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Investigating the Relationship between Implicit Theories about Intelligence and Teacher-Student Relationship Quality

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Investigating the Relationship between Implicit Theories about Intelligence and Teacher-Student Relationship Quality

A Dissertation Presented

by

WOODBURY B. CLIFT

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Investigating the Relationship between Implicit Theories about Intelligence and Teacher-Student Relationship Quality

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DEDICATION

I dedicate this body of work to my son, Maxwell Montgomery Clift, and my eternal love,

Zena Clift.

ACKNOWLEDGMENTS

There are many people to whom I owe my gratitude. First and foremost, I am forever indebted to my mom, Eleanor Clift, who instilled in me the values of hard work, persistence, and critical thinking, and who always backed my creative and academic pursuits. Second, I may never have realized this milestone without the guidance of my father, William Brooks Clift, my step-father, Thomas Brazaitis, and my Godfather, Reverand Richard Peard, who together, and in their own distinct ways, helped me to become the man I am today. I am further grateful for the gentle and persistent nudging of my two brothers, Edward Montgomery Clift and Robert Anderson Clift, who, through both words and deeds, inspired my academic journey. And last but not least, when I was unsure I would ever finish and needed inspiration, my wife, Zena Clift and my son, Maxwell Clift, remained unwavering in their faith in me and always encouraged me to press ahead.

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ABSTRACT

INVESTIGATING THE RELATIONSHIP BETWEEN IMPLICIT THEORIES ABOUT
INTELLIGENCE AND TEACHER-STUDENT RELATIONSHIP QUALITY

SEPTEMBER 2016

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This study investigates the influence of teacher held implicit theories about intelligence

on the quality of their relationships with students within the context of a school co-

located in a secure juvenile justice setting serving adjudicated adolescent boys. In

Massachusetts, adjudicated youth attending schools co-located in juvenile justice

residential settings have significant gaps in their formal schooling, are culturally diverse,

come from impoverished communities, and have high rates of learning disabilities. Their

teachers, on the other hand, are mostly middle class, white, and well educated. As such,

an immense social and cultural relational divide inherently exists between the teachers

and their students working in these settings. And yet, the importance of forming quality

teacher-student relationships is widely regarded as essential to achieving a wide range of

outcome measures, including engagement, motivation, and achievement (Goodenow,

1993; Midgley, Feldaufer, & Eccles, 1989; Hamre & Pianta, 2005; Stewart, 2008;

Hughes & Kwok, 2007). Given these realities, and in order to improve the outcomes for

adjudicated youth, improving our understanding about the factors that influence the

quality of teacher-student relationships is paramount. This study explores how teacher held implicit theories about intelligence as either fixed or malleable may mediate efforts to form quality teacher-student relationships in service to student learning. Surveys, classroom observation, and teacher interview data were used to increase understanding about the influence of implicit theories of intelligence on teacher-student relationship quality.

TABLE OF CONTENTS

APPENDICES

LIST OF TABLES

CHAPTER I

INTRODUCTION

"Learning and succeeding in school requires active engagement…..Engaging adolescents, including those who have become disengaged and alienated from school, is not an easy task. Academic motivation decreases steadily from the early grades of elementary school into high school. Furthermore, adolescents are too old and too independent to follow teachers' demands out of obedience, and many are too young, inexperienced, or uninformed to fully appreciate the value of succeeding in school."
National Academy of Science's Research Council (2004)

Teaching is a dynamic social process involving an array of interactions between teachers and their students. These interactions are the primary medium through which teachers form quality relationships with their students, foster engagement, and learning occurs. Underlying these interactions are teachers' implicit theories about intelligence and learning, or self-theories (Dweck, 1999). These unconsciously held, implicit theories about intelligence have been shown to influence teacher thoughts, feelings, and behaviors (Dweck, Chiu, & Hong, 1995). Despite the importance of quality teacher-student relationships on a wide range of outcome measures, including engagement, motivation, and achievement (Goodenow, 1993; Midgley, Feldaufer, & Eccles 1989; Hamre & Pianta, 2005; Stewart, 2008; Hughes & Kwok, 2007), attention to establishing quality teacher-student relationships is largely neglected in systemic education reform efforts, which overwhelmingly focus on curricula, school structures, and testing. As a result, we've lost sight of the skills required to form, maintain, and mend as needed, productive teacher-student relationships that facilitate student learning and are unwittingly undermining the very outcomes we seek to achieve through formal schooling.

Throughout my career as an educator working at the intersection of education reform and social justice and equity in mostly urban school districts and juvenile justice

settings, I have grown increasingly interested in the role of teacher-student relationship quality as a motivational factor for students, and specifically boys, who appear to be disinterested, reluctant to learn, or otherwise disengaged. For the past eight years, I've served in various administrative roles as part of a comprehensive juvenile justice education reform initiative in Massachusetts. Throughout this period, I've sought to improve educational outcomes for adjudicated youth despite a host of inconsistencies in practice between what research indicates adolescent youth need to grow and thrive and what they experience when entering the juvenile justice system. For example, research on adolescent cognitive and psychological development demonstrates that youth are more likely to succeed academically, socially, and emotionally when they feel connected to caring adults or institutions, experience a sense of agency and competency, believe they have control over their future, and hold a stable sense of identity (Deci & Ryan, 2000; Erikson, 1963; Hawkins & Catalano, 2004; Piaget, 1965). However, in stark contrast to the guidance offered by this body of research, when an adolescent is detained, they are removed from the community they call home, isolated from the people with whom they have relationships, placed in an unfamiliar environment whereby their physical and emotional safety is uncertain, stripped of most of their physical freedoms, implicated as incompetent, and systemically encouraged to re-examine their identity by people who are predominantly from different social, economic, and cultural backgrounds. Given this divide between what research indicates adolescents need to thrive and their experience upon entering and transitioning through the juvenile justice system, it should not come as a surprise that re-arrest rates for juveniles entering the community after one year hover

2

stubbornly around 55% nationally, leaving the juvenile justice system vulnerable to claims of ineffectiveness and political posturing (Mendell, 2003).

Despite these realities, and because of the numerous teachers I've observed harness their hard earned relational capital to engage seemingly "reluctant" students in challenging learning endeavors, I remain hopeful about the potential impact that education holds for this population of youth. Understanding the variables that influence a teacher's ability to earn and sustain this relational capital in service to teaching and learning is the focus of my research. This proposed collaborative action research case study seeks to yield greater understanding about the intersection between teacher beliefs about intelligence, commonly referred to as mindset (Dweck, 2007), and teacher-student relationship quality and how surfacing these mindsets can support the teacher's capacity to form high quality teacher-student relationships. Findings will be useful to policy makers, administrators, and teachers alike, to herald a new age of education reform that recognizes the humanistic element of teaching and learning as part and parcel to closing the proverbial achievement gap.

Statement of the Problem

"Watch your thoughts, they become words;
watch your words, they become actions;
watch your actions, they become habits;
watch your habits, they become character;
watch your character, for it becomes your destiny."

-1977 May 18, San Antonio Light

People, including teachers, hold implicit theories about the nature of intelligence that typically span between two ends of a continuum. On one end are people who generally believe intelligence to be a fixed entity. On the other end are people who believe that intelligence is malleable (Dweck, 1999). These implicit theories are precursors to action, serve as filters through which individuals interpret the actions of others, and as a consequence, influence the quality of the relationships they forge (Dweck, 2007; Pianta & Walsh, 2005). Because teacher-student relationship quality (TSRQ) is recognized as an important variable in the success of students placed at-risk for failure across a wide range of outcome measures, including engagement, motivation, and achievement (Goodenow, 1993; Hamre & Pianta, 2005; Hughes & Kwok, 2007; Midgley, Feldaufer, & Eccles, 1989; Stewart, 2008), understanding the variables influencing TSRQ in the classroom is essential. However, because these beliefs are unconscious, teachers are likely to repeat enactments of these beliefs regardless of how positively or negatively they impact the quality of the teacher-student relationship (Chang & Davis, 2009). In schools serving adjudicated youth, where at-risk, minority males are over-represented, where pervasive and deleterious messaging about the potential for positive outcomes for this population are reinforced, and where the medical model of treating deficits is ubiquitous, surfacing the implicit and potentially insidious theories

about intelligence teachers hold may be of critical importance to clearing the way for high quality teacher-student relationships and ultimately, youth engagement in learning.

The influence of teacher perceptions and beliefs on student outcomes is well established in the literature. For instance, the groundbreaking *Pygmalion in the Classroom* study conducted by Rosenthal and Jacobsen (1968) concluded that a students' intellectual development was chiefly attributed to what teachers expect and how those expectations are communicated. Social Cognitive Theory (Bandura, 1977, 1997) posits that people are capable of intentional pursuit of courses of action (agency), and that such agency operates through a dynamic process wherein environmental, behavioral, and internal factors determine both what we believe about ourselves as well as the choices and actions we take. A central component of social cognitive theory is the concept of self-efficacy. Bandura (1997) defined self-efficacy as "beliefs in one's capabilities to organize and execute the courses of action required to produce given attainments" (p. 3). In education, self-efficacy beliefs affect a wide range of teacher behaviors, including behavioral changes related to curriculum and instruction, persistence with struggling students, and less critical responses to students who get an incorrect answer (Allinder, 1994; Gibson & Dembo, 1984; Guskey, 1988; Tschannen-Moran, Hoy, A., & Hoy, W., 1998). Other researchers have demonstrated that teacher expectations result in differential treatment (Hattie, 2009; Jussim & Harber, 2005) based on such factors as race, ethnicity, or gender (Brody et. al., 2006; Wong, Eccles, & Sameroff, 2003). More recently, a growing body of literature examining the influence of mindset, which encompasses the implicit beliefs individuals hold about intelligence as either fixed or malleable, on student motivation and outcomes further confirms the mediating effect of

teacher beliefs and expectations on adolescent achievement (Dweck, 2007; Wigfield, Eccles, Schiefele, Roeser & Davis-Kean, 2006).

Although prior research has explored the link between teacher expectations, beliefs, and perceptions on engagement and learning outcomes, I have been unable to find a study exploring the intersection between teacher self-theories about intelligence and the quality of their relationships with students. This lack of research represents a significant gap in the scholarly literature related to teacher-student relationship quality and the influence of teacher beliefs on the formation thereof.

Purpose of the Study

Relationships are the primary medium through which teaching and learning in school occurs. Teachers working in schools serving adjudicated youth are faced with engaging and teaching highly transient student populations, mostly from cultural and socio-economic backgrounds that differ from those of the teachers, and many of whom have histories of negative schooling experiences. Further complicating the challenge facing teachers working in juvenile justice settings is the general dearth of research situated in juvenile justice settings to inform effective instruction. Despite these barriers, many teachers succeed in forming quality teacher-student relationships that facilitate student engagement and learning. However, some do not. As a result, the opportunities and potential for learning are greatly diminished.

This study seeks to add to our understanding about teacher-student relationship quality by exploring the relationship between teachers' implicit theories about intelligence and the teacher behaviors that influence the quality teacher-student relationship in a school co-located in a secure juvenile justice setting serving adjudicated adolescent boys using a collaborative action research case study design. In particular, the study will explore how teacher held implicit theories about intelligence influence their thoughts, behaviors, and interactions with their students and how surfacing these implicit theories might support the capacity of a teacher to form high quality teacher-student relationships.

Significance of the Study

This study is important for several reasons. First, it focuses on adjudicated youth attending schools co-located in residential secure settings. According to a 2008 Kids

Count report by the Annie E. Casey foundation, the scope of the problem facing communities across the nation surrounding juvenile justice is staggering. To begin, large numbers of our nation's youth – and disproportionately youth of color, youth for whom English is a second language, and youth with disabilities – are directly impacted by the current system. On average, the report states, police make 2.2 million juvenile arrests, an estimated 400,000 of these youth cycle through juvenile detention centers, and an estimated 100,000 youth are confined in juvenile facilities on any given night (Sickmund & Snyder, 2006). Unfortunately, involvement in this system does not bode well for the future for most of these youth as is indicated by recidivism studies that consistently find that 50 to 70 percent of youth released from juvenile correctional facilities are rearrested within one to two years (Mendel, 2003). In addition to the human toll of incarceration, the fiscal toll to the nation of incarcerating such a significant number of youth is noteworthy. The Justice Policy Institute (2009) found that it costs an average of $240.99 per day (close to $88,000 per year) per youth in state-funded, post-adjudication residential facilities.

In addition to the social and fiscal costs associated with incarceration, an added problem is that teachers working with youth in state custody too often find themselves with few validated programs and evidence-based interventions to guide their work. Notably, the link between educational attainment and delinquent behavior is one of the strongest correlations established by studies on juvenile delinquency (Blomberg, T., Bales, W., & Piquero, A., 2012). Given the strength of this relationship, and the fact that school aged youth who are held in the formal custody of a juvenile facility are required to attend school, teachers working in these settings need to be equipped with well-

researched interventions that will prepare youth to succeed in our schools and upon re-entry to the community. However, too little is known about what educational methods are effective within the context of a juvenile justice setting. In fact, a 2014 review of the model programs' guide page on the OJJDP website (http://www.ojjdp.gov/mpg/) reveals **no** model classroom based instructional programs tailored to juvenile justice residential settings.

A second reason that this study is significant is that it introduces the variable of teacher self-theories (Dweck, 2000) about intelligence (mindset) on teacher-student relationship quality. Several bodies of research demonstrate the profound impact teacher beliefs and expectations have on student learning outcomes including engagement, motivation, and achievement (Wigfield et al., 2006; Bandura, 1977; Hattie, 2009, Midgley, 2002). However, prior research has not explored the role of teacher self-theories about intelligence on the interactions they have with their students that form the basis of the quality of the teacher-student relationship.

This study is also important because it might identify specific skills or strategies for teachers to use in service of the formation of quality teacher-student relationships. For too long, the ability to form and harness quality teacher-student relationships has been relegated to innate qualities of the teacher. As a consequence, improving the relational skills of teachers has not been a priority in research or practice. This study may provide guidance to teachers and stakeholders involved in improving teacher practice with concrete skills to assist in teacher relational efficacy.

Finally, this study may provide important insights to literature on implicit theories about how to support teachers to surface implicit beliefs in a non-threatening manner and

change habits of behavior to better align with a teachers espoused theory. Given the difficulty in surfacing unconscious beliefs that might be in contradiction of one's espoused beliefs, research that serves to advance a framework for doing so is critical for creating equitable outcomes for all youth.

Research Questions

1. How are the implicit beliefs that teachers who work in schools co-located in juvenile justice settings hold about intelligence expressed when a teacher discusses the quality of their relationships with students?

2. How do teachers who work in schools co-located in juvenile justice settings understand the effects of making explicit their implicit beliefs about intelligence on their relationships with students?

Overview of Methods

A collaborative action research approach was employed in order to enhance our understanding of how teacher implicit beliefs about intelligence influence the behaviors of teachers with their students as well as the quality of the relationships they forge. Further, this approach allowed for greater understanding about how surfacing teacher implicit beliefs about intelligence can help to alter behavioral patterns that inhibit quality teacher-student relationships. Participant interviews, classroom observations, surveys, and document reviews were the primary sources of qualitative data collection for this study.

I spent a considerable amount of time at the selected site, a school co-located in a secure residential treatment facility serving adolescent boys adjudicated delinquent in Massachusetts with a highly transitional student population of up to fifteen students. The study was guided by Calhoun's (1994) action research process inclusive of five sequential and recursive phases: (a) selecting the area of focus, (b) collecting data, (c)

organizing data, (d) analyzing and interpreting data, and (e) taking action. Together with the participants, I analyzed salient moments within day to day ordinary instances that were critical to my interests about the way implicit beliefs are expressed.

The collection and analysis of data in this study occurred concurrently over a six-week time span in partnership with teachers. The study resulted in the identification of areas to focus support for teachers in confronting teacher held beliefs about intelligence in service of strengthening teacher-student relationships and improving outcomes for marginalized youth.

Overview of Chapters

Chapter Two outlines the theoretical underpinnings and rationale for studying implicit beliefs about intelligence and teacher-student relationship quality within the context of the environment for which the study will occur. Both the broad contextual and individual forces impacting the teacher-student relationship in a school co-located in a secure juvenile justice setting are described in detail. The research and methodology of the study is explained in Chapter Three and includes the following sections: rationale for a collaborative action research case study, research questions, participants and sampling procedures, instrumentation, data collection and analysis processes, limitations and delimitations of the study, verification of findings, as well as ethical considerations.

CHAPTER II

LITERATURE REVIEW

Introduction

There is a substantial body of literature demonstrating the value of teacher-student relationship quality towards healthy youth development, achievement, and engagement outcomes for similar populations of youth as those who populate juvenile justice settings nationwide (Bandura, 1993; Crosnoe, 2001; Csikszentmihalyi & Schneider, 2000; Cohen, Raudenbush & Ball, 2003; Eccles & Roeser, 2011; Roeser, Eccles, & Sameroff, 2000). Additionally, research conducted by Carol Dweck (2007) on beliefs about the malleability of intelligence and Albert Bandura's (1977, 1997) seminal work on self-efficacy demonstrates the profound importance of one's perceptions and beliefs on achievement. Lastly, the influence of the "external influences" (Pianta, 1999) on youth development outcomes in schools, including those within juvenile justices settings, must also be considered as there is a sizable literature providing evidence that school climate and youth outcomes are interdependent (Bronfenbrenner, 1977).

When combined, a conceptual framework, emerges: Student engagement in learning hinges on the dynamic quality of the teacher and student relationship (Erin, 2010; Sameroff & Mackenzie, 2003), which is influenced by the perceptions and beliefs that teachers and students hold (Bandura, 1977; Burchinal, et. al., 2002; Dweck, 2007; Hamre & Pianta, 2005; Stewart, 2006) and the context in which this relationship exists (Bronfenbrenner, 1977; Eccles, Lord, & Midgley, 1991).

<u>Contextual Forces Impacting Teaching in Juvenile Justice Settings</u>

In schools serving adjudicated youth, there exist a vast array of contextual forces influencing the perceptions, beliefs, and actions of the teachers, students, and other caregivers involved in youths' rehabilitation. Among the significant contextual forces at play are the complex characteristics of the students, the design of the juvenile justice system, conflicting understandings about the purpose of juvenile justice, the perceptions and beliefs of teachers and students alike, and a paucity of research to inform educators working in these settings.

The educational and psychological characteristics of adjudicated youth, defined as a youth who has been found guilty by a judge of committing a delinquent act, presents monumental challenges for educators seeking to improve the academic attainment of this population. Decades of research demonstrates that this population consistently performs below their peers academically, are more likely than their peers to be absent, truant, or considered dropped-out, qualify for special education services, and have a history of school discipline (Neild & Balfanz, 2006; Sedlak & McPherson, 2010; Zingraff, Leiter, Myers & Johnson, 1994). Research conducted by Leone and Cutting (2004) found that the average reading level nationally for ninth grade delinquent youth is comparable to a fourth grader and more than one-third are considered illiterate.

Other studies have revealed the prevalence of youth with disabilities and in need of special education services to be three to five times greater in juvenile justice schools than in public schools (Casey & Keilitz, 1990; Murphy, 1986). According to a descriptive study by Dunivant (1982) 36% of delinquent youth had learning disabilities and this population was 220% more likely to break the law than their non-disabled peers.

Moreover, the prevalence of mental health problems correlated with increased levels of teacher-student conflict is staggering. A recent survey of committed youth in all types of juvenile facilities nationwide conducted by Sedlak and McPherson (2010) found that more than 60 percent of youth included in the survey had anger management issues, half exhibited elevated symptoms for anxiety and half showed signs of depression as well. Another national survey found that youth with Emotional Behavioral Disturbances (EBD) made up an average of 47% of the incarcerated youth with disabilities (Quinn, Rutherford, Leone, Osher, & Poirier, 2005), whereas the EBD population nationally is less than 1% (Christie and Yell, 2008). With figures demonstrating such profound disproportion, one might conclude that juvenile justice settings have become today's proverbial "classroom in the basement," where students with disabilities were removed from classes with their peers, placed in a classroom in the basement of the school, provided sub-par education, and, as a consequence, further stigmatized.

