe how student collaboration can impact the learning process.
- IQ8. How do you inform students about what successful achievement criteria looks like?
- IQ9. How do you build trust and an environment where it is safe to make mistakes and learn from others?
- IQ10. Explain how you gauge the prior knowledge and expe

- IQ11. Explain how your educational practices have changed or not since you learned about Visible Learning.
- IQ12. What positive or negative impact have you experienced in students' learning related to the Visible Learning research?

BAKER UNIVERSITY

Baker University Institutional Review Board

February 23rd, 2021

Dear Valerie Utecht and Verneda Edwards,

The Baker University IRB has reviewed your project application and approved this project under Expedited Status Review. As described, the project complies with all the requirements and policies established by the University for protection of human subjects in research. Unless renewed, approval lapses one year after approval date.

Please be aware of the following:

1. Any significant change in the research protocol as described should be reviewed by this Committee prior to altering the project.
2. Notify the IRB about any new investigators not named in original application.
3. When signed consent documents are required, the primary investigator must retain the signed consent documents of the research activity.
4. If this is a funded project, keep a copy of this approval letter with your proposal/grant file.
5. If the results of the research are used to prepare papers for publication or oral presentation at professional conferences, manuscripts or abstracts are requested for IRB as part of the project record.
6. If this project is not completed within a year, you must renew IRB approval.

If you have any questions, please contact me at npoell@bakeru.edu or 785.594.4582.

Sincerely,

Nathan D. Poell

Nathan Poell, MLS
Chair, Baker University IRB

Baker University IRB Committee
Sara Crump, PhD
Nick Harris, MS
Christa Manton, PhD
Susan Rogers, PhD

BAKER UNIVERSITY

IRB Request

Date 2/12/21

IRB Protocol Number _____ (IRB use only)

I. Research Investigator(s) (students must list faculty sponsor)

Department(s) Education

	Name	Signature	
1.	Valerie Utecht	Valerie Utecht	Principal Investigator
2.	Verneda Edwards	V. Edwards	☑ Check if faculty sponsor
3.	Peg Waterman	Margaret Waterman	☐ Check if faculty sponsor
4.			☐ Check if faculty sponsor

Principal investigator contact information

Note: When submitting your finalized, signed form to the IRB, please ensure that you cc all investigators and faculty sponsors using their official Baker University (or respective organization's) email addresses.

Phone (816) [redacted]

Email vutecht@[redacted]

Address [redacted]

Faculty sponsor contact information

Phone _____

Email _____

Expected Category of Review: ☐ Exempt ☑ Expedited ☐ Full ☐ Renewal

II. Protocol Title

Educators' Perceptions of the Mindframes for Visible Learning [redacted]

III. Summary:

The following questions must be answered. Be specific about exactly what participants will experience and about the protections that have been included to safeguard participants from harm.

A. In a sentence or two, please describe the background and purpose of the research.

The purpose of this qualitative study is to examine the perceptions of practicing educators' experiences utilizing the research and practices of Hattie (2008) in their current field. This study is also being conducted to gain an understanding of how these educators perceived the impact of the Visible Learning concepts in the experiences for their students, along with themselves, in classrooms and schools. This study will also examine educators' perspectives of the mindframes, or core beliefs, of Visible Learning used by these educators.

B. Briefly describe each condition, manipulation, or archival data set to be included within the study.

No conditions, manipulations, or archival data set are a part of this study.

IV. Protocol Details

A. What measures or observations will be taken in the study? If any questionnaire or other instruments are used, provide a brief description and attach a copy.

An interview will be conducted with each subject that lasts 45 minutes to 1 hour. The interviews will take place in person, by phone call, or web-based video conferencing technology tools. The subjects will be asked a series of questions regarding their perception of the impact of Visible Learning mindframes including the benefits and drawbacks they perceive with that usage. Since the focus of the study is to explore subjects' lived experiences, no direct observations are required.

B. Will the subjects encounter the risk of psychological, social, physical, or legal risk? If so, please describe the nature of the risk and any measures designed to mitigate that risk.

Participating in this study will not expose the subjects to any psychological, social, physical, or legal risk.

C. Will any stress to subjects be involved? If so, please describe.

Study subjects will not encounter any stress as a result of their participation in this study.

D. Will the subjects be deceived or misled in any way? If so, include an outline or script of the debriefing.

Subjects will not be deceived or misled in any way during this study.