Another complicating factor in providing a quality education to this population is the design of the juvenile justice system where teaching and learning is to occur. For instance, research on adolescent cognitive and psychological development demonstrates that youth are more likely to succeed academically, socially, and emotionally when they feel connected to caring adults or institutions, experience a sense of agency and competency, believe they have control over their future, and hold a stable sense of identity (Erikson, 1963; Hawkins & Catalano, 2004; Piaget, 1965; Ryan & Deci, 2000). However, in stark contrast to the guidance offered by this body of research, when an adolescent is adjudicated delinquent, he or she is removed from the community they call home, isolated from the people with whom they have relationships, placed in an

unfamiliar environment whereby their physical and emotional safety is uncertain, stripped of most of their physical freedoms, implicated as incompetent, and systemically encouraged to reexamine their identity. While all of these experiences may, despite the apparent contradiction with research on resilience, actually be what's best for the youth, it remains a jarring, if not traumatic experience requiring the systematic deployment of resources and services organized around shoring up a youth's sense of agency, competency, self-efficacy, and identity.

Further exacerbating this design problem, and permeating throughout every interaction a juvenile delinquent has with agents of the juvenile justice system, is America's long struggle with the purpose of juvenile justice and its ambivalence about how to treat youth in the eyes of the law. This struggle can be defined as having five distinct phases (Scott & Steinberg, 2010). The first phase, roughly covering the 1600's and through to the early 1800's, rested the responsibility for raising proper, law abiding citizens with the family and surrounding community. Parents, townspeople, and the church were responsible for correcting perceived deviant behavior of youth through whatever means available, including whippings, beatings, and even capital punishment (Pisciotta, 1994). While the community was largely responsible for handling the misdeeds of youth, there was a clear belief that youth as young as seven were responsible for their behavior and should be held accountable for it through punishment.

With the onset of mass industrialization and urbanization in the 1800's, a second phase emerged as elite members of society, known as the "child savers," started to view youth as victims of the deterioration of the fabric of society and promoted the idea that the state needed to stem this tide (Siegel & Welsh, 2009). The "child savers" sought, as

their central goal, to protect these vulnerable youth from the problems of society, how they were handled in the eyes of the law, and provide them the treatment they needed to avoid a life of crime. They argued that youth and adolescents were not as culpable as adults because they held diminished moral and cognitive capacities and, as a consequence, they were more apt to change their deviant ways with appropriate intervention. Two significant changes occurred during this period. First, "houses of refuge" were established wherein juveniles were placed in order to both protect them from society and develop their character. And, secondly, due to the influence of powerful judges and legislators from progressive states such as Massachusetts, New York, and Illinois (Platt, 1977), juvenile courts specializing in dispensing justice for youth under age 16 were established, with the first one in 1899 in Cook County, Illinois. This new court employed the legal doctrine known as "parens patriae" whereby the state has the right to intervene in the life of a child to protect them from themselves or their environments and to essentially act as the parent in determining proper treatment. By 1950, every state had a separate juvenile court charged with exercising guardianship rights for juvenile offenders so that the conditions that contributed to their actions could be treated and cured. During this period, the state was responsible for managing the treatment of youthful offenders and youth had little to no legal protections because juvenile courts were not criminal courts (Frankel, 2011).

In 1967, a third period, symbolized by massive deinstitutionalization efforts and a seismic shift from favoring the rights of the state to favoring the rights of youth occurred with the landmark case of Gault, 387 U.S. 1 (1967). In this case, a 15 year old boy, Gerald Gault, and a friend were taken into custody for allegedly making lewd calls to a

woman. The parents were never informed of the youth being placed in custody, Gault

did not appear at any hearing, and there was no official hearing relative to the allegations.

However, Gault was committed to age 21 in an Arizona juvenile institution. The

Supreme Court determined that the individual's rights had been violated and that youth

were entitled to many of the same due process protections of adults when the potential of

institutional placement was being considered (Frankel, 2011). The residual effects of this

decision included sweeping national legislation, the Juvenile Justice and Delinquency

Prevention Act of 1974, which aimed to create a comprehensive, graduated, and just

approach to dispensing juvenile justice. Key components of this legislation included (1)

reducing the use of secure confinement for juveniles (2) developing capacity in

communities to support vulnerable youth and (3) ending the practice of assigning youth

to juvenile detention or commitment settings for offenses that would not be considered

criminal if perpetrated by adults, referred to as "status offenses."

States began to experiment with alternatives to incarceration and throughout the

1970's in order to both comply with this act and receive federal funds for juvenile justice

programs. Examples of alternatives that took hold include the creation of smaller

residential settings for treatment of youth with varying degrees of security and probation.

This period of deinstitutionalization put the onus on state and local officials to design,

test, and refine alternatives to juvenile detention based on limited evidence about how to

steer youth away from a life of crime. During this same period, Robert Martinson (1974)

published an article entitled "What Works? Questions and Answers About Prison

Reform" in the journal *The Public Interest* where he cited research study after research

study indicating the lack of any evidence supporting the value of alternatives to

incarceration. While this article focused on the adult prison population, the distinction

was lost among conservatives who used it as fodder in their agenda to re-assert control

over what they deemed to be a "morally corrupt society and growing criminally minded

youth population" (Lipton, Martinson, & Wilks, 1975). Because of the lack of clarity

about how to better serve juveniles under this new law, fears about the impact on

community safety, and costs associated with community based interventions,

conservatives who believed that juvenile offenders should be punished for their alleged

crimes, were able to draw parallels between the Martinson article and the treatment of

juveniles and blur the legal and psychological distinctions between adults and juveniles.

This backdrop, coupled with media reports about the rise of the supposed juvenile

"super predator" (Dilulio, 1996) in the late 1980's and into the 1990's, fear swept

throughout communities across the nation and thus the fourth phase was born. The crack

epidemic was at its worst and politicians sought to "get tough on crime" by passing laws

forcing judges to impose harsh sentences on youth, including mandatory drug sentencing,

lowering the age for youth to be sent to adult facilities, and the establishment of the

"three strikes, you're out" laws. This resulted in swelling of the juvenile offender

population as well as that of the adult corrections throughout the early 2000's. Slowly but

surely, the 1974 law had been undermined, and the juvenile offender was no longer being

treated as a juvenile, but rather as a young adult criminal, and the philosophical

underpinnings of the juvenile justice system shifted towards adult corrections in policy,

practice, and staffing (Lipsey, Howell, Kelly, Chapman, & Carver, 2010).

More recently, however, the pendulum is swinging back towards a more balanced,

developmentally tailored approach to juvenile justice, recognizing the role of juvenile

justice in addressing public safety while similarly acknowledging the original tenets of

the child saving movement: youth are not morally and cognitively the same as adults,

they are amenable to change, and that treating youth as criminals only increases the

likelihood they will re-offend (Butts, Bazemore, & Meroe, 2010).

Despite this shift, the corrections, discipline and deficit focused mentality still

permeates the beliefs, perceptions, and actions of many of the adults and youth

interacting throughout the juvenile justice system. In order to counter this reality, and for

change to take hold inside juvenile justice settings, demonstrating positive outcomes is

paramount. To do so, research into what actually works to improve the outcomes with

and for youth placed in juvenile justice settings across America is vital. For teachers

working in these settings, the need for this research is both desperate and urgent. As

illustrated earlier, a review of over 600 programs designed to prevent and/or treat

violence, delinquency, aggressive behavior, or drug abuse in juveniles by the

"Blueprints" project at the Center for Study and Prevention of Violence identified only a

handful were deemed effective for youth already involved in the justice system (Mihalic

et. al., 2004). Of these, none were designed for teachers to deliver to youth within a

juvenile justice setting.

Context and Teacher-Student Interactions

Every function in the child's cultural development appears twice: first on the social
level, and later, on the individual level; first between people (interpsychological), and
then inside the child (intrapsychological). (Vygotsky, 1978, p.57)

The aforementioned contextual forces are deeply embedded in the culture of

juvenile justice settings and have the potential to profoundly and insidiously influence the

actions of the teachers, youth, and other caregivers involved in the youth's education.

Because educational settings, including schools co-located in juvenile justice settings, involve complex interactions among peers, teachers, other school related staff (Vygotsky, 1978), understanding the nature and consequences of these interactions on the lives of students has garnered the attention of researchers. As a consequence, we know that the range of social interactions youth have in schools play a significant role on a wide range of outcomes associated with healthy youth development including student motivation, learning, and social and emotional adjustment (Bronfenbrenner, 1977; Deci & Ryan, 1985; Hughes & Kwok, 2007; Wentzel, 1998;) as well as the overall school climate (Crosnoe, Kirkpatrick & Elder, 2004; Fraser, 1994; Maslowski, 2006; Van Houtte, 2005). Of additional importance is the demonstration that these interactions are transactional in nature, in that they are both dynamic and contextually influenced (Bronfenbrenner, 1986; Carr, Taylor, & Robinson, 1991; Lerner, 1991; Lerner & Castellino, 2002; Pianta, 1999; Sameroff & Mackenzie, 2003). In other words, as these interactions occur over time, relationships are formed and these relationships have a substantive effect on the cognitive and social-emotional development of the individuals involved as well as the environment in which these relationships exist.

A robust research base informs the influence of context and interactions on learning and growth. Vygotsky (1962) was among the first to theorize that social interactions among peers, teachers, and other adults were fundamental to cognition and development. Social Learning theorist Albert Bandura (1963, 2006) theorized that learning occurs through observation and modeling and explains human behavior as a continuous reciprocal interaction between cognitive, behavioral, and environmental influences. Lave and Wenger (1991) posit that learning as it normally occurs is

20

situational in that it is a result of the task, context, and/or culture in which it occurs. Lerner (1991), a Developmental System theorist, describes development and change as the process of individual and environmental characteristics interacting, "Because change in the organism always occurs in dynamic connection with changes in the context (and vice versa), then change in organism context relations are the basic change process in development" (p. 27). Self-Determination Theory (Deci & Ryan, 1985) espouses that human beings can be active and engaged, or, alternatively passive and disconnected, in large part due to the degree in which the conditions in which they grow and develop adequately satisfies three innate psychological needs: competence, autonomy, and relatedness. Ecological Systems Theory (Bronfenbrenner, 1977) indicates that the child is the center of five systems and that he/she is influenced by each of these systems to varying degrees over time. Together, these theories demonstrate that learning is developmental, exits in context, and is a by-product of dynamic interactions with multiple intrinsic and extrinsic variables.

Emerging from these theories, multiple models for understanding the variables that influence individual development over time have been proposed. Transactional models (Sameroff & Chandler, 1975) explain development of the individual as a product of the interactions between the individual and the experiences provided by the environment. Moreover, transactional models demonstrate that an individual's "developmental outcome at any point in time is the product not of the influences of the environment or the influences of the individual characteristics, but of the complex relationship between child and the school environment over time" (Sutherland & Oswald, 2005, p.3). For example, a student who exhibits challenging behaviors as perceived by

the teacher is likely to receive less academic support and fewer interactions characterized as caring and supportive, resulting in the student having more difficulty in class and exhibiting more challenging behaviors, which in turn, further exacerbates the initial source(s) of the challenging behavior.

Ecological contextual models posit that children develop over time within interrelated systems that are both proximal (i.e. interactions between the child/teacher in the classroom) and distal (i.e. impact of family member/caregiver losing job) (Bronfenbrenner, 1977; Pianta & Walsh, 1996). According to Bronfenbrenner's ecological framework for human development, "the characteristics of the person at a given time in his her life are a joint function of the characteristics of the person and of the environment over the course of that person's life up to that time" (1989, p.191). His model, composed of five systems surrounding the child, asserts that the most influential layer is that of the microsystem or individual setting wherein the child has the most social interactions, such as the home or school. According to Bronfenbrenner (1994), the five systems include:

1. Microsystem: This is the system closest to the child. It is a "pattern of activities, social roles, and interpersonal relations experienced by the developing person, in a given face-to-face setting, with particular physical, social, and symbolic features that invite, permit, or inhibit engagement in sustained, progressively more complex interactions with, and activity in, the immediate environment. Examples include such settings as family, school, peer group, and workplace" (p.39).

2. Mesosystem: This system "comprises the linkages and processes taking place between two or more settings containing the developing person (e.g., the relations between home and school, school and workplace, etc.)" (p.40).

3. Exosystem: This system encompasses "the linkages and processes taking place between two or more settings, at least one of which does not contain the developing person, but in which events occur that indirectly influence processes within the immediate setting in which the developing person lives (e..g., for a child, the relation between the home and the parent's workplace; for a parent, the relation between the school and the neighborhood peer group)" (p.40).

4. Macrosystem: This "consists of the overarching pattern of the micro-, meso-, and exosystems characteristic of a given culture or subculture, with particular reference to the belief systems, bodies of knowledge, material resources, customs, life-styles, opportunity structures, hazards, and life course options that are embedded in each of these broader systems. The macrosystem may be thought of as a societal blue-print for a particular culture or sub-culture (p.40)."

5. Chronosystem: This "encompasses change or consistency over time not only in the characteristics of the person but also the environment in which the person lives (e.g., changes over the life course in family structure, socioeconomic status, employment, place of residence, or the degree of hecticness and ability in everyday life)" (p.40).

Pianta and Walsh's Contextual Systems Model (1996) emphasizes the influence of the family environment and school systems on the development of the individual over time. Variables relative to the family environment that have been demonstrated to impact

the child-teacher relationship include socio-economic resources (Birch & Ladd, 1997; Stuhlman, Hamre, & Pianta, 2002), mother-child attachment (Bowlby, 1973; O'Connor & McCartney, 2007; Thompson, 2010), parental support for schooling (Pianta & Walsh, 1996), and the quality of the relationship between the family and the school (Reynolds, Weissberg, & Kasprow, 1992; Mantzicopoulos, 2005). Variables in the school environment are conceptualized as comprising the school system, the classroom system, the teacher system, and the child system. Each of these four systems is considered to be influential in shaping the development and quality of the teacher-child relationships.

The school system has been shown to positively influence teacher-student relationships in schools where teachers have higher salaries, report having a supportive and involved principal, and/or have access to greater amounts of professional development (Fontaine, Torre, Grafwallner, & Underhill, 2006; Hall & Cassidy, 2002; Pianta, 1999). This confirms the value of attending to the basic and psychological needs of teachers (Maslow, 1943) in order to cultivate an environment where quality relationships can be fostered. However, it is worth noting that the presence of the aforementioned factors does not definitively result in quality teacher-student relationships or increased student achievement, because each system influences the other, indicating the importance of compatibility across each system.

The classroom system has been shown to have a high degree of influence on the quality of the teacher-child relationship as well. For example, classrooms that are characterized as having teachers that are warm, caring, and demanding show higher levels of teacher-quality relationships and increase youth sense of belonging, mattering, and engagement (Eccles & Gootman, 2002). Furthermore, classrooms with lower child-

24

teacher ratios, where the teachers interact with the students more individually and developmentally are also associated with higher quality relationships (Boure, 1986; NICHD ECCRN, 2002; Pianta, 1999; Pianta & Hamre, 2009). Fullan (2001) and Cohen, Raudenbush, and Ball (2003) argue that, while highly qualified instructors and quality curricular materials are important resources relative to improving student achievement, they are insufficient. Rather, school improvement efforts must alter the instructional interactions between their teachers and students to impact student engagement and learning (Hughes, Kwok, & Loyd, 2008; Kennedy, 2011; Montalvo, Mansfield, & Miller, 2007).

The teacher system includes characteristics of the teacher, such as personality, beliefs, qualifications, education, and experience that influence their behavior. For example, teachers with higher education levels generally form quality relationships with their students (Hearns, 1998), whereas more experience as a teacher is negatively associated with teacher-student relationship quality (Mashburn, Hamre, Downer, & Pianta, 2006). Further, research conducted by Montague and Rinaldi (2001) reveals negative teacher attitudes towards students with disabilities and low achieving students results in increased teacher criticism, ignoring, and negative behaviors towards these students.

The child system encompasses child characteristics such as gender, beliefs, behavior, culture, and language proficiency. Carr et al. (1991) examined the effects on teacher-student interactions for students who exhibited problem behaviors and reported that these students received less academic feedback from their teachers and further, the quality of these academic interactions were characterized by lower level instruction. This

finding is supported in the extensive literature base involving youth with Emotional

Behavioral Disturbances (EBD), who constitute a sizable majority of the roughly 50% of

students eligible for special education services within the MA DYS (2012). For instance,

Skinner and Belmont (1993) found that students whom teachers perceived to be more

engaged, received more positive teacher behaviors, whereas those students who teachers

perceived to be less engaged, experienced teacher neglect and more coercive efforts to

get the students to engage. As a result of this pattern, youth who were already

disengaged grew to be more so, what Skinner and Belmont described as a magnificatory

effect. Taken a step further, these are the students who are more frequently sent out of

class, or don't come to class altogether, and for whom most schools respond to using

extrinsic efforts to coerce them to be, or at least appear, engaged.

Research exploring the lack of adolescent engagement in schooling reveals a

serious disconnect between what adolescents want and need developmentally (e.g.

autonomy and agency) and what they experience in school (Crosnoe, 2000; Dornbusch,

Glasgow, & Lin, 1996; Eccles, Early, Frasier, Belansky, & McCarthy, 1997; Eccles,

Lord, & Midgley, 1991). Adolescence is a period when youth are engaged in identity

formation and role development in the context of their future hopes and dreams (Côté,

2002; Erikson, 1959). They are concerned with being treated respectfully and caringly

(Ryan, Stiller, & Lynch, 1994). And, whether explicitly or not, it is clear that adolescents

across cultures are future focused, thinking about education, career, family, and life-style

goals (Nurmi, Poole, & Seginer, 1995). As a result, teachers working with adolescents

must ensure competency development across both cognitive and affective domains in

order to facilitate an adolescent's progress towards their hoped for future self (Kuhn,

2009; Nurmi, 1991). The most ubiquitous methods found in schools for promoting this

development include academic and/or social-emotional learning curriculum,

differentiation of instruction, and specific interventions, e.g. advisories. However, to

maximize the likelihood these methods will have the intended effect, the teacher must

recognize that the quality of their relationship with their students can either serve to foster

or stultify the adolescent's growth and development. As such, they hold primary

responsibility for cultivating the relationship, including repairing harms to it, or risk the

downward spiral of disengagement in learning.

The Importance of Engagement for Learning

Following the release of *A Nation at Risk: The Imperative For Educational*

Reform (1983), researchers, policy-makers, and practitioners have sought to understand

and replicate the attributes of effective schools. One of the attributes garnering

significant inquiry throughout this period is the construct of engagement (Fredricks,

Blumenfeld, & Paris 2004; Goodenow, 1992). Research on engagement indicates it is

associated with a myriad of positive outcomes, including academic achievement, school

completion, resilience, social emotional development, and the reduction of risk taking

behaviors (Catalano, Berglund, Ryan, Lonczak, & Hawkins, 2004; Gardner, Roth, &

Brooks-Gunn, 2007; Scales, Benson, Leffert, & Blyth, 2000). It is the theoretical

construct most frequently employed in understanding school dropout and the associated

negative outcomes, including the increased likelihood of being incarcerated and/or

poverty (Christenson, Sinclair, Lehr, & Hurley, 2000). Further, the positive outcomes

associated with engagement span a range of socioeconomic conditions (Klem & Connell,

2004) and cultural differences (Lutz, Guthrie, & Davis, 2006). Given the acute

implications of engagement for student success for all, understanding its components and how to facilitate it, particularly for youth placed at-risk, is paramount.

Over the past several decades several definitions of engagement have emerged. According to Fredricks, Blumenfeld, and Paris (2004) engagement is defined as inclusive of three dimensions (emotional, behavioral, and cognitive) within the school research literature. The emotional/affective dimension encompasses students' feelings about their peers, teachers, and/or schoolwork and is correlated with student perceptions of their attachment to school and motivation to work. The behavioral dimension largely encompasses the key notion of participation, including measures that indicate participation in co-curricular activities, evidence of academic success such as grades and scores on standardized tests, and measures of conduct, including suspension and attendance. Additionally, the cognitive dimension includes the central idea of student investment in learning, and incorporates students' perceptions and beliefs related to self, school, teachers, and peers such as self-regulation, autonomy, self-efficacy, persistence and effort. More recently, researchers have proposed a four-part engagement taxonomy that adds academic engagement to the construct and pairs externally observable indicators of engagement together (academic and behavioral) and internal processes of engagement (cognitive and psychological) together (Anderson, Christenson, Sinclair & Lehr, 2002). This model conceptualizes engagement as a "state of being" that is highly influenced by contextual factors, specifically the home, school, and peers. Because this model no longer relies on engagement as an attribute of the student only, but rather a dynamic interaction between the student and the extent to which the context supports learning and development, greater attention to the interaction between the student and

these contextual factors as a source for cultivating engagement is required. The emphasis

on dynamic interaction suggests that further understanding about the nature of these

interactions as it relates to the teacher-student relationship quality is vital.

The Promise of High Quality Teacher-Student Relationships

Pianta (1999) describes teacher-student relationships as "emotions-based

experiences that emerge out of teachers' on-going interactions with their students." Doll,

Zucker, & Brehm (2014) in their book *Resilient Classrooms* describe teacher-student

relationships as caring and authentic relationships between teachers and students.

Research conducted by Wentzel (1998) illuminates the characteristics of respect, support

for autonomy, caring, high and realistic expectations, and the provision of constructive

feedback as central features of a high quality relationship. Doda and Knowles (2008)

synthesized the characteristics of quality teacher-student relationships as generally

including "compassion, respect, personalization, fellowship, and friendship" (p.27).

Additionally, the importance of active listening, individualized and deserved

encouragement, and taking the time to get to know the student are consistently cited in

the research (Hamre & Pianta, 2005; Hughes & Kwok, 2007; Pianta, 1999; Rath &

Clifton, 2005).

Teacher-student relationship quality (TSRQ) is widely accepted as an important

variable in student success across a variety of outcome measures, including achievement,

engagement, and motivation (Hamre & Pianta, 2005; Hughes & Kwok, 2007; Stewart,

2008). While the benefits of a quality TSRQ are shared among virtually all students, they

seem to be most significant for youth who are "at risk" for school failure (Baker, 2006;

Rimm-Kaufman et. al., 2002), and who disproportionately end up involved with the

29

juvenile justice system. Hughes and Kwok (2007) found that higher levels of perceived TSRQ among Black, White, and Latino students with low literacy skills were positively related to student engagement levels, which in turn were predictive of increases in both math and reading achievement scores. In another study, Wentzel (1997) found that students who perceived their teachers as caring about them were more motivated to achieve positive social and academic outcomes in middle school. Research conducted by Gregory and Ripski (2008), on high school students with a history of both frequent and intense discipline problems revealed that when the adolescents perceived their teachers to be trustworthy people, they exhibited less defiant behaviors. Research on the psychological aspects of middle school, a particularly vulnerable period in youth development and where disengagement from schooling can gain a foothold, conducted by Goodenow (1993) and Midgley, Feldaufer, and Eccles (1989) correlated positive teacher-student relationships with early adolescent's academic motivation and achievement. This finding is supported by several studies conducted by Buchs, Butera, Mugny, and Darnon (2004) and Ladd, Birch, and Buchs (1999) demonstrating that children with higher quality relationships participate more in class and are more engaged overall than those with lower quality relationships.

In addition to the role of TSRQ on motivation and engagement, it also plays a mediating effect on cultural performance variances in the classroom. For example, Burchinal et. al. (2002) found that African American children with higher quality relationships performed better on standardized tests of language skill than African American children with lower quality relationships. Stewart (2006) examined the perception of 8th and 10th grade black students relative to the quality of their relationship

with their teachers and found that higher levels of TSRQ were predictive of higher math standardized achievement scores.

These findings suggest that high quality teacher-child relationships can partially compensate for disadvantages in other facets of students' social-emotional lives and academic trajectories. For teachers working in juvenile justice settings nationwide, where minorities and youth with disabilities are overrepresented, and where teachers reflect the demographic pattern of educators nationwide, this research offers the promise of efficacy and agency in the face of day-to-day struggles to reach and teach adjudicated youth. However, recognizing the influence of the motivation producing interactions that could exist between this unique population of students and their teachers is only one piece of the puzzle—the literature suggests that another important piece to understand is the degree to which student and/or teacher perceptions and beliefs mediate the quality of the relationship.

The Role of Perceptions and Beliefs on Teaching and Learning

The influence of teacher and student perceptions and beliefs on student outcomes has been well established. Social Cognitive Theory (Bandura, 1977, 1997) posits that people are capable of intentional pursuit of courses of action (agency), and that such agency operates through a dynamic process wherein environmental, behavioral, and internal factors determine both what we believe about ourselves as well as the choices and actions we take. A central component of social learning theory is the concept of self-efficacy. Bandura (1997) defined self-efficacy as "beliefs in one's capabilities to organize and execute the courses of action required to produce given attainments" (p. 3). In education, self-efficacy beliefs affect a wide range of behaviors and outcomes for

31

students and teachers alike. For teachers, higher self-efficacy is correlated with behavioral changes relative to curriculum and instruction, including willingness to experiment with alternative instructional methods, seek out improved teaching methods, and try out new instructional materials (Allinder, 1994; Guskey, 1988; Tschannen-Moran et al., 1998). Additionally, teachers with reported higher self-efficacy are more likely to persist with struggling students and less likely to criticize students who get an incorrect answer (Gibson & Dembo, 1984). Further, teacher self-efficacy is attributed to greater academic performance of students (Moore & Esselman, 1992). Last, teachers reporting higher levels of self-efficacy also report less conflict in their relationships with students (Hamre, Pianta, Downer, & Mashburn, 2008; Mashburn et al., 2006).

For students, the correlates for student self-efficacy are also widespread. Decades of research demonstrate the highly predictive nature of student reported self-efficacy on academic and positive life outcomes. Bandura observed that "students whose sense of self-efficacy were raised set higher aspirations for themselves, showed greater strategic flexibility in the search for solutions, achieved higher intellectual performance, and were more accurate in evaluating the quality of their performance than were students of equal cognitive ability who were led to believe they lacked such capabilities" (Bandura, 1997, p. 215). In addition to the positive effects of higher self-efficacy on the academic success of youth, it also appears to influence risk-taking behaviors that are commonly attributed to juvenile offenders. For example, some studies suggest that youth with higher self-efficacy scores are less likely to use drugs and alcohol, participate in illegal activities, and/or have sexual relations outside of long-term relationships (Schunk & Meece, 1987).

Another line of inquiry surrounding the role of beliefs in teaching and learning is Achievement Goal Theory (Ames, 1992; Dweck, 1986; Urdan, 1997; Urdan & Maehr, 1995). Achievement goal theorists hypothesize that there are two kinds of goals that influence motivation and achievement, learning goals and performance goals. These two classes of goals are deeply embedded in school structures as well as teacher and student beliefs about the nature of schooling, and can have a significant impact on achievement. The aim of learning goals, also called mastery goals (Ames, 1992), are to acquire new skills or knowledge and are correlated with increased effort, deep-level, strategic processing of information, and self-regulated learning (Bouffard, T., Bouchard, M., Goulet, G., Denoncourt, I., & Couture, N., 2005). Moreover, students who adopt a learning goal orientation tend to attribute success to effort and failure to having not employed the right learning strategies (Nicholls, 1984; Pintrich & Schunk, 1996). In contrast, performance goals, also called ability goals (Ames, 1992), are directed towards validating one's ability, or conversely avoiding demonstrating one's lack of ability, resulting in surface, rote-level processing that can have the effect of inhibiting learning (Ames, 1992; Ames & Archer, 1988). A review of research on Achievement Goal Theory conducted by Meece, Anderman, and Anderman (2005) concluded that schools emphasizing the demonstration of high ability and competing for grades diminishes the motivation of most students. This finding is confirmed by a meta-analysis by Roseth, Johnson, and Johnson (2008) of over 17,000 adolescents on the effects of goal structures on peer relations and achievement that revealed better outcomes associated with goals structures emphasizing cooperative learning over competitive demonstrations of learning.

Carole Ames (1992) posits that classrooms are composed of three interrelated structures that can be leveraged by teachers towards promoting a mastery goal orientation, including the "design of tasks and learning activities, evaluation practices and the use of rewards, and distribution of authority or responsibility" (p.263). When these structures are accompanied by specific instructional strategies within a classroom, she contends that a set of motivational patterns among students will be evidenced, including a focus on effort and learning; attributions to effort; attributions to effort based strategies; use of effective learning and other self-regulatory strategies; active engagement; high intrinsic interest in activity; feelings of belongingness; and "failure-tolerance." Examples of instructional strategies aligned to the different structures are detailed in the table below (Ames, 1992):

Table 2.1 Mastery Goal Orientation Instructional Strategies

Structure	Instructional Strategies
Task	• Focus on the meaningful aspects of learning activities • Design tasks for novelty, variety, diversity and student interest • Design tasks that offer reasonable challenge to students • Help student establish short-term, self-referenced goals • Support development and use of effective learning strategies
Authority	• Focus on helping students participate in the decision making • Provide "real" choices where decisions are based on effort, not ability evaluations • Give opportunities to develop responsibility and independence • Support development and use of self-management and monitoring skills
Evaluation/ Recognition	• Focus on individual improvement, progress, and mastery • Make evaluation private, not public • Recognize students' effort • Provide opportunities for improvement • Encourage view of mistakes as part of learning

More recent research conducted by Carol Dweck (2000, 2007) on the influence of learners' attributions relative to ability has further confirmed the profound importance of one's beliefs and perceptions on motivation, learning, and achievement. According to Dweck (2007), individuals hold implicit beliefs about the nature of intelligence and ability along a continuum. They are considered implicit beliefs because, in general, they are unconsciously held and unless the individual is asked about them, they operate in the shadows. On one end of the continuum are individuals who believe that intelligence and ability are fixed entities and therefore regardless of their efforts and persistence, improvements to their intelligence or abilities are limited. She refers to this as a fixed mindset. Those who hold a fixed mindset are performance focused and likely to pursue performance tasks that will reinforce existing beliefs about their abilities and avoid experiences that might reveal a lack of ability or knowledge (Dweck & Elliott, 1983; Nicholls, 1984). Mistakes are affront to their identity and therefore taking risks to learn new things, particularly in a social sphere such as a classroom, is deeply threatening. On the other end of the continuum are individuals who believe that abilities and intelligence are malleable and therefore capable of growth. She refers to this as a growth mindset. The host of positive behaviors associated with the growth mindset includes a willingness to persist in the face of failure, to seek out critical feedback, and to take risks. For instance, Dweck (2000) found that while individuals may still experience the pain associated with failure, they turn their focus to learning from these mistakes and trying out new strategies. For teachers working with students who are reticent about traditional education, the behaviors attributed to a growth mindset are central to their effectiveness day in and day out.

Because of the implicit nature of these mindsets, they can be quite insidious to one achieving their fullest potential across multiple disciplines, including education. Research demonstrates a variety of ways in which one's mindset influences learning and development. A study conducted with youth in New York City (Blackwell, Trzesniewski, & Dweck, 2007) revealed that students who entered the seventh grade with a fixed mindset were more likely to engage in non-collaborative behaviors such as defensiveness and disengagement. Non-collaborative behaviors generally fall into one of two classes including (1) learned helplessness (failing to apply learning strategies) and (2) self-handicapping (acting out in such a way as to impede learning), either one of which can lead to significant negative psychological and life outcomes. Learned helplessness generally occurs when an individual discovers, consciously or not, that the outcomes of a situation are out of his/her control (Abramson, Seligman, & Teasdale, 1978; Kofta & Sedek, 1989). This experience results in perceptions of incompetence and lack of individual agency accompanied by feelings of "anxiety, despair, and pessimism about future success" (Covington & Omelich, 1985, p. 448). Over time, this self-perception can generalize to other situations and the individual comes to believe that he/she is not equipped with the strategies needed to attain future positive outcomes and, in turn, stops putting forward even minimal effort in other similar situations (Dweck & Legget, 1988). In essence, the individual has learned that putting forth effort doesn't result in desired outcomes and therefore he/she gives up trying.

According to Maier and Seligman (1976), there are several psychological deficits that coincide with learned helplessness, all of which teachers working in juvenile justice settings are familiar. Emotional deficits that often accompany the sense of

powerlessness include depression and loss of self-esteem. Cognitive deficits emerge because the individual fails to acquire important learning strategies. And, finally, motivational deficits result due to individual's loss of self-efficacy. Alternatively, the individual may engage in self-handicapping behaviors, which "involves creating obstacles to one's own performance for the sake of attributional benefits" (Tice & Baumeister, 1990, p.447) and largely serve as a protection of one's self-worth (Tesser, 1988). By engaging in self-handicapping behaviors, such as procrastination or acting out, one's failure at an achievement task can be attributed to the self-handicapping behavior and not one's lack of ability. In either case, the consequences are essentially the same. Both result in loss of constructive effort and cascading negative life outcomes.

In contrast, this same study revealed that youth with a growth mindset had significantly higher achievement in math than the students characterized as having a fixed mindset. Additionally, among the behaviors attributed to the youth with the growth mindset were persistence, academic risk-taking, and effortful engagement-essential ingredients for learning. Moreover, and of particular importance to teachers working in juvenile justice settings where biases and assumptions run rampant, a growth mindset seems to provide protection against stereotype biases about their abilities (Blackwell et al., 2007; Good, Aronson, & Inzlicht, 2003; Aronson, Fried, & Good, 2002). As such, whether or not the individual, his/her peers, and/or his/her teacher hold fixed beliefs about intelligence, the promotion of a growth mindset serves to at least partially inoculate the youth from the harms these imposed beliefs might place on them.

This body of research demonstrates the profound influence beliefs and perceptions about intelligence, mindset, has on the engagement, motivation, achievement

and life outcomes of youth. Further, it indicates that one's mindset and its manifestations are dynamically influenced by the context in which they exist and the interactions that occur within this context. Despite the importance of teacher-student relationship quality, I was unable to find any study exploring the influence of teacher beliefs regarding intelligence on the quality of teacher-student relationships. Given the importance that mindset and teacher-student relationship quality hold for learning, particularly for youth placed at risk for failure, further inquiry into the influence of mindset as it relates TSRQ is warranted.

CHAPTER III

METHODS AND RESEARCH DESIGN

As efforts to crack the school to prison pipeline garner more attention by the general public and policy makers, there is an increased need to understand how the juvenile justice system and its array of actors can more effectively rehabilitate the youth in its care and custody. Quality education has long been touted as an essential mechanism for fulfilling this promise, but little is known about how teachers working in these settings can be more effective in reaching and teaching this highly vulnerable and disproportionately minority population. As such, there is an increased need for interventions that provide policy makers and practitioners alike with a more sophisticated understanding about the behaviors of teachers that result in improved outcomes for this population. Effective practices aimed at establishing quality teacher-student relationships are crucial in order to increase student engagement in learning and teacher efficacy.

This study seeks to fill this gap by using collaborative action research case study strategy of inquiry. This research will add to the literature regarding teacher-student relationship quality by exploring how surfacing unconscious beliefs teachers working in a school co-located in a secure juvenile justice setting serving adolescent boys adjudicated delinquent hold about intelligence influences their behaviors and how surfacing these mindsets might support the teachers' capacity to form high quality teacher-student relationships.

This chapter provides a detailed description of the methods and research design utilized in this study. The research plan within this chapter is organized into several sections to provide a framework for a qualitative collaborative action research case study:

rationale for a qualitative study, research questions, participants and sampling

procedures, data gathering procedures, data analysis procedures, limitations, verification

of findings, and ethical considerations.

Rationale for Qualitative Research Design

Qualitative research is a broad approach to studying and generating knowledge

about a social phenomena with the goal of improving some social circumstance

(Rossman & Rallis, 1998). Rossman and Rallis (2003) describe qualitative research as

having "two unique features: (a) the researcher is the means through which the study is

being conducted, and (b) the purpose is to learn about some facet of the social world

(p.5)." Denzin (1994) describes qualitative research as both naturalistic and interpretive,

while drawing on multiple methods of inquiry.

While qualitative research is seldom used in education, it is an appropriate

method to obtain a holistic view of multiple perspectives of specific populations

(Creswell, 2007; Patton, 2002) in a natural setting. Janesick (1994) likens qualitative

research to the art of dancing. She asserts that qualitative research includes three phases,

"the warm-up stage, or design decisions made at the beginning of the study; second is the

total workout stage, during which design decisions are made throughout the study; and

third is the cool-down stage, when design decisions are made at the end of the study

(p.211)." Within each of these phases, certain characteristics are common. According to

Rossman and Rallis (2003) qualitative research has the following commonly found

characteristics:

1. Takes place in the natural world
2. Uses multiple methods
3. Focuses on context

4. Is emergent rather than tightly prefigured
5. Is fundamentally interpretive

For this research, a qualitative study was deemed appropriate because the purpose was to explore a social phenomenon, the influence of teacher held implicit beliefs about intelligence (mindset) on teacher-student relationship quality, within the context of the social setting in which it occurs. Since this research engaged the participants in an iterative process of inquiry into the experience of formulating quality relationships within the context of a juvenile justice setting and sought to identify specific actions that might result in improvements to this relationship, a collaborative action research strategy was used.

Collaborative Action Research

Collaborative Action Research has its roots in social psychology (Lewin, 1946) and is a type of action research. Action research is "the study of a social situation with a view to improving the quality of action within (Elliot & Keynes, 1991, p. 69)." Collaborative action research extends action research by emphasizing the use of strategies that engage the researcher and practitioner in research decisions, theorizing, and inquiry throughout the study (Reason & Bradbury, 1991). There are three important characteristics about collaborative action research that separates it from conventional research (Baum, MacDougall, & Smith, 2006). First, the focus of the research is on mutual learning and promoting action through reflective inquiry. Second, it is concerned with equity between the researcher and the practitioner. And last, it is sensitive to the context in which the research is conducted, thus increasing the value and potential application of the research findings (Gillespie & Gillespie, 2006). In educational settings "action research is a special form of research that may be carried out by teachers

who are not only interested in *understanding,* but in *changing* their teaching to make it more in line with their values" (Arhar & Buck, 2000, p. 336, original emphasis). While there are numerous proposed models for conducting action research found in the literature (Stringer, 2014; Calhoun, 1994; Hendricks, 2013; Kemmis & McTaggart, 1990) they all share certain commonalities. First, they begin with a central problem or general idea. They involve preliminary data collection relative to the central problem, often in the form of observation. They include a plan for action, the collection of and synthesis of data associated with the action, and a period of reflective inquiry. And finally, the research cycle repeats until the study is concluded.

As with any method, there are certain limitations attributed to collaborative action research. Because action research requires engaging practitioners in the study design from start to finish, it can require extensive time on the part of both practitioner and researcher (Bailey, 1999; Wong, 1993). Another limitation attributed to action research, as well as case study research, is researcher bias (Stringer, 2014). To address researcher bias, several procedures have been promulgated including repetition of the action research cycle, member checks, use of multiple sources of data, participant debriefing, and understanding of the process by participants, all of which will be employed in this study (Melrose, 2001; Stringer, 2014).

Case study

Rossman and Rallis (2003) describe case studies as an overall strategy for understanding a "larger phenomenon through intensive examination of one specific instance" (p.104). Features typical of a case study are that they are small scale, holistic, rely on multiple techniques for gather data and are conducted over a period of time within

42

a bounded context (Merriam, 2009; Shaw, 1978; Yin, 2003). A descriptive-interpretive single case study approach was used for this study in order to "depict events, processes, and perspectives as they unfold" (Rossman & Rallis, 2003, p.104) within the context of a school co-located in a residential juvenile justice setting. The descriptions illustrate the perceived challenges of relationship formation within the selected setting, how teacher beliefs about intelligence were expressed, and how awareness of these beliefs systems may have influenced the quality of these relationships. Because the study was focused on answering "how" questions, case study was an appropriate approach (Yin, 2003).

However, there are certain limitations attributed to case study. First, case studies are context dependent and therefore when generalizing to other contexts, the application of learnings to another situation must be "believed or assumed to be sufficiently similar to the study sample that findings apply there as well" (Kennedy, 1979, p. 665). Additionally, because the researcher is primary mechanism for data collection decisions and analysis, limitations surrounding researcher bias and ethics are noted in the literature (Guba & Lincoln, 1981; Hamel 1993).

<u>Research Questions</u>

The following research questions were used for this study, which was conducted at a selected school site managed by the Massachusetts' Department of Youth Services:

1. How are the implicit beliefs that teachers who work in schools co-located in juvenile justice settings hold about intelligence expressed when a teacher discusses the quality of their relationships with students?

2. How do teachers who work in schools co-located in juvenile justice settings understand the effects of making explicit their implicit beliefs about intelligence on their relationships with students?

Context of the Study

  The selected site for this collaborative action research study was a small school co-located within a secure juvenile justice treatment setting in Massachusetts. The site was chosen because of its similarities to other juvenile justice treatment settings across Massachusetts, as well as the nation, that have sought to provide a less correctional institution approach to juvenile rehabilitation. Typically, these smaller, campus-based settings are composed of three service delivery components that includes education, therapy, and operations. Education services are usually provided by a small number of teachers, as few as two, who must teach multiple content areas, e.g. science and math, throughout the day to youth across a range of grade and proficiency levels. This section describes the demographics of the selected site and that of the overall juvenile justice population in Massachusetts at the time of the study.