E. Will there be a request for information which subjects might consider to be personal or sensitive? If so, please include a description.

The interview questions used in this study are limited to inquiring into the participants' perceptions of their use of Visible Learning mindframes. Any further information provided to the principal investigator will be entirely at the discretion of the participant. Each participant will have an opportunity to review his or her responses at the end of the interview to ensure their hours are accurately represented. Subjects may opt out of answering any question they consider too sensitive or personal during the interview stage of the study.

F. Will the subjects be presented with materials which might be considered to be offensive, threatening, or degrading? If so, please describe.

Subjects will not be presented any material—written or otherwise—that might be considered offensive, threatening, or degrading as a part of this study.

G. Approximately how much time will be demanded of each subject?

Subjects will be asked to participate in one interview session. Each interview session will last no longer than one hour. In addition, following the interviews, member checking, which will occur by following up with each participant by sharing the major findings and themes of the study, will take an additional session of less than 30 minutes.

H. Who will be the subjects in this study? How will they be solicited or contacted? Provide an outline or script of the information which will be provided to subjects prior to their volunteering to participate. Include a copy of any written solicitation as well as an outline of any oral solicitation.

The sample for this study consists of 10-15 educators currently practicing in the field of education such as district leaders, building leaders, or teachers in a Kindergarten through 12th grade setting. Participants will be recruited based on their employment in a single district that began implementing Visible Learning during the 2017-2018 school year. Each subject for this study will have knowledge of the Visible Learning research and practices that was gained through professional development sessions, professional readings, or observations in the learning environment.

I. What steps will be taken to insure that each subject's participation is voluntary? What if any inducements will be offered to the subjects for their participation?

Participants will receive no inducement for participating in this study. Participants will be advised their participation is voluntary and may withdraw from the study at any time and for any reason.

[redacted]SCHOOLS

J. How will you insure that the subjects give their consent prior to participating? Will a written consent form be used? If so, include the form. If not, explain why not.

Each participant will be presented an informed consent form that must be signed prior to participating in the study. To assure the subjects' confidentiality, each signed informed consent forms will be safeguarded in a place by the principal investigator.

K. Will any aspect of the data be made a part of any permanent record that can be identified with the subject? If so, please explain the necessity.

No aspect of the data collected for the study will be part of a permanent record identified with the subjects. Study participants will be assigned alpha-numeric pseudonyms to help protect their identities as a condition for participating in the study.

L. Will the fact that a subject did or did not participate in a specific experiment or study be made part of any permanent record available to a supervisor, teacher, or employer? If so, explain.

No, this study will not be made a part of any permanent record nor made available to a supervisor, teacher, or employer.

M. What steps will be taken to insure the confidentiality of the data? Where will it be stored? How long will it be stored? What will be done with the data after the study is completed?

While the study is in process, each subject will be assigned a pseudonym. All other data—electronic and otherwise—will be stored on an external hard drive that is password-protected and in the principal investigator's custody. The drive and the data contained therein will be destroyed three years after the conclusion of the study.

N. If there are any risks involved in the study, are there any offsetting benefits that might accrue to either the subjects or society?

There are no risks involved in this study. Further, there are no benefits accruing directly to the participants. However, the findings of the study will add to the emerging research into educators' use of Visible Learning.

O. Will any data from files or archival data be used? If so, please describe.

No data from files or archival data will be used for this study.

[redacted]HOOLS

Appendix C: Email Invitation for Participation in the Study

Participation Email

Greetings Fellow Educator,

My name is Valerie Utecht and I am a doctoral candidate working towards the completion of my Ed.D. at Baker University. You are being invited to participate in a research study related to Visible Learning practices in education. The purpose of this qualitative research project is to find out educators' experiences with Visible Learning practices and their perception of the effect of these practices.

I am asking permission to conduct and record an interview with you as a part of this research. The interview session will last approximately 30 to 45 minutes. You may choose to interview face-to-face, via phone call, or through Zoom. The recording will be used to assist in writing field notes and will be stored on a secure digital file that will be discarded after the dissertation has been defended. The information you provide will not be used for any other purpose outside of this qualitative research study. Your answers will be confidential and combined with the responses of other participants in summary form. Information reported will not include any individuals or school districts. In addition, your individual privacy will be maintained in all data in this study.