Table 3:1 Student Demographics for MA DYS Committed Population in Residence

Gender	Male	Female
N=509	92.5%	7.5%

Age	12	13	14	15	16	17	18	19	20	21
N=509	2	10	63	102	181	119	19	9	3	1

Race/Ethnicity	Latino	Black	Caucasian	Two or More	Missing	Asian /American	Amer. Indian or Alaskan Native
	206	146	112	26	15	n/a	n/a

Table 3.2: Teacher Demographics for MA DYS 2014-15

Race/Ethnicity	White	Hispanic	Black	Asian	Two or more	Unknown
N=133	117	6	6	2	1	1

Gender		Male	Female
N=133		59	74

Age	21-20	30-39	40-49	50-59	60-69
N=133	13	36	26	33	25

Table 3.3: Student Demographics of Selected Site

Gender		Male	Female
N=8		8	0

Table 3.4: Teacher Demographics for Selected Site

Race			White
N=2			2

Gender		Male	Female
N=2		2	0

Age		30-39	40-49
N=2		1	1

Research Setting

The study was conducted at a small school co-located in a secure juvenile justice residential setting in central Massachusetts that can house up to 15 adolescent males adjudicated delinquent.

Participants/Stakeholders

For this study, participant selection was limited to two teachers assigned to teach in a single residential school setting. I invited the entirety of the full time general education faculty, two teachers, at the selected site to participate in the study and both agreed to do so. The setting, a small school co-located in a short-term treatment settings, from which the participants were invited to participate was similar to other short-term treatment settings across the state in several notable ways. The two participating teachers work full-time in their respective roles and teach multiple subjects throughout the day. The selected participants were demographically representative of the overall teaching population. The students were committed to the program for a minimum of 3 months, were male, and ranged in age from 14-18. And, as reflected in the tables above, the demographics of the student population were consistent with the overall demographics of the adjudicated youth population statewide.

Using a single case collaborative action research strategy of inquiry, the focus of this research was on the experiences and reflections of teachers as they learned about implicit beliefs about intelligence, the importance of teacher-student relationship quality, and how these two ideas might intersect in the context of their role as teachers working in a school co-located in a juvenile justice setting. The process was action driven, flexible, and iterative. It allowed for actual events that occurred in the natural setting to be considered and analyzed within the context of the focus of the study.

Because the purpose of this study was to expose and interrogate the influence of implicit beliefs on teacher behaviors with the collaborating teachers, I, as the researcher, needed to select teachers who I believed would be willing to openly engage in

conversations that ran the risk of making them feel vulnerable in front of their supervisor. As such, participant selection was largely based on my observations of the identified teachers in professional development situations wherein their willingness to take risks and challenge their assumptions in order to become more effective was apparent. Once they accepted the invitation to participate, acceptable methods for communicating the risks of participation and mechanisms for reducing the impact of such risks were employed.

As noted above, participation in this study did present real and perceived risk to the teacher participants. While there were no physical risks posed to the participants as a result of this study, there were potential emotional, legal, and/or employment related risks posed. To address these risks, the following safeguards were employed to protect the rights of all parties who are directly or indirectly involved: 1) the focus of the research and the approach for inquiry was clearly articulated in written form so that the participant understood the scope of the study and his role in carrying it out, 2) informed consent detailing the risks and protections (Appendix D) by the participant was secured prior to the study proceeding, 3) written approval by both MA DYS and UMASS Amherst (Appendices B and G) was obtained, 4) the participants were made aware of data collection procedures and actively shaped data collection activities during the study, 5) raw and synthesized data was made available to the participants and 6) prior to dissemination of the findings, the participants were provided the opportunity to determine if they wished to remain anonymous. To protect the rights of others who were observed or described during the study, I kept their identity strictly confidential and anonymous by using initials at all times. Fictitious names were used in place of the residential treatment

setting/school and names referred to in this case study. Last, prior to conducting this

research study, I participated in an Internet-based "Collaborative Institutional Training

Initiative (CITI)" in May 2014 and earned a certificate of completion (see Appendix A).

Data Collection Strategies

Participant survey responses were collected in June, 2015. Observation and

interview data was collected during the six week summer school period of July-August

2015. As outlined in Table 3.5 below, multiple types of data collection were used

throughout the study in an effort to generate "thick description" (Geertz, 1983) of the

teachers experience in relation to the focus of the study.

Table 3.5: Methods of Investigation for Research Questions and Analytical Categories
(Continued onto next page)

Research Question	Data Collection Type	Analytical Categories
RQ1: How are the implicit beliefs that teachers who work in schools co-located in juvenile justice settings hold about intelligence expressed when a teacher discusses the quality of their relationships with students?	• Semi-Structured Interview • Survey • Field Notes • Teacher Journal • Field Diary	• Fixed: *helplessness, giving up, ability, performance* • Malleable: *risk taking, persistence, focus on process of learning, effort* • Self-efficacy
RQ2: How do teachers who work in schools co-located in juvenile justice settings understand the effects of making explicit their implicit beliefs about intelligence on their relationships with students?	• Classroom Observation • Document Review • Teacher Journal • Researcher Field Notes • Field Diary	• Affect: *Respect, caring, warmth, humor, conflict, persistence* • Quality and frequency of feedback: *criticism, ignoring, constructive, detailed, demanding* • Teaching Orientation: *Performance v. Mastery* • Student Motivation: *participation and engagement*

The aforementioned data collection sources were selected to elicit an emerging understanding of the research questions and to inform the overall findings. Researcher field notes and teacher participant journals served as data collection sources throughout the study. The researcher field notes described my observations as the researcher and my impressions and commentary. To supplement my field notes, I also maintained a field diary as a historical record of my emerging thinking, perceptions, and experiences. The teacher journal described the participating teacher's thoughts, reflections, questions and emerging understandings throughout the study and was used to inform each of the research questions and the overall findings.

What follows is the rationale and approach for securing the selected data collection source, other than field notes and teacher journal, as it pertains to the research question.

RQ1: How are the implicit beliefs that teachers who work in schools co-located in juvenile justice settings hold about intelligence expressed when a teacher discusses the quality of their relationships with students?

Upon my first visit to the school with the teachers, I described the focus of the study, why I believed it to be worthy of research, and explored teacher interest and/or concerns relative to participating in the study. I also reviewed the anticipated time commitment required as a participant in a collaborative action research inquiry study. Upon securing agreement to participate, and as a method for gathering and organizing data about the area of focus and to support the first cycle of analysis and interpretation, I asked the teachers to respond to two open-ended interview questions addressing when a successful and an unsuccessful teacher-student relationship was achieved. The structure

of this initial interview is outlined in the interview guide (Appendix C), a qualitative approach for "eliciting the participant's worldview (Rallis and Rossman, 2003, p. 181)." The selected questions, which were utilized in an international study conducted by Reichert & Hawley (2013) and the International Boys' School Association examining relational teaching with boys, were intended to indirectly surface teacher beliefs about intelligence within broad categories of behavior as well as their thoughts associated with a fixed or malleable mindset about intelligence. For example, relative to a malleable mindset, I expected their responses might reveal the degree to which they emphasize effort and convey the message that effort will pay off. With respect to a fixed mindset, I expected that I might find language that reveals a focus on performance and ability.

Additionally, because teacher beliefs about intelligence are hypothesized to influence a teachers approach to teaching as either performance focused or mastery focused (Dweck, Chiu, & Hong; 1995) and as a data triangulation strategy, a sampling of the following documents were reviewed prior to the second interview: teacher journal, teacher mini-units, and learning objectives.

The teacher responses were uploaded to DeDoose, an internet based analytical program, for both storage and coding purposes. After completing the first interview, and to inform future collaborative analysis and interpretation, the participating teachers were asked to complete a reading about how implicit beliefs about intelligence influence teacher behavior (Appendix F).

RQ2: How do teachers who work in schools co-located in juvenile justice settings understand the effects of making explicit their implicit beliefs about intelligence on their relationships with students?

Using the transcripts from the first interview and identified documents, I performed an initial categorization of the data. At the second interview, I shared my initial analysis and solicited participant reactions to my initial analysis in light of the article about how implicit beliefs about intelligence influence teacher behavior. This interview provided the participants to co-construct a nuanced understanding of how implicit beliefs might be influencing their behaviors and, as a consequence, their relationships with students in their classes. Based on this conversation, I expected to gain an initial understanding of what to look for when observing the teacher.

Following the development of this emerging framework, I scheduled classroom observations. This data served as the centerpiece of the third interview with the participating teachers. During this interview, the teachers were asked to reflect on selected interactions and their understanding of the quality of their teacher-student relationships in light of our emerging understanding about the ways in which implicit beliefs about intelligence are expressed. We also explored other plausible interpretations to our emerging understandings. This cycle of inquiry and reflection was repeated in subsequent interviews and contributed to rich, open-ended reflective dialogue about how the participants themselves perceived the influence of their implicit beliefs about intelligence on the quality of their relationships with their students.

As described above, the Collaborative Action Research inquiry cycle included several teacher interviews. Because teachers working in these settings teach multiple subjects and have limited instructional planning time, sensitivity to the demands on their time was critical. Therefore, teacher interviews were no longer than 45 minutes. A majority of the interviews were preceded by classroom observations and the data

collected during these interviews were frequently reflected upon during the interviews. Interviews were recorded on my Smartphone and the information transcribed by a transcriptionist verbatim using a transcription service and uploaded to DeDoose for analysis and security purposes.

Data Collection Procedures

Permission for the study was obtained from the Department of Youth Services and the University of Massachusetts Amherst prior to the research study. Specifics surrounding participation were articulated in the participant informed consent form and an opportunity to discuss questions or concerns surrounding consent were provided before initiating the study.

The researcher maintained all print study records in a locked safe at the researcher's home address (32 Aldrich St., Belchertown, MA. 01002) when not being reviewed for research purposes. All documents used in this research study will be destroyed three (3) years after the close of the study.

All electronic files (including all databases, spreadsheets, and other electronic files) do not contain any identifying information for the individual school, teacher participant, students, or other school/program stakeholders. Data that was uploaded to DeDoose are password protected to prevent access by unauthorized users. Only the researcher, Woodbury Clift, has access to the relevant password.

At the conclusion of the study, I intend to publish my findings. Unless the participants grant explicit permission to share their information, it will remain anonymous and confidential. Further, information will be presented in summary format and the specific school will not be identified in any publications or presentations.

Data Analysis

Consistent with the iterative process of action research inquiry, data analysis was conducted throughout the course of the study and in collaboration with the teacher participants. This approach allowed for categories to be developed and explored and for themes to emerge as part of the analytical process. According to Rossman and Rallis (2003), data analysis is the "process of bringing order, structure, and meaning to the mass of collected data (p. 278)." Creswell's (2009) organizes the process as inclusive of three steps, including: (1) data organization; (2) data review including marginal notes and analytic memos; and (3) generating categories and themes through detailed analysis and coding. Ultimately, this process is followed by a period of interpretation (Denzin & Lincoln, 1994), a search for alternative understandings, and ultimately written findings. What follows are descriptions of the analytical techniques used to make meaning out of the data related to the corresponding research questions.

RQ1: How are the implicit beliefs that teachers who work in schools co-located in juvenile justice settings hold about intelligence expressed when a teacher discusses the quality of their relationships with students?

Survey and interview data was analyzed through categories associated with holding a fixed or malleable belief system (Dweck, 2007; Ames, 1992). Categories outlined in the literature include self-efficacy, helplessness, self-handicapping, risk-taking, and performance or mastery focused instructional practices. Attention to the degree to which the teacher expressed their mindset differently with different students was also explored. Interviews were transcribed and analysis of interview data was performed over several cycles. Following each listening, I created an analytic memo in

my field journal that captured surprises, interesting thoughts, categories to pursue, and key ideas (Rossman & Rallis, 2003). This analytical strategy allowed for themes to emerge, surprises to be noted and pursued, and for their validation throughout the collaborative action research inquiry cycle.

RQ2: How do teachers who work in schools co-located in juvenile justice settings understand the effects of making explicit their implicit beliefs about intelligence on their relationships with students?

Data from field notes and the teacher journal were analyzed through categories associated with relationship quality. Categories revealing teacher *affect*, such as respect, care, warmth, humor, conflict, and persistence; *quality of teacher feedback*, such as criticism, ignoring, constructive, detailed, and demanding; and *teaching orientation*, including behaviors related to performance or mastery were explored. The same strategy for analyzing interview data described in RQ1 was utilized.

Observation data was used to explore behaviors typically attributed to beliefs about fixed or malleable mindsets, including such behaviors clustered around teacher affect, the quality of their feedback, and teaching orientation relative to performance or mastery. Participant discussion regarding data indicating student participation and engagement was also interrogated. Observation data was analyzed using the iterative process identified in RQ1. Participants were also asked to provide their reflections on the observation data in an effort to better understand the thinking behind their actions.

Ethical Considerations

Careful consideration was made to ethical considerations related to the proposed research study. Because the proposed study involves active participation by human

subjects the researcher sought Institutional Review Board authorization prior to

beginning by both DYS and the University of Massachusetts, Amherst. DYS determined

that a review by the IRB was unnecessary. However, a use agreement was prepared

between the researcher and the Department of Youth Services outlining the parameters

for appropriate use of data and strict adherence to this agreement was ensured throughout.

Informed consent was obtained from teacher participants. Complete anonymity of the

youth was maintained by the use of pseudonyms and by taking care to not share specific

identifying information about students at any time.

The researcher holds a current CITI certification in relation to the ethics of

conducting research and protecting the rights of human subjects (see Appendix A), and is

aware of the level of care that must be given to protect human subjects when performing

educational/social research.

Results will be shared with the Department of Youth Services and relevant

stakeholders through their receipt of the final written document (dissertation) and all

presentation materials (e.g. charts, graphs, tables, presentation files, etc.). Due to the

nature of Collaborative Action Research, research participants were active in

interrogating the data that informed the findings. The dissertation and corresponding

presentations will also be made available to relevant stakeholders both electronically (via

email and file sharing software, such as Dropbox) and by hard copy as requested.

Stakeholders were encouraged to contact the researcher to modify the format of the

documents for the specific use of the stakeholder as a courtesy and a show of good faith

to achieve a mutually beneficial outcome for all stakeholders as a result of the completion

of the study.

In order to ensure trustworthiness throughout the study, I used established procedures that conform to standards for acceptable and competent practices as well as ethical conduct (Rossman & Rallis, 2012). As the primary researcher conducting this study and the Director of Education for the DYS Education Initiative who, in this role, held the power to hire, discipline, and fire teachers, I used comprehensive informed consent procedures that clearly detailed the purpose of the research, what participation in the study included, the protections surrounding their participation, and the process for participants to withdraw at any time. Further, I was explicit in both writing and during face to face interviews that I would not use data in any form for the purposes of employee performance, and that only in instances required by law would confidentiality be breached.

Internal and External Validity

Measures for ensuring both internal and external validity for this collaborative action research case study were employed in order to ensure that the results were valid within the study itself, and to the degree possible, useable by other teachers teaching in similar settings with a similar population.

Internal validity was preserved through a number of strategies. First, collaborative action research is a participatory inquiry strategy and, as such, interpretations and findings were checked throughout the course of the study by participants and served as a form of participant validation (Lincoln & Guba, 1985). This strategy served to confirm the accuracy of findings, corroborate interpretations of the data, and preserved the rigor and credibility of the study (Rossman & Rallis, 2003). Second, through the use of observations, interviews, and document analysis, we were

able to triangulate the data in order to justify emergent themes relevant to the research questions. Third, included in this proposal, potential biases of the researcher were discussed and revealed to the reader to consider in their own interpretation of the findings.

The following strategies for achieving external validity included the use of rich and thick descriptions (Lincoln & Guba, 1985), in conveying the findings and the use of a community of practice (Rossman & Rallis, 2003) to serve as peer reviewers. Rich and thick description served as a form of descriptive external validation by providing a detailed account of the field experience such that the reader would be able to vividly share in the experience (Creswell & Miller, 2000). The community of practice served to reduce likelihood of researcher bias and inaccurate interpretations or findings, as well a test emerging ideas and hypothesis throughout the study. The dissertation chairperson, committee members, and a small group doctoral students at the University of Massachusetts studying educational leadership, participated on this committee.

Limitations and Delimitations

The first limitation is that all of the classes observed occur within the same school serving adolescent adjudicated youth in Massachusetts. The basic design elements of the research study could be applied to other similar schools or schools serving similar populations of students in an effort to determine if there are context-specific variables that should be considered when designing relational interventions with teachers. It is likely that subsequent case studies related to teacher-student relationship quality in juvenile justice settings would highlight practice elements that could help teachers working in these settings to be more effecting in quality teacher-student relationships that

result in improve social, emotional, and cognitive outcomes for youth placed in these settings.

The second limitation of the study is that the selection of the participants were based on my knowledge of his profound commitment to improving his practice. Since collaborative action research is intensive, interpretive, and personal, it is anticipated that the findings are somewhat influenced by the perspectives of the participants. Although full disclosure to the purpose of my research study was provided and the participant's anonymity and confidentiality was guaranteed, some of their responses may be biased due to my position as a supervisor and the fear of possible disclosure of their responses.

The study is further limited by the time frame in which it was conducted. The study will lend itself to the development of actions teachers working in similar settings might undertake to improve their relationships with their students, but these actions were not tested over an extended period of time.

My role in carrying out the qualitative research was also a potential limitation. Rossman and Rallis (2003, p.5) note that a unique feature of qualitative research is that the "researcher is the means through which the study is conducted." In this capacity, the qualitative researcher is responsible for analyzing and interpreting data about the context in which he/she has been immersed through his/her personal lens. Given this, it is expected that the researcher's personal biography, that is to say my values, assumptions, and biases (Creswell, 2003), shaped the knowledge constructed during the study. Therefore, I strove to be aware of my personal biography as it relates to the study. In addition to approaching this research with a perspective about the value of relationships

and the influence of beliefs on these relationships, my personal biography inclusive of my gender, race, class, and life experiences, including limited experience in conducting research, may have biased the findings. However, procedures for limiting the likelihood of unintentional bias were used throughout the study.

Perhaps the most important delimitation of this study is that the teachers were selected because of my knowledge as the researcher of their demonstrated interest in improving practice and as a result, the sampling is not random. Another delimitation of the study is that the unit of analysis for this study was purposefully limited to one school co-located in a juvenile justice setting, two teachers, and in one state serving a small number of adolescent males adjudicated delinquent. Furthermore, I recognize that the quality of a teacher-student relationship is influenced by both the teacher and the student. However, I chose to focus this study on how the beliefs that teachers hold about intelligence, and not the beliefs of students, might be influencing the quality of their relationships with their students and therefore, a variable integral to the phenomena of teacher-student relationship quality, the student, is not equally interrogated in the design of the study.

<u>The Researchers Role</u>

Throughout my twenty five year career working in the field of education, I have worked with marginalized youth from birth to adolescence and in urban and rural settings. Over the past eight years, I've served as an educational administrator and leader responsible for shaping improvements to the educational program for adjudicated youth throughout the Commonwealth of Massachusetts. Like other systemic education reform efforts, we've concentrated resources on building a foundation for continuous

improvement by increasing the professional qualifications of our faculty, investing in comprehensive professional development, strengthening curriculum, instruction, and assessment, and tightening accountability. While these strategies have improved the quality of our education programming, engagement in learning remains a challenge. In classes where students are predominantly engaged are those where the teachers have established respectful relationships, characterized by humor, high expectations, and caring. I believe, and the research demonstrates, that relationships are an essential, but highly undervalued, component of the craft of teaching. Given this conviction, it is possible that it biased my interpretations of the data. Additionally, I started this study with the perspective that establishing quality teacher-student relationships in the context of a school co-located in a juvenile justice setting serving adjudicated youth is a difficult challenge, complicated by the implicit beliefs teachers hold about their students. This perspective, coupled with my belief in the importance of teacher-student relationships in service to the enterprise of teaching and learning, are biases that may have shaped the way I understand and interpret the data.

Therefore, several procedures for ensuring objectivity were used, including member checks (Lincoln & Guba, 1985), field notes (Rossman & Rallis, 2003), data triangulation (Denzin, 1978), and the use of a community of practice (Rossman & Rallis, 2003). Together, these procedures were intended to ensure rigor throughout the study, texture to the findings, and reduce researcher mistakes and bias.

The findings tell a story of the participating teachers emerging understandings of how implicit beliefs about intelligence influence their behaviors and, as a result, the quality of their relationships with their students. It is my belief that the study

demonstrates the promise of reflecting critically about one's mindset as a strategy for clearing away unconscious hurdles to teachers taking the necessary risks to form, sustain, and repair relationships with adolescent males from different backgrounds and who are mistrustful, challenging, and sometimes violent. Based on the findings, I plan to produce one or two articles that describe how this emerging understanding influenced their thinking about teaching adolescent adjudicated youth in schools co-located in residential treatment settings and skills and practices that may be employed to improve teacher-student relationship quality.

Summary

In summary, this chapter reviewed the purpose of the study and explained the methods used to conduct this study. The underlying reasons for conducting a collaborative action research qualitative case study were addressed in the *Rationale for Qualitative Research Design* section of this chapter. Through this research, I planned to shed light on how teacher held implicit beliefs about intelligence might be influencing their efforts to form quality teacher-student relationships and, as a consequence, strengthen student engagement in learning. Chapter 4 will offer a detailed description of the qualitative findings for this study.

CHAPTER IV

FINDINGS

This chapter presents the findings drawn from teacher survey data and a series of interviews, observations, and reflective conversations with two general education teachers from a small school co-located in a juvenile justice residential treatment facility in central Massachusetts. The purpose of this qualitative research study was to explore the ways in which teachers who work in these schools express their implicit beliefs about intelligence and better understand how these expressions may be influencing the quality of their relationships with their students. I was particularly interested in exploring if learning about and reflecting on implicit beliefs about intelligence would serve to reduce unconscious hurdles that prevent teachers from establishing quality teacher-student relationships with adolescent males from significantly different backgrounds and who are mistrustful, challenging, and sometimes violent in the context of a juvenile justice setting.

Background Information

The study was guided by Calhoun's (1994) collaborative action research process inclusive of five sequential and recursive phases: (a) selecting the area of focus, (b) collecting data, (c) organizing data, (d) analyzing and interpreting data, and (e) taking action. While I had hoped the study would provide time for me and the participants to agree on and take explicit actions to test our emerging understandings, the constraints of a six week study coupled with extensive day to day demands on the participating teachers' time impeded our progress on this last step. Nevertheless, through the iterative "process of bringing order, structure, and meaning to the mass of collected data" (Rossman & Rallis, p. 278, 2003), categories emerged from the data during the course of

the study and potential implications for practice are considered and discussed. Merriam

(1998), describes this step as a largely "intuitive process" that is "systematic and

informed by the study's purpose, the investigator's orientation and knowledge, and the

meanings made explicit by the participants themselves" (p. 179). These categories

formed the basis for the findings that follow.

The two participants in this study included an experienced general education

teacher with ten (10) years of teaching in a juvenile justice residential setting, who will be

referred to as Jason, and a first-year general education teacher with no prior experience

working in a juvenile justice residential setting, who will be referred to as Rick. Prior to

face to face interviews, the teachers were asked to respond to a survey seeking their

reflections on both a successful and unsuccessful teacher-student relationship. These

survey responses, individual face to face interviews, and classroom observations served

as the primary sources of data through which we sought to respond to the research

questions guiding this study. Through our interrogation of this data, my subsequent

analysis, and the critical feedback offered by a community of practitioners (Rossman &

Rallis, 2003), an overall finding as well as findings specific to each research question

were developed.

Overall Finding

As discussed in the conceptual framework, student engagement in learning hinges

on the dynamic quality of the teacher and student relationship (Erin, 2010; Sameroff &

Mackenzie, 2003), which is influenced by the perceptions and beliefs that teachers and

students hold (Bandura, 1977; Burchinal, et. al., 2002; Dweck, 2007; Hamre & Pianta,

2005; Stewart, 2006) and the context in which this relationship exists (Bronfenbrenner,

1977; Eccles, Lord, & Midgley, 1991). In Massachusetts, the majority of incarcerated youth are at least one year behind their peers academically, are disproportionately identified as having emotional disturbances that require special education services, and have significant gaps in their formal education (Morrissey, 2015). In addition to the required participation in weekly clinical groups and therapy, youth are required to attend classes taught by licensed teachers for a minimum of 5.5 hours per day for up to 210 days per year. In general, upon commitment to a DYS juvenile justice program, youth are disengaged from their education, are emotionally distressed, and largely concerned with "doing their time." This disengagement, together with the clinical treatment that presses youth to work through their complex histories of trauma while also learning productive ways of expressing their emotions, magnifies the need for teachers working in these settings to make the establishment of a trusting, respectful, and caring relationship with their students a priority such that they can fulfill their role in the youth's rehabilitation.

As the study progressed, I became increasingly aware of the ways in which the backdrop of potential violence, unpredictable outbursts, and/or physical confrontation creates a setting whereby teachers, not only for their safety and that of their students, have a heightened sensitivity to maintaining order in their classrooms. As a consequence, teachers working in these settings are highly susceptible, and reasonably so, to the implicit and explicit messages endemic to working in a juvenile justice facility that reward teachers who avoid assignments that might be too challenging, cause a student to grow frustrated and act out. This culture has the unfortunate effect of reinforcing lower order, performance based instructional tasks consonant with a fixed mindset orientation. It is therefore not surprising that both teachers exhibited manifestations of a fixed

64

mindset in their interactions with, and reflections about, their students. Notwithstanding

these contextual forces, the overall finding that spans across both research questions is

that ***the participating teachers demonstrated the capacity to adopt a growth mindset***

regardless of their proclivity towards a fixed or growth mindset. As the data indicate

throughout the findings, one participant, Rick, appears to demonstrate a fixed mindset

throughout much of the study, but the data also show he has the capacity for reflecting on

his mindset and by doing so, is able to imagine adopting a growth mindset. Jason, on the

other hand, reveals not only that he can move between a fixed and growth mindset, but he

has also grown more into a growth mindset throughout his teaching career. This capacity

to adopt a growth mindset is reflective of the malleability of beliefs about intelligence

and as the following findings illustrate, the polarity of expressions that are possible when

a growth or fixed mindset is dominant.

<div align="center">

General Findings

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Research Question 1: How are the implicit beliefs that teachers who work in schools co-located in juvenile justice settings hold about intelligence expressed when a teacher discusses the quality of their relationships with students?

There were two key findings that emerged in response to this question. These

findings encapsulate the patterns of interpersonal and instructional expressions that

emerged in light of our data analysis and understanding of how a fixed or growth mindset

influences the individual behaviors.

Finding 1: Persistence vs. Helplessness-A growth mindset increases teacher persistence

by illuminating possibilities when there may appear to be none and shields teachers from

resigning to low expectations and debilitating assumptions about students and their

futures. The data indicate that Rick tries to connect with his students and help them to

learn, but he easily gives up and abdicates the responsibility for learning entirely over to the student. Jason, on the other hand, seems to recognize that teaching and learning in a DYS setting takes a lot of work on behalf of the teacher and student alike, and therefore persists because he believes it's a process and there is always hope.

Throughout their survey responses, the teachers described their students using adjectives that might be characterized as being permanent. For instance, Jason describes the student with whom he has a challenging relationship as a "highly intelligent, moody, short-tempered young man" and "always extreme, either very high or very low (Survey, June 12, 2015)." Similarly, Rick describes traits of his students in terms that indicate permanence, such as being "rather quiet and mysterious" and "pleasant, happy, and alert" or "respectful and cooperative (Survey, June 17, 2015)." At first glance, these descriptions seem to suggest that neither teacher believes that these students have the capacity to change and could be evidence of a fixed mindset.

However, upon further analysis of Jason's descriptions and regardless of the perceived quality of his relationship with his students, we find language indicating that given time, effort, and the right strategy, students are capable of changing. To illustrate, when describing a successful relationship with a student, Jason begins by describing Juan as an "intelligent, clever, and at times manipulative young man (Survey, June 12, 2015)." The traits of being "intelligent" and "clever" are, at first blush, indicators of a fixed mindset insofar as they appear to be static in nature. However, he continues with the statement "and *at times* manipulative young man" (italics added for emphasis). This qualifier suggests that in addition to believing the young man to be intelligent and clever,

he also signals a belief that there is more to what meets the eye. This pattern continues throughout the rest of his description, writing:

> *At the beginning of his time* here Juan was quiet and reserved. He was very observant and seemed to take in his environment. *As time went on* Juan became more confident and was more outspoken in class discussions and in free time with his peers. He put effort into his assignments but lacked the motivation to push himself outside his comfort zone. *After our initial meeting* to discuss school rules and his educational pathway *I constantly checked-in* with Juan. He seemed to appreciate that I was meeting with him and was invested in his education (Survey, June 12, 2015) (italics added for emphasis).

In this entry, we begin to see that Jason views the student, as well as the formation of his relationship with him, as a process of development that requires both time and persistence. The impact of which seems to create windows of opportunity and possibility for Jason in his quest to reach and teach Juan. For instance, we see Jason carefully avoiding defining Juan as "quiet and reserved," stating that these behaviors may be part of Juan's strategy to "take in his environment," as opposed to fixed traits. This belief system seems to provide the fertile ground Jason needs to persist in his efforts to not only get to know Juan, stating "I constantly checked in with him," but also re-engage him in learning, noting that he perceives Juan as becoming "invested in his education."

The return on Jason's persistence in his relational efforts over time seems to also strengthen his sense of self-efficacy. In the description below of a student with whom Jason felt he had an unsuccessful relationship, we see that he persists in his relational and instructional efforts throughout his experience of perceived rejection. His behaviors are consistent with a growth mindset insofar as he maintains his agency by assuming the responsibility for establishing a relationship with the student and persisting in trying to engage him over and over again despite fleeting successes along the way.

I would try to take him aside before class each day to see how he was feeling. I would ask him if there was anything in particular that would make class more successful for him. This was helpful to an extent, but if Franklin refused to engage I had very few options. During meetings, I would have him write down what works for him and what he would like to see improved. The problem with that was if the improvements he wanted weren't immediate he would shut-down again (Survey, June 12, 2015).

This statement suggests that Jason is willing to keep trying new ways to engage Franklin. Even when Franklin refuses to engage, Jason's response shows that he believes there are still options left for him to pursue, saying "I had very few options" instead of say something akin to "I had no options left." I also note that Jason's use of the "I" statement indicates his continued ownership of the solution, although he also strives to promote Franklin's agency in defining proposed solutions throughout his interactions.

Additional evidence of Jason's growth mindset orientation is exemplified by his tendency to attribute student performance and/or mastery deficits to skills and/or knowledge that have yet to be developed as opposed to something intrinsic to the students' capacity to learn. This attribution technique appears throughout the study and appears to serve to generate possibilities for change whereby a fixed mindset serves to close off possibilities.

First, the data show that Jason is inclined to understand student behaviors in terms of the factors that mediate those behaviors as opposed to fixed traits. In the survey response below, for example, we see Jason attributing Juan's success to Juan's identification of a goal that was meaningful to him as opposed to his inability, to do the work, writing:

As the school year went on, Juan's enthusiasm for school increased and he became more focused on his goal to pass the HiSet. As a teacher, it was tremendously rewarding to have a student come into the program with little

motivation and then ultimately pass and receive his HiSet. He had a steep growth curve, but he persevered and was able to reach his goal (Survey, June 12, 2015).

Another illustration of growth mindset is evident in Jason's well-developed assumption busting technique, what I refer to as the "model student diagnostic." Using an imagined "model student," that is to say a student who possesses the skills and knowledge to achieve almost anything, Jason seeks to understand why a student might not be performing to their fullest potential in service of providing targeted and meaningful instructional feedback. For instance, Jason describes the adjustment of two new students under a journal reflection header of "Educational Stamina:"

> After our discussion on Friday, I observed the two new students and how they were adjusting to the rigor of our school day. After I went over the daily assignments, new student one, Felix, stated that he had never done work like this. It was apparent he was not accustomed to the pace, work load, and routines of the school day. Felix hasn't attended school in at least a year and it is evident he lacks student skills. This should not be confused with intelligence, Felix is a smart young man but he doesn't know how to be a good student. He has yet to build up any semblance of educational stamina and gets tired soon after doing assignments (Journal, July 13, 2015).

Here we see Jason avoiding making assumptions about Felix by carefully parsing intelligence and capability from skills that can be developed. At a later date, Jason reflects on his efforts to assist a new student with completing an assignment on the computer. He sees that the student doesn't comply with opening up the computer file Jason prepared for him. Instead of interpreting this response as defiance, a much overused explanation for student behaviors in DYS classrooms, Jason draws a different conclusion by putting himself in the shoes of this student and imagining the skills this student might not have acquired in contrast to the "model student":

> (speaking from perspective of student) In my schools, we never use a computer, or I didn't take a computer class, or if there was a computer in my class I wasn't the student that chose it…

(reflecting on the student) I mean, his computer skills are so low that I had to do really some very, very basic stuff…this is how you open a document. And that has nothing to do with intelligence, but if I presumed that it was, you know, I'm going back and talking with teachers about how he needs really elementary type work because he can't do anything. But that wasn't the case (Interview, July 17, 2015).

The invention of the "model student" as a diagnostic strategy seems to partially inoculate Jason from the range of alternative and more deleterious assumptions that accompany a fixed mindset, such as inability or incompetence, and which run rampant in settings serving incarcerated youth. The strategy leads Jason to explore alternative explanations for student behaviors or perceived deficits and, as a consequence, persist in his efforts to effectively engage his students in challenging learning tasks.

Another manifestation of this finding involves responsibility for forming and sustaining the quality of teacher-student relationships. When these teachers express a belief in a growth mindset, they also appear to embrace the primary responsibility for initiating the teacher-student relationship as well as repairing fissures that occur along the way.

Both teachers recognize the importance of teacher-student relationship quality with regards to teaching students in a DYS classroom. A frequently cited lever for fostering a positive teacher-student relationship by both teachers is trust. Rick describes his approach to developing trust with a new group of student in this way:

Trust is important. With new guys, I don't just come at it with "here are the rules and communicate the message of goals." I'm not authoritarian. I'm working with them, not against them, I'm here to make them understand I'm a positive piece of their time in DYS. It's hard in DYS-not sure I'm ever going to get through to them-sometimes it takes like 5 months to trust my intentions. My whole strength is to develop relationships (Interview, July 10, 2015).

Because of this belief system, Rick employs a couple of strategies to create a positive first impression. One strategy is to "break the ice (Interview, July 20, 2015)."

70

Whenever we have a new student, I try to introduce myself to them prior to school. So, I'll go up and meet them in the morning in the TV room and introduce myself to them, let them know who I am and that I'll be seeing them later (Interview, July 20, 2015).

He complements this strategy with one intended to communicate that they are valued and respected by preparing a journal for new students prior to their participation in class and by taking time to explain classroom norms and processes.

I always take a moment at the beginning of class to go over procedure. For instance in science class we'll do reflections at the start of each day, so I have a journal prepared for the student before they arrive that I always try to make sure and prepare for them. Otherwise it looks, you know, like shuffling and struggling and you're not ready and they may not feel important. So, I try to take the time to, you know, get the heads up from the clinicians if we're getting someone new or at least have a couple of blank journals on standby that I can quickly write a name on….But it's really just about communication and respect, making the student feel respected and welcome from the very beginning is my approach to it and I've done the same with every single one of them.

Jason also recognizes the intrinsic mistrust that exists between him and his students, describing it this way:

Our students are rarely blindly trusting. Takes a lot of work. They don't trust authority figures. Some of this is because I'm a white teacher. I've heard "you're just in it for a pay check." "Every other teacher has thrown me out." "DYS is not school, it's just a place for me to spend 5.5 hours a day" (Interview, July 16, 15).

Despite these realities, Jason doesn't get deterred, making it a point to meet with the students over and over again and address barriers to their relationship. A poignant example of this trust building is exemplified in his story about Jerry. As Jason describes it, he's worked hard to help Jerry be more engaged in class, to design a course of studies that is tailored to his expressed interests, and praise him for his model student behaviors, such as completing his work independently. However, after a three day weekend, Jason returns to work to learn about a fight between two students, one of whom is Jerry. Jerry refuses to come to school for several days and when he finally does return, Jason notices

that Jerry has been "reluctant to speak with" him and "won't look" at him in the eyes

(Journal, July 15, 2015). Jason attributes this new behavior to a sense of shame that Jerry

is experiencing about the incident, stating that Jerry had previously told him that this is

the first time he's felt like a "real student (Journal, July 15, 2015)." But now, everyone is

going to "judge him" to be "just another criminal in juvie (Interview, July 17, 2015)." He

believes that Jerry must be struggling with feeling he's broken the trust between the two

of them, similar to "disappointing his parents (Interview, July 17, 2015)." Jason sees the

change in Jerry's behaviors through a lens of growth and possibility, as well as

vulnerability, and as a result doesn't take offense to the distancing behaviors. Here we

see that a growth mindset protects Jason from personalizing Jerry's behaviors and to

think about how he might create a safe space for the two of them to repair the trust that

Jerry perceives to have broken.

In contrast, when Rick describes an unsuccessful student relationship, he seems to

protect himself by placing the bulk of the responsibility for the success of the relationship

on the student, reaction commonly attributed to people who hold a fixed mindset when

faced with achievement setbacks (Dweck & Leggett, 1988; Henderson & Dweck, 1990).

For example, Rick states:

> Oscar refuses to come to school most of the time. When he does attend, he is
> included in the HiSet prep class, since he has decided to not pursue a diploma. He
> often just sits with his classwork in front of him, but does not do any work. He is
> not disruptive to class, but never really gets anything done. *I have tried several
> approaches with him, but nothing seems to motivate him to do his work* (Survey,
> June17, 2015). (italics added for emphasis)

This description includes characteristics that are consonant with a fixed mindset.

First, he seems to have given up on Oscar in that he refers to his efforts to motivate him

in the past tense. Second, he seemingly holds very low expectations for Oscar in terms of

his effort to learn. This is evidenced by his apparent acceptance that Oscar will rarely

come to class and with regards to his expectations of him when he does come to class,

noting that he's "not disruptive, but never really gets anything done." Because he

seemingly attributes Oscar's lack of engagement to these static traits, it abdicates Rick of

any responsibility for Oscar's learning and places the onus of responsibility solely on

Oscar. For these reasons, it appears that Rick is guided by a fixed mindset.

Yet, later on in his response, he reveals the capacity to adopt a growth mindset

when he states:

> Since he refuses to leave his classroom 90% of the time, I want to make sure he is
> acknowledged when he makes an effort to come to school. I want it to be a
> positive experience when he is here, so I do not push too hard but do keep
> encouraging him to work on his packet and try to do problems with him (Survey,
> June 17, 2015).

Although one might reasonably argue that the level of teacher support indicated in

this last statement is evidence of low expectations, e.g. the focus on packet completion, I

noted that the teacher has provisioned for the possibility that the student attends class and

that he is available for problem solving as needed. That said, the responsibility for

teaching and learning in this description appears to rest mostly with the student and while

the teacher might believe that providing such space to the student respects his emotional

well-being, it could also be a rationalization for not believing that the student is capable

of changing. To determine if the latter is more likely to be true, a reflection of Rick's

later in the study is illuminating. Rick states:

> Yesterday, I made a statement when discussing a particular student. I said that I
> did not expect him to pursue his HiSet when he left the program. He has made
> statements that he plans to return to a life of crime and become a drug dealer.
> What does that say about me that I have allowed myself to accept the notion and
> even promote it by giving it acknowledgement? (Journal, July 21, 2015)

73

This reflection suggests that Rick is aware that he demonstrated a fixed mindset, but he sees it, and by doing so, it indicates that he is capable of a growth mindset.

A story Jason shared about one of his students from earlier in his career reveals a pivotal moment in his approach to teaching in DYS that exposes a time when Jason too may have once been guided by a fixed mindset but over time has adopted a growth mindset. When discussing a student during an interview on July 17, 2015, Jason discloses a performance task approach to teaching that sought to keep student busy, saying that his "assignments back then—my assignments were very simple" and that he was "kind of a worksheet kind of teacher a lot of times." Despite the simplicity of his assignments, he is confronted by a student who he describes as the "most disagreeable kid" who "won't participate, just angry, angry, angry." This behavior seems to stump Jason and inspires him to better understand the root of it. During class one day, Jason assesses the students reading level and discovers that he is reading at the "kindergarten, first grade level" and his student record indicates he is supposed to be in the 10th grade. Astounded by this dissonance between the young man's purported grade level and the reality of his literacy level, Jason realizes that his performance based instructional approach is simply reinforcing a terrible cycle and not getting at the root problem stating:

> "Why were people passing him? Why wasn't that (his reading level) in the records at all? And he was terrified to do any assignments because he didn't—he wouldn't know how to read the questions. And how do you tell that in front of your peers? You can't….so his defense mechanism was just to be angry or at least pretend to be angry or upset, or like, defiant. So he never—so he was just a tough kid, not a kid who couldn't read."