If you determine that you would like to participate in this research study, please understand that your participation is strictly voluntary and you have the right to withdraw your consent at any time or refuse to answer particular questions with no penalty or repercussions. If you withdraw from the study, your data will not be used.

If you agree to participate in this study, please reply to this email directly to me and I will be in contact soon to set up a time that is convenient for you. You may also contact me if you have questions about participation in this study. Your consideration is greatly appreciated.

Sincerely,

Valerie Utecht
Doctoral Candidate
Baker University

Appendix D: Participant Consent Form

Dear Fellow Educator,

I am a doctoral candidate to complete my Ed. D. at Baker University in Kansas. You are invited to participate in a research study related to Visible Learning practices in education. The purpose of this qualitative research project is to find out educators' experiences with Visible Learning practices and their perception of the effect of these practices.

I am asking permission to conduct and record an interview with you as a part of this research. The interview session will last approximately 30 minutes. The recording will be used to assist in writing field notes and will be stored on a secure digital file that will be discarded after the dissertation has been defended. The information you provide will not be used for any other purpose outside of this qualitative research study. Your answers will be confidential and combined with the responses of other participants in summary form. Information reported will not include any individuals or school districts. In addition, your individual privacy will be maintained in all data in this study.

Your signature on this form grants me, as the investigator, permission to record your answers for the qualitative research study. If you determine that you would like to participate in this research study, please understand that your participation is strictly voluntary and you have the right to withdraw your consent at any time. You have the right to withdraw your consent at any time or refuse to answer particular questions with no penalty or repercussions. If you withdraw from the study, your data will not be used.

If you agree to participate in this study, please sign and complete the contact information below and I will be in contact soon. You may also contact me if you have questions about participation in this study.

Valerie Utecht
valerie.utecht@[redacted].org
(816) [redacted] (cell)
(816) [redacted] (office)

_____ _____
Signature Date

_____
Printed Name

_____
Email Address

_____
Phone Number

Appendix E: Interview Script

Educators' Perspective of the Mindframes of Visible Learning

Valerie Utecht – Baker University Cohort 18

Interview Script

Date & Time of Interview _____

Introduction

Thank you for participating in my research study related to Visible Learning practices in education. The purpose of this qualitative research project is to find out educators' experiences with Visible Learning practices and their perception of the effect of these practices. This research study will provide [redacted] with evidence of how currently practicing educators in the district view the impact of Visible Learning, more specifically the mindframes, on student learning.

With your permission, I will record this interview with you as a part of this research. The interview session will last approximately 30 to 45 minutes and the recording will be used to assist in writing field notes and will be stored on a secure digital file that will be discarded after the dissertation has been defended. After today's interview, you will have the opportunity to review and clarify your responses. The information you provide will not be used for any other purpose outside of this qualitative research study. Your answers will be confidential and combined with the responses of other participants in summary form. Information reported will not include any individuals or school districts. In addition, your individual privacy will be maintained in all data in this study.

Please understand that your participation is strictly voluntary and you have the right to withdraw your consent at any time or refuse to answer particular questions with no penalty or repercussions. If you withdraw from the study, your data will not be used. Thank you for your time and participation.

Interview Questions

- IQ1. How do you evaluate your own impact on student learning?
    - FQ1. What methods do you use to assess your impact on student learning?
- IQ2. How do you utilize assessments to inform your impact on student achievement?

    - FQ1. Tell me about how this information guides the next steps you take as an educator.
- IQ3. Talk about how you collaborate with peers.
    - FQ1. Explain how you discuss progress and your individual impact on student achievement.
- IQ4. How would you go about initiating change to improve student achievement?
    - FQ1. Explain how you help students believe they can make progress.
- IQ5. Tell me how you challenge yourself.
    - FQ1. How do you challenge students?
- IQ6. Explain how you interpret and act on feedback offered to you.
    - FQ1. How do you help students understand feedback?
- IQ7. How do you engage students in their learning?
    - FQ1. Describe how student collaboration can impact the learning process.
- IQ8. How do you inform students about what successful achievement criteria looks like?
- IQ9. How do you build trust and an environment where it is safe to make mistakes and learn from others?
- IQ10. Explain how you gauge the prior knowledge and experiences of your students.
- IQ11. Explain how your educational practices have changed or not since you learned about Visible Learning.
- IQ12. What positive or negative impact have you experienced in students' learning related to the Visible Learning research?