The legacy of this experience is most evident in Jason's unwavering commitment to meeting with his students on an ongoing basis, regardless of how they behave or perform in his class, stating "if they have the expectation that we're gonna be meeting

every week, whether you're the most achieving student who just does three homework assignments ahead, or if you're a student who's struggling. If they know, "I got to meet with Mr. Jason today..I think they're more willing to open up in that situation…and discuss where I'm at in the class and how I need to do better." In so doing, Jason is able to get to know his students and what motivates them, have honest conversations with them, and, as his use of the term "we" below reflects, communicate that he shares the responsibility for the student's learning and development.

> They want that validation, you know. So, I think it's that personal, "Listen, you might not believe in yourself, but *we can do this*. And if you're behind, *let's* work on catching you up, so you—*so we* can stop the cycle. You're an individual student, let's catch you up, so you come to class not feeling like, "I'm so behind." (italics added for emphasis)

Finding 2: Intrinsic vs. Extrinsic Motivation Techniques-A teacher with a growth mindset believes that students have the potential to respond to intrinsic motivational techniques, that is to say they can self-regulate. However, when you rely on intrinsic motivation techniques in a DYS setting you are taking a risk insofar as the students may act out due to the combination of overwhelming feelings of frustration coupled with poorly developed self-regulation skills. Such acting out behaviors can both result in substantial disruptions, including significant injury to the student, teacher, and/or other students, as well as diminishing confidence in the teacher by the direct care workers who are charged with maintaining safety and security. In this context, Rick tends to rely on extrinsic motivation techniques whereas Jason is more inclined to use intrinsic motivation techniques, despite the inherent risks in doing so.

Bandura (2001), describes being agentic as being able "to intentionally make things happen by one's actions. Agency embodies the endowments, belief systems, self-

75

regulatory capabilities and distributed structures and functions through which personal

influence is exercised, rather than residing as a discrete entity in a particular place. The

core features of agency enable people to play a part in their self-development, adaptation,

and self-renewal with changing times (p.2)." With student agency comes engagement

and as discussed earlier, research demonstrates that the more an adolescent feels they are

in charge of their learning, the greater the likelihood they will engage in learning and

persist in the face of difficulty. However, the data suggest that a teacher's mindset may

influence the degree to which they rely on extrinsic or intrinsic motivational techniques

in their efforts to engage students.

Rick, for instance, relies on a barter system for securing student engagement by

seeking student compliance in exchange for a quick reward. His reliance on extrinsic

motivational strategies appears to reveal a deep rooted fear that his students may not be

able to complete the performance tasks he constructs as part of his lessons. As the

statements below indicate, rather than to push students to experience higher order

learning, he quickly turns to extrinsic motivation techniques that serve to keep the

students busy. Examples of busy work include:

> One student would not stop singing, so I convinced him to create a song about science class (Journal, June 19, 2015).
>
> A student was bored watching a historical video, so I gave him some additional work to enable him to multi-task and focus better (Journal, June 19, 2015).
>
> A student did not want to properly organize his notebook so I convinced him to at least decorate a new notebook cover (Journal, June 22, 2015).
>
> Students were asking to see some basketball video clips, so I compromised and I found a video entitled "sports science" which highlights several NBA stars and breaks down their efforts scientifically (Journal, June 24, 2015).
>
> These could be interpreted as he cares for his students and in fact, they probably

are. In fact, each of the examples cited above could be interpreted as effective

instructional strategies in that he appears to be striving to make learning relevant by responding to the unique needs or interests of the students. However, the fact that they are not planned, are void of higher order learning, and appear to be his primary method for motivating students, it is also likely that he doesn't really believe his students are capable of finishing. Other possible explanations, which are also consistent with a fixed mindset, include that he values behavioral engagement (performance) over learning (mastery) and/or he is afraid that the students will get frustrated, act-out, or even worse in his mind, fail. Failure, to a person with a fixed mindset, is to be avoided at all costs.

As noted above, and in subsequent interview data, Rick never seems to ask the students to persist with the intended learning goal, be it a mastery related goal or performance goal, or even offer alternative strategies for solving problems, and instead seeks to barter with them to do almost anything so long as it keeps them busy. In interviews early in the study, Rick discusses this bartering strategy relative to one of his students, saying:

> He's ready to strike deals and, you know, if you take him up on it he'll deliver. He does, so I try to accommodate it whenever I can (Interview, July 20, 2015).

And, when reflecting on the amount of back and forth conversations in class that do not appear to have much connection to the goals of the lesson, Rick states:

> I think I sometimes let banter go on because they are engaged and if it strengthens my relationships, I'll do it (Interview, July 14, 2015).

Further analysis of his lessons reveals additional manifestations of a fixed mindset, including an overreliance on fairly simple performance-based learning tasks, e.g. complete three sentences about the video we watched, teacher-student interactions that veer from performance on an instructional task to open dialogue, to negotiations for

alternative less rigorous performance tasks, and limited higher-order questioning

techniques that challenge the students to analyze, apply, understand, or evaluate content.

The students comply with behavioral standards in exchange for easier work and the

teacher continues to self-handicap his efforts to see youth overcome barriers to learning

and achieve their learning goals. I noted during a reflection on July 14th, 2015, that Rick

is aware of this dimension of his teaching when he shared that he "struggles with

challenging kids, wants them to get 100, to get the answer right." This internal struggle

is evidence of a deep fear of risking pushing students too far and the potential negative

effects to his classroom milieu or student self-confidence. Fear of taking risks is

attributed to a fixed mindset and appears the guiding emotion that drives Rick's choices

throughout his lessons. The consequences of succumbing to this underlying fear, rooted

in a fixed mindset, are significant and recursive.

Jason, to a much lesser degree, also turns to extrinsic rewards and bargaining to

get students to comply behaviorally. However, in contrast to Rick, when he uses this

strategy, he is seems to be more aware of its fleeting utility. To illustrate, Jason reflects

on one of his students, Jamal, who seems to be breezing through the class assignments.

Jason says:

> He (Jamal) wants to finish the work, and---but it's funny how students interpret
> that as being a good student…as opposed to…there are other things that I'm
> looking for..But again, in their mind, the schools they've been brought up in and
> they're, just, that's how you are—that's the good students. They finish their work
> quick..and they get it done, and the answer's all correct, whatever. That's being a
> good student. There's other students who kind of understand that there is a-
> there's more to it. And I don't need to say that to them. They just understand.
> (Interview, July 21, 2015)

Here we see that Jason believes that Jamal's intrinsic motivation is derived from a

desire to view himself in accord with his mental model of a good student. He sees this as

an asset, a characteristic of Jamal's that can be developed when the time is right. He continues:

> Jamal is getting it a bit, but his first thing to-a couple of days ago-is just finishing the assignment while we were discussing it. Not that that's necessarily a bad thing, I'm not gonna get on his case for that. But in his mind, that's how he feels like good students, that he's always known, are the quick workers, and the ones who get it done quick, and I mean, I think he also wanted to get some free time. But there's also, in his mind, that's being a good student, you know, is finishing work and getting the answers correct. (Interview, July 21, 2015)

These comments, together with a statement he made during a previous interview suggesting he needed to "reign him in a bit," indicate that Jason is keenly aware of the delicate balance between intrinsic motivation and extrinsic motivation insofar as he recognizes that the benefit of free time may be overshadowing this intrinsic motivation. While Jason had not yet acted on his more finite understanding about Jamal's intrinsic desire to be seen as a model student, it is clear that he is thinking about how to capitalize on it going forward.

And while Jason is not immune to using a combination of extrinsic and intrinsic rewards, he is largely driven by a desire to cultivate intrinsic motivation in his students, by making "life in school to be a positive experience." Adding, "That doesn't mean I just pass out candy in my classes or that I just watch movies all the time or this or that. That's not what I'm going for. What I'm going for is to teach them a little bit in a way that they get something, they're learning something, and they feel positive about themselves and their own education." Jason seems to understand that cultivating intrinsic motivation is more likely to create a greater sense of self-worth and that in a context that he describes as "deflating," intrinsic motivation may just be the fertilizer that allows for the seed to grow in the crack in the sidewalk.

79

RQ2: How do teachers who work in schools co-located in juvenile justice settings understand the effects of making explicit their implicit beliefs about intelligence on their relationships with students?

As the study progressed, both teachers grew more reflective about potential expressions of their implicit beliefs about intelligence and how these expressions might be influencing the quality of their relationships. Because of the malleable nature of implicit beliefs about intelligence, I decided that we needed to surface a baseline understanding of each teachers' implicit beliefs about intelligence to serve as a starting point for interrogating their decisions, thoughts, and actions. Therefore, I selected a short, three item survey instrument validated by Dweck and her colleagues (Dweck et. al., 1995) to assess implicit theories about intelligence. The original study design did not include this measure, but in order to facilitate teacher discussion surrounding various behaviors or statements that appeared to be consistent or inconsistent with their expressed beliefs, I decided that this questionnaire might serve as an entry point to our analysis. The three survey items include: (a) "You have a certain amount of intelligence and you really can't do much to change it"; (b) "Your intelligence is something about you that you can't change very much"; and (c) "You can learn new things, but you can't really change your basic intelligence." The teachers were asked to indicate their agreement with these statements on a 6-point scale from 1 (strongly disagree) to 6 (strongly agree). A lower score would indicate a stronger incremental theory about intelligence (growth mindset).

Both teachers scored very low across each measure, indicating strongly held espoused incremental beliefs about intelligence, that is to say a growth mindset orientation. Armed with this data, we examined their espoused beliefs with their actions, thoughts, and behaviors and in so doing, found areas where a calibration between their

espoused theories and theories in use might be influencing the quality of their teacher-student relationships.

Finding 1: Caring vs. Coddling—One of the hallmarks of a quality relationship is the expression of caring. Teachers can communicate they care in many ways, including, but not limited to how they prepare for their lesson, the quality and nature of their feedback, the instructional materials they select, the pace of their lessons, and how they respond to disruptions. In MA. DYS, the value of the caring adult in facilitating a youth's rehabilitation is highly trumpeted. However, the data suggest a teachers' implicit beliefs about intelligence may influence their effectiveness in calibrating between caring behaviors that support engagement in learning through quality teacher-student relationships and those that undermine it. For the purposes of describing this finding, I will use the term "coddling" for expressions of caring that may serve to undermine teacher-student relationship quality that supports engagement in learning.

To illustrate, Rick's journal entries reveal indications of this calibration as a result of our discussions. At the beginning of the study, Rick associates expressions of growth mindset in terms of behavioral engagement. His entries emphasize being responsive to individual student needs by employing extrinsic motivational strategies that overwhelmingly serve to lower the cognitive demand expected of his students. However, on July 14th, 2015, he shares that he may be compromising the "pacing of the lesson" by allowing too much time for youth to have "the freedom to expand on ideas and have tangent conversations," which arguably looks and feels like student engagement, but can inadvertently communicate low cognitive expectations. Then, on July 21st, Rick reveals

what appears to be a substantive change in his thinking relative to his expectations for

cognitive engagement embedded in his instruction, noting:

> To promote a growth mindset:
> This may take a few tries vs. Let's start with an easy one.
> We're going to see in this class really great scientists who were wrong again and again.

> On July 23rd, 2015 this shift takes on sustained meaning, when he shares "After our discussions, I have realized how impactful it is to discuss my ideas of intelligence openly with someone else. My perceptions and opinions change almost instantly when an idea is verbalized that is not of a growth mindset." These reflections highlight a change in Rick's acceptance of failure as an essential part of learning and his role in creating a classroom climate where it is encouraged. This calibration is deeply personal for Rick and, as such, an expression of his deepening respect for his students.

While Rick never verbalizes when this emerging understanding starts to take hold, I suspect it was a result of an interview on July 20th, 2015, wherein I asked him to describe a situation where he failed at something and to what attributed his failure. He described failing to make the all-state concert band because of lack of preparation. Through his own words, I was able to illustrate how individuals with a growth mindset respond to setbacks by attributing their failure to a lack of effort and/or utilization of the wrong strategies and wondered if he was providing similar opportunities to learn from failure to his students. Subsequent to this conversation, Rick acknowledges having difficulty with students being wrong and seems to recognize an overemphasis in his classes on creating assignments or asking questions that will ensure the students get the answer right, stating "I struggle with that (higher order thinking), I think a lot of ---a lot of my assessment opportunities are very much performance tasks." Unfortunately, the

data do not provide insight into the degree to which Rick's emerging understanding might be influencing the quality of his relationships, though it does demonstrate greater confidence in his students to be able to persist in face of failure and his responsibility in shaping the classroom climate to safely allow for risks to be taken, both of which are arguably manifestations of caring that avoids coddling.

The data indicate that Jason also struggles with this tension between caring and coddling in his relationships with his students. During an interview on July 17th, Jason discussed the dilemma he faces with students who believe they should be receiving instruction in a certain subject area, e.g. Algebra II, but are unable to "understand a simple Algebraic problem." Perhaps due to his incremental theory of intelligence, Jason is less concerned with what a student is supposed to be studying for the purposes of graduation than he is with facilitating a student's development from where they appear to be academically. As a consequence, Jason believes he ends up having some very uncomfortable, even risky, conversations that, in the end, serve to engender the trust and respect of his students. During one of our interviews, Jason reflects on how he approaches this type of a complex conversation with one of his students who appears to be more concerned with passing the class he's required to take than actually learning the content. He reflects:

> Should I just be following the system that just rubber stamps these kids through or should I, you know, say "Hey, listen, you should at least know some Algebra." You know what I mean? I kind of cool the process down a little bit and say, you know, "I'm not going to stop you from getting your credit, but I'm going to teach you what you really need to know." Interview, July 17, 2015

After reflecting on his approach, he gets specific about this conversation, stating:

> …I basically said, you know, "Right now, you really need to be taking, they said you need to be taking Algebra II to graduate. You know, you haven't—you

don't--" I was straight up honest with him, "You don't have the skills right now to be in Algebra, you can't be an Algebra II student."

As the interview continues, Jason discusses how this conversation plays out between him and his students over and over again. He is keenly aware of the risks, remarking that he can really end up "pissing a kid off" because the student might perceive his statements as calling him "dumb" or not being "on their side." However, he clearly believes that being honest with his students communicates a level of caring that serves to both facilitate an effective teacher-student relationship and increase the students' investment in learning in his class.

Finding 2: Individuals vs. Stereotypes—Teachers who work with adjudicated youth in schools co-located in juvenile justice residential treatment facilities are surrounded by repeated and pernicious messages about the academic and socio-emotional capacities of the youth in their classrooms. These messages run rampant across society at-large and are also deeply embedded in the culture of residential juvenile justice facilities. Unwittingly, these messages can prevent teachers working in such settings to see their students as they are, but instead as they have been cast. The risk of this happening is affirmed by the well-known prison study conducted by Zimbardo (1973) that sought to determine if the behaviors of prison guards was a result of their disposition or the prison environment and found that both the prisoners as well as the guards quickly acted out the worst possible characteristics attributed to roles they had been randomly assigned. For the teachers in this study, a growth mindset appears to be comingled with their capacity to see beyond stereotypes and to get to know their students as individuals, thus increasing the likelihood that they will form quality teacher-student relationships and not treat them as a group of "juvenile delinquents."

Throughout the study, both teachers demonstrated some evidence of struggling against making assumptions about their students before truly getting to know them as individuals. For Rick, however, this struggle was more problematic insofar as his perceptions about and behaviors towards his students appeared to undermine his efforts to get to know his students as individuals despite an authentic desire to do so.

As discussed earlier, more approximately 55% of the student population committed to DYS in MA are students with disabilities and therefore have an Individualized Education Program (IEP). The IEP and the related forms and documents can provide significant and rich details about students, their academic histories, and suggestions for instructional and learning strategies that may facilitate greater academic and life outcomes. Rick, however, when asked about this population of students says "I don't really know the details. Our Special Ed Teacher, Scott (pseudonym), oversaw. And when we would co-plan, there would be things coming into play, but I never really read the IEP's or know if there was anything I needed to adjust for…" In this way, he is choosing to be blind to a characteristic of the student that is likely to have had a profound impact on his identity, which is analogous to when people claim to be "color blind" when discussing race. It is possible he is trying to avoid making assumptions about the abilities of his students by choosing to be blind to their disabilities, but in so doing, he is more likely doing more harm than good relative to his efforts to reach and teach his students. If Rick were to have shared that he avoids reading IEP's until he gets a chance to meet them as a method of trying to not develop preconceived notions about them based on frequently outdated information, I could see the value, but his altogether refusal to read

the IEP's or even consider them reveals a misguided stereotype busting strategy that is informed more by his anxiety about stereotyping rather than actually busting stereotypes.

This unintended negative effect is also found in research about stereotype threat and race, whereby white teachers and professors, concerned about being perceived as racist, will provide less specific and critical feedback to their black students than to white ones (Harber, et al., 2012). Similarly, with a fixed mindset orientation, student praise is often evidenced by such generalized statements as "good job" or "excellent." And when students do make errors they are either avoided altogether or simply marked as incorrect. Rick appears to be beholden to this phenomena as well. During my first visit, I noted that he frequently praised students with these generalized statements. When asked about this behavior, he said he strives to "acknowledge every success, never miss a chance to compliment." Unfortunately, this strategy of praising every little success in an effort to be encouraging is more likely undermining his teacher-student relationship insofar as the message truly being conveyed is one of low teacher expectations grounded in a fixed mindset orientation. According to Stipek (2010), "Praise for successful performance on an easy task can be interpreted by a student as evidence that the teacher has a low perception of his or her ability. As a consequence, it can actually lower rather than enhance self-confidence. Criticism following poor performance can, under some circumstances, be interpreted as an indication of the teacher's high perception of the student's ability."

To ascertain if the dispensation of generalized praise is just a missed opportunity for Rick to demonstrate his knowledge of each students struggle in attaining their success and its relative meaning to them or evidence that he doesn't really know his students as

individuals, we have to examine the data. The first except, where Rick is describing one of his students, Daveon, he says:

> Outwardly, he expresses himself in a way that you realize this kid is smart. He's very—he has a very good vocabulary, he expresses himself well, he's able to follow along and complete almost anything I've ever given him with little questions. I think he's pretty close to his grade level which makes him standout….He gets a lot done. So, a lot of that involves wearing headphones, so a lot of times he's in his own world, but he attends class like he should, he has a good attitude.

In this statement, it appears that Rick knows Daveon in terms of the performance metrics of completion without assistance and attending class with a good attitude. But beyond these metrics, he shows very little depth in his knowledge about Daveon as a student, beyond having a good vocabulary in comparison to his peers, as indicated by the "standout" comment. The following excerpt seems to reinforce his lack of knowledge about his students beyond how they present in class:

> Henry is pretty, Henry is….he's kind of a funny guy. He's become almost the class clown now that he is opening up and showing his personality. He likes to laugh and joke. He's not far under his grade level in most subjects which is kind of rare, so it makes him appear pretty intelligent in class. He will complete his work begrudgingly. I don't think he really likes school and lessons and work and things like that. He likes coming to class for the social aspects more.

Here again, Rick does not demonstrate any specific knowledge about Henry and his specific needs and strengths as a student. What's more, when you couple this excerpt with the preceding one, it seems to reveals that Rick has formed a stereotype about the intelligence levels of the body of students he normally teaches, and views his students' intelligence against this invented metric and not as individuals. The only evidence we have that this may impair the quality of his relationship with his students is based on the relatively low levels of academic rigor in his classroom. While the students all seem to respect Rick, it does not appear that they respect him as a teacher, in that observed

lessons regularly deviated from the stated learning objectives and the students rarely appeared to persist through even low level instructional tasks, such as writing several sentences in response to a teacher prompt, which are at the lower levels of Bloom's (1956) and Marzano's (2001) taxonomies of educational objectives. This distinction between respecting Rick as a teacher vs. a caring adult is important because while it appears as if Rick has caring relationships with his students that are characterized by mutual respect, essential elements of student learning such as risk-taking, persistence in the face of challenging work, or student agency are not evident.

Jason, on the other hand, mostly guided by his growth mindset, approaches his instruction, feedback, and relational outreach efforts in a highly individualized manner. During my first observation of Jason, I noted his distribution of laptops to each student. After introducing a lesson on the Fourth Amendment and engaging the students in a whole class discussion about the amendment and how it was relevant to the students' lives, Jason distributed laptops to each student and asked them to open up their folders, find the document pertaining to the Fourth Amendment and respond to the prompts provided. The students worked together to make sure each laptop had power, that each student had the right laptop, and then proceeded to start working. Jason circulated the room, prodding for more detail from some, providing some reminders from the lesson to others, and answering any individual questions that arose. During our reflection, Jason discussed his participation in a national initiative supporting teacher proficiency in blended learning and that as a result of his participation, he was using an online platform called Edmodo that allowed him to create individualized tasks for each student, provide private and personalized feedback, and outline a set of lesson activities over a period of

time that could be accessed regardless of the DYS setting the student might be someday be transferred.

By using this new technological platform in such an individualized manner, Jason communicates his growth mindset orientation in several ways. First, by envisioning the technology as a forum for providing private and personalized feedback, he shows he is thinking about the student's emotional safety while also maintaining the importance of critical feedback in service to learning. Second, his approach recognizes that the work for each student must be tailored to the readiness of each student and that by harnessing a virtual space for the students to reflect on their understanding of the content he can achieve this goal. Third, it reveals his sensitivity to a student's DYS experience in terms of recognizing that a student may be moved from one treatment setting to another and that the system should provide for access to this work for both students and teachers alike no matter where they might be placed so they can continue in their learning from where they left off, saying "I can't expect they get it, understand it immediately, but over time, I think they will (July 10, 2015)."

Additional evidence of how Jason's growth mindset may be helping him to see beyond stereotypes is apparent in his descriptions of his students. In stark contrast to Rick, whose explanations for his students' academic success are framed in terms of their overall lack of academic abilities as compared to the rest of his students, e.g. "he's not far under his grade level in most subjects which is kind of rare, so it makes him appear pretty intelligent (Interview July 20, 2015)," Jason describes each students success in terms of their individual struggles and growth. For example, during one of our discussions about the importance of making learning relevant, Jason compares two of his students, stating:

89

Jeremy is really motivated to earn his GED, so basically, he's like, "just give me what I need to do that", and that's very understandable, you know. And I think, I think he respects that I'm trying to work with him along those lines. Whereas, Stefon I think would be, not offended, but he wants to master subjects, he wants to really understand them on a deeper level. And I think if I tried to just do performance expectations for him, I think he'd be disappointed. And that would mean that he knows from me that I—not expect a little bit more, but that he knows that I know that he wants more.

Here we see that Jason is keenly aware of the individual factors motivating these two students and that he uses this information in order to facilitate their individual growth. And although one student seems to be more interested in defining his academic success in terms of a performance based outcome, earning his GED, which is associated with having a fixed mindset, it is Jason's mindset that is the focus of this study and by respecting the individual learning goals of his students, he is both fostering their sense of agency and autonomy, which are indicators of a growth mindset and likely to strengthen his teacher-student relationship quality.

In another example of Jason's attentiveness to each student's individual struggle and growth in the context of working in a juvenile justice setting, Jason tackles the dilemma of social promotion and its impact on his interactions with his students. When students arrive in DYS, they are provided with a graduation grid that outlines the classes they need to take to stay on track to graduate. In this scenario, the student is supposed to take Algebra II, but is unable to do basic Geometry and Jason is uncomfortable with putting him in an Algebra II class for fear that he won't succeed and it will result in greater frustration. One of the risks in making this decision for the student is that it will be interpreted as the teacher believes the student to be incapable of ever doing this level of work. The excerpt below, wherein Jason is reflecting on a conversation with one of his students, evidences his awareness of the possibility of inadvertently conveying this

message and his approach to balancing the need to communicate hard to hear information in such a way that also communicates he cares:

> (paraphrasing conversation with student) "You know, you need to be taking Algebra II to graduate. You haven't, you don't, have the skills right now to be in Algebra—you can't be an Algebra II student. But I'm not going to hold this against you. Part of it is because of people before you, but I have to make you take Geometry. That's where you need to be. That's your skill set level. I'm not going to make you take Geometry for three years, but I want to make sure you know some basic formulas. And I asked him "how do you feel about this?" If he said, "I want to take Algebra II" I guess I could have made that work, but I don't think he would have been very successful at it. And then what does that do? That, in turn, he's not confident, he's not doing well in class, so he's frustrated. Not to say that with enough time, he could, but we don't have time. So that's what I do, I have an honest conversation. (Interview, July 17, 2015)

Jason further states that some students don't "want to hear that," but "they know deep down, and think ultimately, they have appreciated it." And that "the way they are now, their skill set, it's not—and again, I don't say intelligence, because it's different. Because you can work on a subject." Here we see Jason refusing to allow himself to get tricked into believing that this youth is incapable of doing the work, but rather that he hasn't yet learned the technical skills required to do it. And what's more, because he is being honest and hopeful with the student, he believes that the student will be more inclined to hear the bad news without getting discouraged and simultaneously preserve the quality of the teacher-student relationship.

While it is reasonable to interpret Jason's statement above as meaning that intelligence isn't malleable, but that subject matter knowledge is, I would argue that it is more indicative of two attributes common to the field of education. The first one being that beliefs about intelligence as being malleable are far less ubiquitous than beliefs about intelligence as being fixed, in part because of the penetration of the I.Q. test in the field of education. Second, I would argue that teacher training, with its narrow focus on teaching

subject matter knowledge, is insufficient in preparing teachers to cultivate and sustain a growth mindset of their own, much less in and among their students.

The patterns of teacher thoughts and behaviors herein described could be interpreted through other social psychological theories such as attribution theory (Weiner, 1974) or social-learning theory (Bandura, 1977), which also seek to explain why people do what they do. However, I chose implicit theories about intelligence—mindset-- because of its currency in the field of education today as well as its versatility in terms of application to other potential implicit theories people hold that are deserving of dialogue among educators, such as implicit theories about race, gender, or disability, but which have been cast to the shadows in favor of high-stakes testing. The data from this study suggests that increasing the value of relationships on the relational-testing ledger is warranted.

CHAPTER V

DISCUSSION

People hold implicit beliefs, or mindsets, about intelligence (Dweck, 1999). These mindsets exist along a continuum that ranges from fixed to growth. People who are guided by a fixed mindset view intelligence as a static trait bounded by an underlying amount of intelligence. On the other hand, people guided by a growth mindset view intelligence as malleable and, therefore, developable through effort. These mindsets structure the way an individual thinks and acts. In terms of students, mindset has been shown to influence motivation, persistence, and self-efficacy (Blackwell et al., 2007; Dweck, 1986, 1999; Robins & Pals, 2002; Hong, Chiu, Dweck, & Lin, 1998). As a consequence, understanding how to promote a growth mindset in students has garnered the increased attention of educators and researchers alike. However, it is my opinion that the focus on the mindsets of students has diverted attention from understanding the role mindsets of teachers hold on their practice, thereby missing an essential lever for change in the highly relational enterprise of teaching and learning.

The potential value of high quality teacher-student relationships for youth placed at-risk, such as those that make up the juvenile justice population, is also substantial. Youth who report having positive relationships with their teachers have been found to persist more when confronting academic challenges (Hamre & Pianta, 2005, Hughes and Kwok, 2007), exhibit less defiant behaviors (Gregory and Ripski, 2008), and perform better on standardized tests (Burchinal et. al., 2002). Unfortunately, the fervor surrounding performance on standardized tests in education has relegated teacher-student relationship quality to the margins and as a consequence, youth at-risk have been further

93

marginalized. Without a greater understanding of the mediators that help or hinder

teacher-student relationship quality, the danger is that only those teachers who are

already proficient in forming quality relationships will be effective in stemming the tide

of negative outcomes for youth at-risk.

It is here, at the intersection between the *quality of teacher-student relationships*

and the *influence of teacher held implicit beliefs about intelligence* that I set out to

explore through this research. While the literature on these two concepts suggested the

potential for synergy, I could not find a study that focused on the intersection of the two.

It was my intent to contribute to a greater understanding of the intersection between these

two concepts relative to teaching and learning through a small study involving two

teachers working in a school co-located in a juvenile justice setting.

The selected setting, a small residential school serving up to 15 adjudicated youth,

was chosen because it represented an extreme case in terms of the typical characteristics

of the student population and the magnitude of the challenges faced by a teacher. Yet, I

contend these extremes are not mere hyperbole to the lived experience of many a teacher

working in a traditional urban public school setting and are, therefore, still valuable to all

teachers working with at-risk populations in schools situated in impoverished

communities across America.

Discussion and research about mindset has generally been presented in binary

terms as either fixed or growth. However, more recently in EdWeek, even Dweck (2015)

is finding the need to emphasize the nuanced nature of mindset in her commentaries on

the concept. The data from this study also indicate that expressions of mindset much

more nuanced. Not surprisingly, during interviews both teachers espoused a growth

mindset, that is to say a belief that intelligence is malleable, however their thoughts and actions appeared to intermittently shift along a continuum between a fixed and growth mindset, thus making it impossible to proclaim a teacher held a singular perspective on intelligence. Similarly, both teachers appeared to have caring relationships with their students, but as the findings illustrate, being caring did not always equate with the types of positive student behaviors attributed to high quality teacher-student relationships, such as persistence, engagement, and less defiance (Hamre & Pianta, 2005; Hughes & Kwok, 2007; Stewart, 2008). This ambiguity was present throughout the study, both in terms of concretizing manifestations of teacher held beliefs about intelligence and what constitutes a high quality teacher-student relationship. However, merely by reflecting on their ambiguities, it had the effect of fostering reflective self-calibration among the teacher participants relative to their espoused beliefs and their words and actions. Observation of this self-calibration also serves as an example of me bearing witness to the malleable nature of beliefs about intelligence in operation. And, as will be discussed later, although this ambiguity made it challenging to corral these concepts into concrete terms, the study suggests that implicit beliefs about intelligence and quality teacher-student relationships interact in ways that are congruent with the literature on effective teaching and learning.

Moving from Autopilot to Flight Controller

The findings from this study suggest that teachers who adopt a growth mindset demonstrate attributes such as self-efficacy, a mastery orientation, and protection against stereotyping. Research has indicated similar benefits of a growth mindset to students as well thus indicating that teachers and students share similar characteristics. Further, the presence of these attributes appears to make a positive difference to the nature and quality

95

of the teacher-student relationship. The potential value of these understandings to educators is further magnified when you consider the finding that the capacity to adopt a growth mindset exists regardless of one's proclivity towards a fixed or growth mindset and that further, by consciously reflecting on the concept of implicit beliefs about intelligence, the participants were more likely to make choices that cascaded towards these positive attributes. Recall Rick's reflection in his journal on July 23rd, 2015 where he writes, "After our discussions, I have realized how impactful it is to discuss my ideas of intelligence openly with someone else. My perceptions and opinions change almost instantly when an idea is verbalized that is not of a growth mindset." In essence, the conscious act of moving from autopilot to flight controller with regards to monitoring one's implicit beliefs about intelligence can contribute to teacher-student relationships that facilitate mastery learning. Hence, further exploration of the intersection between implicit beliefs about intelligence and teacher-student relationship quality is worthy of additional pursuit. The discussion that follows will explore how this study and its related findings dovetail with existing literature on components of effective teaching and learning.

In contrast to their peers working in typical public school settings, teachers who teach in schools co-located in a juvenile justice setting face seemingly insurmountable headwinds in their efforts to get to know their students and engage them in schooling. Take, for instance, the reality that from one day to the next, teachers do not know who will be in their classes. This can be caused by any number of reasons, including the arrival of newly detained or committed youth, safety or security concerns requiring certain individuals to be separated, or matters that are clinical or legal in nature. This fact

alone makes establishing a relationship grounded in trust and mutual respect challenging enough. Then, add to this reality the characteristics of the population where in any given class a majority of students are in different grade levels, have varying learning abilities and disabilities coupled with significant gaps in their formal schooling, may have complex traumatic personal histories--and the task of forming and sustaining relationships grows exponentially more complex. Arguably, the scope and persistent nature of these headwinds place teachers working in these settings "at-risk" of having no control, of feelings of ineffectiveness, or worse, actual ineffectiveness, akin to the experience of the youth "at-risk" they are responsible for teaching. In this way, one might consider both the teacher and the youth at-risk.

As discussed earlier, at the root of feelings of ineffectiveness is self-efficacy (Bandura, 1977, 1997). With a sense of self-efficacy, a teacher will persist through difficulty and recover from failures. Throughout the findings, we see that where a growth mindset about intelligence is more evident efficacy is also present. The teacher, Jason, is more likely behave in a manner consistent with the research on feeling efficacious, including persisting in the face of difficulty, balancing caring with high expectations, employing intrinsic motivational techniques, and striving to get to know the student as individuals. For instance, Jason engages in a set of teacher-student interactions grounded in a growth mindset about intelligence that includes (1) seeking to establish rapport through 1:1 student-teacher conferences, (2) challenging his personal assumptions in order to truly get to know the individual student and their academic needs and strengths through the use of a "model student" diagnostic (3) tailoring instruction to the individual through the use of mastery oriented instructional strategies and, (4) persisting in his

efforts to facilitate student learning by drawing on a range of relational and instructional strategies despite barriers.

Underlying this pattern of behaviors, we can see evidence in Jason of the profound relationship between a growth mindset and self-efficacy. This is true with respect to his descriptions of Franklin where we see that despite fleeting successes and clear frustration, he persists in meeting with him in an effort to connect with him and strengthen the teacher-learner alliance. This persistence is evidence of both a growth mindset and self-efficacy. It is also true with regards to his invention of the "model student" diagnostic strategy that forces him to explore alternative explanations for a behavior in order to more likely use the right strategy to address the problem at hand. And last, we see it in Jason's willingness to adopt new technologies and instructional methods suited to the new technologies (Allinder, 1994; Guskey, 1988; Tschannen-Moran et al., 1998) that allow for greater flexibility in designing lessons tailored to the readiness of each student and private, personalized, and specific feedback on student work. In each of these instances, Jason exhibits both a sense of agency and hopefulness.

In contrast, without a sense of self-efficacy, a downward spiral of anxiety, despair, and ultimately learned helplessness is bound to set in. Learned helplessness generally occurs when an individual discovers, consciously or not, that the outcomes of a situation are out of his/her control (Abramson, Seligman, & Teasdale, 1978; Kofta & Sedek, 1989) and results in perceptions of incompetence and lack of individual agency accompanied by feelings of "anxiety, despair, and pessimism about future success" (Covington & Omelich, 1985, p. 448). In Rick we see the hallmarks of the negative effects of low self-efficacy and learned helplessness operating together. He quickly gives

up on the intended objectives of a lesson and easily allows the students to engage in off-topic conversations, even though these conversations appear to engender the appreciation of his students. He sets aside almost 5-10 minutes of his 45 minute long classes to watch videos that are only remotely connected to the lesson in order to incentivize work completion. He even goes so far as to say that one student will go right back to dealing drugs when he returns to the community thereby inferring that there is no point in even trying. Coupled with this sense of helplessness is a bias towards a fixed mindset about intelligence that gets revealed at least in part through his descriptions of students as only "seeming smart" in contrast to his typical class of students. However, as we engaged in discussions about growth mindset and his relationships with his students, Rick appeared to move from helplessness to problem solving and even developed new and concrete ways for introducing a lesson that would be more likely to promote a growth mindset, writing in his journal, "This may take a few tries vs. Let's start with an easy one" and "we're going to see in this class scientists who were wrong and wrong again."

By examining the behaviors of these two teachers through the lens of self-efficacy alone one can see that Jason is more efficacious than Rick. On the other hand, if one looks at their behaviors in terms self-efficacy and the quality of their relationships, one might conclude that both teachers are efficacious in that they appear to value, invest in, and believe in both themselves and their students and are thus able to form and sustain teacher-student relationships.

However, the finding indicating the fine line between when caring crosses over into coddling and, as such, undermines learning, highlights how an individual's belief about intelligence might actually serve to undermine the teacher-student relationship

wherein academic learning should be a central tenant. This paradox parallels a similar one outlined in the literature on growth mindset and praise. Stipek (2010) and Dweck (1999) argue that praise on an easy task that may be meant to be encouraging can actually be interpreted by the student as evidence that the teacher holds low expectations of the student's abilities or competence. In Rick, we see evidence that he engages in "compensatory" behaviors (Babad, 1992), e.g. performance tasks that can be easily fulfilled, that actually undermine learning. With Jason, on the other hand, where evidence of a growth mindset was more pervasive, the caring relationship was harnessed, and characteristics associated with high quality teaching and learning were more likely. This approach is consistent with the literature on learner-centered education that "couples a focus on individual learners….with a focus on learning" (McCombs & Whisler, 1997, p.9) and which "treats variables in student learning as outcomes of relational practices" (Cornelius-White, 2014). This suggests that a growth mindset might actually mediate teacher fidelity to adoption of a learner-centered approach.

Beyond the psychological benefits to the teacher who holds a growth mindset and the quality of their relationships with students, the findings also suggest an influence on the instructional strategies they use. To be fair, the instability of the population, incomplete information about their academic histories, and the wide range of core content learning needed by students in any given classroom, makes it difficult for teachers to employ high yield instructional practices that commonly rely on knowing your students—practices such as reviewing prior learning, scaffolding, and designing lessons that are relevant. Nevertheless, with respect to instructional planning and delivery, where

a growth mindset was most evident, the instructional strategies that Jason and Rick used were more consistent with mastery oriented learning (Ames, 2002).

For example, relative to the instruction strategy domain of *evaluation/recognition* Jason's "model student" diagnostic strategy relies on understanding specific factors regarding a student's readiness to learn thereby laying the foundation for assessing and recognizing individual improvement and progress. In the instructional strategy domain of *authority*, Jason's use of Edmodo as an instructional tool serves to promote greater student responsibility for learning as well as self-regulation as the students strive to make progress on their academic assignments. The use of these mastery oriented instructional strategies, which depend on knowing students as individuals capable of changing, is consistent with research on the role of implicit theories on judgements and reactions that asserts "when people believe attributes are more dynamic, malleable, developable (an incremental theory), they tend to focus less on broad traits and, instead, tend to understand outcomes and actions in terms of more specific behavioral or psychological mediators (Dweck, Chiu, & Hong, 1995)." Here the evidence supports the positive benefits of a growth mindset as a mediating factor in the daily instructional decisions a teacher makes rooted in information that, especially in the setting of this study, requires a relationship grounded in trust, respect, and dignity.

This study highlights subtle, but significant differences in the thoughts and behaviors of the two participants relative to the enterprise of teaching and learning. It lends credibility to the influence of beliefs about intelligence on the nature and quality of teacher-student relationships which are central to engaging youth, and specifically youth at-risk, in academic learning. It also suggests the protective power that a growth mindset

has on teachers "at-risk," that is to say, teachers who work with populations of students of similar demographics. Although the findings dovetail with much of the literature cited throughout, it should be noted that while the teacher's beliefs about intelligence can be linked to the quality of their relationship and instructional choices, it is noteworthy that one of the participants, Rick, was new to teaching and the other, Jason, was a ten (10) year veteran of the profession. As a result, the differences among the two may be related to their experience as teachers. If so, we can infer that over time, and with support in recognizing when one is unintentionally allowing the implicit beliefs autopilot to guide one's thoughts, decisions, and actions in contradiction to one's espoused beliefs, a new teacher can come to adopt a growth mindset and enjoy the benefits of doing so.

Implications for Practice

Double Loop Learning: Mindset in Sight and Hindsight

From my perspective as an educational leader, double loop learning provides a useful framework for discussing the implications for practice emerging from this study. This framework for organizational learning is predicated on the idea that all human action is driven by an individuals' mental maps. These mental maps are referred to as theories of action (Argyris & Schön, 1974). According to Argyris & Schön (1974), theories of action are comprised of two theories, an "espoused theory," which is inclusive of what an individual claims to be the driver of their actions, and a "theory-in-use," which is what an individual actually does. Facilitating congruence between these two theories of action for an individual and/or organization is at the heart of double loop learning. In order to achieve congruence, an individual, or the individuals that make up an organization, must work to uncover the assumptions and implicit beliefs driving their behavior and strive to

create accord between the two theories. Accomplishing double-loop learning typically requires time, a commitment to learning to do something better, and the critical reflection of other practitioners who share a similar concern, akin to the work of a community of practice (Lave & Wenger, 1991). Further, the process also asks the individual(s) to both reflect on their practice and reflect while practicing, what Schön refers to as "reflection on action" and "reflection in action."

As a first step in this process, it is essential to examine one's theory-in-use, that is to say what one is actually doing in the context of what one intended to accomplish by said action(s). This step serves to provide concrete information to the individual(s) in service to double loop learning. With regards to growth mindset, this is the step of surfacing specific behavioral manifestations of one's beliefs about intelligence. Once named, adjustments to practice can be made, reflected on, and reflected upon. As it pertains to the participants in this study, Rick might elect to target student praise as his focus, and develop alternative praise statements to "good job" that recognizes the effort his students put forth as well as their problem solving strategies. This seemingly relatively small adjustment to his behavior, consistent with a growth mindset, would provide him with concrete information to reflect on and upon in his efforts to better calibrate his espoused beliefs with his theories-in-use.

While this step may appear to be a relatively minor one, I would argue that it might be more threatening than it appears, especially for teachers whose profession espouses that "all youth can learn" and that teachers are the primary facilitators of student learning. As such, there exists an inherent risk to a teachers' self-efficacy in potentially discovering a mismatch between what they say they believe about intelligence and what

they actually do. This risk is further magnified if they themselves hold a fixed mindset

and are therefore susceptible to the debilitating effects attributed to holding such beliefs,

such as self-handicapping or stereotype threat. Hence, the first challenge to having

teachers calibrate their beliefs with their actions would rest in overcoming these risks

without heightening anxiety and fear. I would accomplish this by drawing upon several

existing, that is to say familiar, levers for changing professional practice, including

statewide professional development, instructional coaching, and learning teams. By

drawing on already existing structures whereby educators are typically expected to reflect

on their practice and work together with their colleagues to sharpen their skills, inquiry

about expressions of mindset relative their practice would serve to both normalize the

discourse and mitigate the potential risks to their sense of efficacy.

At the single loop level of change, and as part of statewide professional

development release days, teachers could be asked to read a short article about mindset,

perhaps the one used in this study, watch classroom lessons on an online site such as the

Teaching Channel, and then document and debate specific behaviors reflective of a

growth or fixed mindset. This would heighten their awareness of specific expressions of

mindset. Thereafter, they could be asked to name an instructional strategy corresponding

to task, authority, recognition/evaluation (Ames, 2002) they want to work on throughout

the year. As an example, Rick might have set his target on the *evaluation/recognition*

instructional strategy domain by focusing on encouraging the view that mistakes as an

essential part of learning. Alternatively, Jason, might have been more interested in the

task instructional strategy domain by designing tasks that are more challenging to

students informed by Bloom's taxonomy (Bloom, 1956).

Throughout the year, teachers would work on their selected area of practice with their instructional coach as well as their colleagues during learning teams, a model used throughout DYS in Massachusetts that encourages teachers to engage in critical dialogue about teaching and learning using data. These collegial interactions would begin with reflective discussions surrounding specific actions for targeted change. However, in order to achieve greater calibration between the individual teachers' espoused beliefs about intelligence and the actions, the nature of these conversations would need to shift to challenging the assumptions driving the actions. As a consequence, in addition to having protected time for such discussions to be held, a structured set of protocols that rely on clear data sources, might need to be developed for teacher use. These protocols would prompt the collection of and critical interrogation of data about the implicit beliefs about intelligence that might be driving teacher actions. Last, as a method for adding value for the teacher, activities could be structured such that the teacher could earn professional development points—a requirement for keeping a license current or advancing it in Massachusetts—by engaging in these reflective exercises. This last step would lend more credibility to the effort as a matter of professional practice.

Over time, I believe this methodical and sustained approach would be most likely to result in greater coherence between teacher beliefs about intelligence and their actions. Further, it would likely cultivate an environment in DYS programs, and among colleagues, wherein conversations about unconscious beliefs about attributes other than intelligence, such as race, gender, disability, and/or class can more safely and constructively be tackled and managed.

Last, I purposely selected to focus this study on the influence of the implicit beliefs *teachers* hold in relation to the quality of their relationships with their students, because much of the discourse in the education community regarding implicit beliefs about intelligence has targeted the mindsets of students and I worry that in so doing, correcting for the debilitating effects of a fixed mindset are not equitably shared. In that same spirit, by focusing this study on teacher held implicit beliefs, I too run the risk of shirking my responsibility in creating schools that cultivate growth mindsets. As such, this study has inspired me to think about how I, as the Director of Education, can engage in a similar process of double loop learning with my leadership team by focusing on the policies we have some degree of influence over, such as assessment measures/grades, which may by in contradiction to our espoused beliefs and corresponding efforts to facilitate the progress of all our youth towards fulfilling their fullest potential.

Conclusion

This study was undertaken in an effort to better understand the influence of implicit beliefs about intelligence on the quality of teacher-student relationships in settings serving youth placed at significant risk, juvenile justice schools co-located in residential treatment settings. Quality education has long been touted as an essential mechanism for effectively rehabilitating the youth placed these settings, but too little is known about how teachers working in these settings can be more effective in reaching and teaching this highly vulnerable and disproportionately minority population. This study sought to fill some of this gap by focusing on areas of shared interest espoused by these stakeholders--academic growth, engagement, and quality teacher-student relationships. The study, though limited in its scope, increases our understanding of how

106

manifestations of implicit beliefs about intelligence may be operating in day to day

interactions between teachers and their students and reinforces the importance of

exposing these beliefs through reflective practice. While this setting was chosen because

the variables impacting teaching and learning seem so hyperbolic, the setting has more in

common with regular schools insofar as learning is situated in countless interactions

between teachers and students and the beliefs that these stakeholders hold shape the

degree to which these interactions can be harnessed in service to learning. This study

provides insight into the role mindset might play in the quality of teacher-student

relationships and affirms the value of systemically and collaboratively examining mindset

as a strategy for clearing away unconscious hurdles to effective teaching and higher order

learning for all students, and especially those who are most vulnerable.

APPENDIX A

PROOF OF RESEARCHER'S CITI CERTIFICATION

COLLABORATIVE INSTITUTIONAL TRAINING INITIATIVE (CITI)
HUMAN RESEARCH CURRICULUM COMPLETION REPORT
Printed on 05/22/2014

LEARNER	Woodbury Clift (ID: 390011) 65 Maple St. Belchertown Massachusetts 01007 USA
DEPARTMENT	Educational Administration
PHONE	617-618-2447
INSTITUTION	University of Massachusetts Amherst
EXPIRATION DATE	05/21/2019

GROUP 2 SOCIAL AND BEHAVIORAL RESEARCH INVESTIGATORS AND KEY PERSONNEL

COURSE/STAGE:	Refresher Course/2
PASSED ON:	05/22/2014
REFERENCE ID:	10227871

REQUIRED MODULES	DATE COMPLETED
SBE Refresher 1 – History and Ethical Principles	05/22/14
SBE Refresher 1 – Federal Regulations for Protecting Research Subjects	05/22/14
SBE Refresher 1 – Informed Consent	05/22/14
SBE Refresher 1 – Research with Prisoners	05/22/14
SBE Refresher 1 – Research in Educational Settings	05/22/14
SBE Refresher 1 – Instructions	05/22/14
SBE Refresher 1 – Defining Research with Human Subjects	05/22/14
SBE Refresher 1 – Privacy and Confidentiality	05/22/14
SBE Refresher 1 – Assessing Risk	05/22/14
SBE Refresher 1 – Research with Children	05/22/14
SBE Refresher 1 – International Research	05/22/14

For this Completion Report to be valid, the learner listed above must be affiliated with a CITI Program participating institution or be a paid Independent Learner. Falsified information and unauthorized use of the CITI Progam course site is unethical, and may be considered research misconduct by your institution.

Paul Braunschweiger Ph.D.
Professor, University of Miami
Director Office of Research Education
CITI Program Course Coordinator

APPENDIX B

APPROVAL LETTER FROM MASSACHUSETTS DYS

AGREEMENT BETWEEN WOODBURY CLIFT AND THE DEPARTMENT OF YOUTH SERVICES

WHEREAS, DYS is the juvenile justice agency of the Commonwealth of Massachusetts and Woodbury Clift is the Director of the DYS Education Initiative at the Collaborative for Educational Services ("CES"), an educational organization whose mission is to strengthen and develop the skills of youth.

WHEREAS CES' activities include supporting teachers working in DYS classrooms to be effective in reaching and teaching youth placed in DYS settings to ensure the quality of education services provided to youth attending schools while in DYS;

WHEREAS CES creates training materials and programs to train teachers to support them in effective education for the DYS youth in their classrooms.

NOW, THEREFORE, for good and valuable consideration as specified herein, the receipt and sufficiency of which is hereby acknowledged, DYS and Mr. Clift agree as follows:

1. The Study

Mr. Clift is pursuing a doctorate in Educational Leadership. In conjunction with that doctorate, Mr. Clift is seeking to conduct a research study on the role of implicit theories about intelligence as either fixed or malleable on teacher student relationship quality. Mr. Clift's' research will consist of a project case study (the "Project") of two of CES' general education teachers teaching in a DYS program. The focus of the Project is on teachers, not DYS youth. The DYS youth will not be interviewed or have anything to do with the Project. Mr. Clift will be present in the classroom on occasion to observe the teachers participating in the case study. In Mr. Clift's capacity as the Director of DYS' Education Initiative at CES he on occasion sits in on DYS classrooms to observe teachers, so there will be no change in his activities. In the course of the Project, Mr. Clift will be interviewing teachers about their work at DYS. To the extent teachers' reference specific youth during any such conversations, such youth's name and/or identifying information will be protected by use of a pseudonym.

In connection with the Project Mr. Clift shall:

    (a) Conduct his Project during the summer of 2015. Said Project shall not interfere with the regular programming, operations or school time at the DYS Program;

    (b) To the extent any DYS youth are identified by teachers during the course of the Project, Mr. Clift will maintain the anonymity of the clients by use of a pseudonym during the Project and in any publications.

    (c) Keep the Program site where the Project is conducted confidential in all publications.

1

2. Consents

(a) Mr. Clift shall obtain the consent of the teachers participating in the Project.

3. Use

(a) Mr. Clift will make his findings from the Project public through his dissertation, presentations, and possibly peer reviewed journals.
(b) Mr. Clift will not submit any written report of his findings other than his dissertation for publication before DYS has reviewed said written report.

4. Expenses

(a) Expenses and Fees. In full consideration for this Agreement and all rights conveyed herein, Mr. Clift agrees that DYS shall not be responsible for any expenses, fees or charges associated with the Study.

5. Indemnification

(a) CES and Mr. Clift agree to release DYS, their agents and employees from any and all claims which CES or Mr. Clift may have or acquire as a result of suffering losses, damages or expenses of any kind or nature, in any way arising from or related to the Project resulting from any act or omission of the DYS its agents and/or its employee(s).

6. Counterparts

This Agreement may be signed in counterparts.

7. Contacts

The main contact at DYS for any issues concerning this Agreement will be
Katie Cohn
Program Coordinator, Educational Services
617-727-7575

The main contact at CES for any issues concerning this Agreement will be:

Woody Clift, Director of Education Initiative
Collaborative for Educational Services
wclift@collaborative.org

Signed:

_____ 5/5/2015

2

Signatory for CES   Date

Rudolf Breig
For DYS: Date
_____

Prior to first interview, ask participants to complete the following survey and bring to the first interview:

1) Using a pseudonym throughout, describe a relationship with a student in which a successful teaching relationship was achieved (questions derived from ISBC study, 2012)

   a) Describe the boy, including his mannerisms, disposition, other characteristics?

   b) How did you establish this relationship?

   c) How did this relationship evolve over time?

   d) How did the student contribute to this relationship?

   e) To what do you attribute the success of this relationship?

2) Using a pseudonym, describe a relationship with a boy in which an unsuccessful teaching relationship was achieved.

   a) Describe the boy, including his mannerisms, disposition, other characteristics?

   b) What were the obstacles to the achievement of a successful teaching relationship with this boy?

   c) What special measures, if any, did you take to cultivate or improve this relationship?

Interview Protocol and Questions: First Interview

Thank you for taking the time to participate in this interview with me today. I know your time is precious and I hope that you will feel that your time participating in this study will also be valuable.

In this study, I am interested in learning more about the role of unconscious beliefs on the quality of relationships between teachers and their students. Before we start the interview, I'd like to re-affirm that your participation in this study is voluntary and that if at any time you wish to stop participating, you may choose to do so and there will be no repercussions to you for making this choice. While you have already signed the informed consent, I want to provide you with time to answer any questions you might still have before going forward. Do you have any questions or concerns you wish to raise?

Throughout the study, it is important to answer honestly and candidly since the value of this type of study resides entirely within your responses, our analysis, and your ongoing reflections. Your responses and insights will remain confidential and will be used for the sole purpose of this study. No names or identifying information will ever be revealed in reports produced from your responses, unless you formally elect otherwise. However, I

will use data from the study, such as quotes, in my dissertation and in future publications. Do you have any questions at this time?

I will be taking notes during the interview process to help me remember ideas to follow up on during the interview. I will also record our interview for transcription purposes. This will allow us to reflect and analyze our interviews in the future.

Other topics to cover during 1st interview will include:

Personal background of teacher:

Personal Information:

Age_____   Age you became a teacher_____

Years of experience teaching in DYS_____

Years of experience as a teacher, if different_____

Educational Background:

Highest level of education completed:_____
Degrees earned
Bachelor's: _____   Master's:_____

C.A.G.S._____   Doctorate:_____

1) Describe the topic of inquiry, implicit beliefs about intelligence and their influence on teacher-student relationship quality with adolescent boys adjudicated delinquent attending schools co-located residential treatment facilities.

2) Define Collaborative Action Research and Calhoun's (1994) action research process that includes five sequential and recursive phases: (a) selecting the area of focus, (b) collecting data, (c) organizing data, (d) analyzing and interpreting data, and (e) taking action.

Close interview with next meeting date and ask participants to read article (Appendix F) about implicit beliefs about intelligence (Dweck, 1999) and to record their reflections in their journal.

Second Interview:

Purpose of this interview is to examine the initial categories that emerged in the open response data in light of the participant's reflections on the article. The goal will be to co-construct an understanding of how the initial categories that emerged in the open response data might be influenced by their implicit beliefs about intelligence and how these categories might be manifest in their day to day functions as a teacher.

Guiding questions might include:

After reading the article, do you think that this is an issue effecting teachers you know? You? In what ways?

I did some analysis of your interview responses and came up with some broad categories to describe how implicit beliefs might have influenced your relationships with the boys you discussed earlier. Let's reflect on these categories, do they make sense to you in light of what you read? If so, why? If not, why not?

Is there a boy you are teaching now that comes to mind as you think of these ideas? If so, what comes to mind? How do you think these beliefs are influencing this relationship?

How do you think you act out these beliefs?

Do you have reflections from your journal you'd like to share?

Close the interview by reminding the participants that I will be observing their classes and taking detailed notes, and that these notes are not performance based, but rather strictly data for us to analyze together. Remind participants to write in journal.

Third Interview:

Purpose of this interview is to reflect on classroom observation data against the hypothesized ways in which the unconscious beliefs are manifest.

We will also reflect on teacher journal insights.

Guiding questions might include:

In our previous meeting, we thought that the following actions were manifestations of our beliefs about intelligence and were influencing our relationships with the boys in our class. Let's review the observation data and see if it confirms, or disconfirms, our thinking and if there are other ways that the beliefs might be surfacing that we didn't expect?

Do you have any insights from your journal you'd like to share?

Have you explicitly done anything different during the course of this study that you want to share?

Close meeting by reminding participants to write in journal.

Fourth Interview:

The purpose of this interview is to start thinking about actions that could help others to interrupt negative patterns of behaviors that might be driven by unconscious beliefs about intelligence and propose ideas for other teachers to consider.

Guiding questions might include:

Based on your experience thus far in the study, are there any ideas that you have tried or are thinking about that might help other teachers to address the influence of unconscious beliefs on their teacher-student relationship quality?

If we were to design a training session to address this topic and help teachers to embrace the importance of this topic relative to their practice, what would that look like?

What have learned that you think is important for others to know?

APPENDIX D

INFORMED CONSENT

May 2015

Dear   ,

      My name is Woodbury Clift, and I am an Ed.D. candidate at the University of Massachusetts in Amherst, Massachusetts. As part of my dissertation research, I am studying the influence of unconsciously held beliefs teachers hold about intelligence on the quality of their relationships with their students in the context of a juvenile justice residential treatment facility serving adolescent males.

      The type of research I will be conducting is called "Collaborative Action Research." This branch of research is exploratory in nature and asks that the researcher work collaboratively with the participants to understand a phenomenon, make sense of data related to the phenomenon, propose and sometimes test, actions that serve to improve conditions related to the phenomenon. Therefore, your participation will demand time and commitment on your part because it will be through our work together that we seek to answer the research questions driving the study. The research questions are below:

1. How are the implicit beliefs that teachers who work in schools co-located in juvenile justice settings hold about intelligence expressed when a teacher discusses the quality of their relationships with students?

2. How do teachers who work in schools co-located in juvenile justice settings understand the effects of making explicit their implicit beliefs about intelligence on their relationships with students?

      A component of this study is to conduct a series of confidential 45 minute interviews with teachers who work in a school co-located in a juvenile justice residential treatment setting serving adolescent males. Another component includes an observation of you in your classroom. You have been selected because I believe that you are deeply

115

dedicated to refining your craft as a teacher and that you are willing to take calculated risks in service of that growth as a professional.

I am seeking your permission to both observe your teaching and interview you and your co-teacher several times over the course of six weeks at a time and location that is most convenient for the two of you. The interviews will consist of open ended questions that will allow us to explore your how the implicit beliefs you hold about intelligence influence your behaviors and the relationships you form with your students. The interviews will be recorded and transcribed to facilitate analysis of the data. You will receive a stipend of $200.00 for participation in this study.

There are minimal risks to your involvement in this study. However, as the Director of Education, I recognize that I have influence over your employment and, as such, you may have reasonable concerns about how your choice to participate and/or participation in the study may influence your employment. As such, unless you authorize me to do so, I assure you that I will not share any information about what you say or do as a participant in this study with your supervisor or for performance evaluation purposes, except in the event that I am legally obliged to do so, as in the case of suspected abuse or neglect. Additionally, unless you explicitly authorize me to share your identity, it and the data we collect attributed to you, will remain anonymous. I will also strive to keep our work together confidential, however, because of the small number of participants, there is some risk that you may be identified as a participant in the study. I will ask that you and any other participants agree to keep the participation of others in the study anonymous unless all parties agree to allow their participation to be public knowledge.

All information regarding this study will be stored at a non-public location in a locked filing cabinet or if in electronic form be password protected. No prejudice will be shown, whether or not you agree to participate in the study. Your participation is completely voluntary. If at any time you wish to discontinue your participation, you may do so without any penalty. Further, you have the right to review material prior to the final oral exam or other publication.

If you would like more information before you decide to grant permission, please email me at wbclift@yahoo.com or call me at (413) 210-2264. Additionally, you may contact my Chairperson, Dr. Sharon Rallis, Dwight W. Allen Distinguished Professor,

College of Education, by email sharonr@educ.umass.edu or phone at 413- 545-1056 or the Associate Dean for Academic Affairs, Dr. Linda L. Griffin, by email lgriffin@educ.umass.edu or phone at 413-545-6985, if you have additional questions.

If you feel you need no further information, please complete the information below indicating your decision to allow me to schedule our first interview for the purpose of carrying out this research. The form may be scanned and emailed to wbclift@yahoo.com or mailed to Woody Clift, 32 Aldrich St. Belchertown, MA. using the envelope and stamp provided. I will provide you with a copy of this letter and retain the original for my files. Once I have received your approval, I will coordinate a visit date and location that are convenient for you. Thank you for your attention and consideration.

Sincerely,

Woodbury Clift

_____

○ I give my permission for Woodbury Clift to interview and observe me for purposes associated with a doctoral study approved by the University of Massachusetts College Review Board.

_____   _____

(participant signature)   (date)

_____   _____

(witness signature)   (date)

■ Carol S. Dweck

Mind-Sets
and
Equitable Education

Much talk about equity in education is about bricks and mortar—about having equal facilities and equal resources. Those factors, although extremely important, are relatively easy to quantify. What may be harder to capture are the beliefs that administrators, teachers, and students hold—beliefs that can have a striking impact on students' achievement.

In my research, I have identified two sets of beliefs that people can have about students' intelligence (and that students can have about their own intelligence). They may have a fixed mind-set, in which they believe that intelligence is a static trait: some students are smart and some are not, and that's that. Or they may have a growth mind-set, in which they believe that intelligence can be developed by various means—for example, through effort and instruction. A growth mind-set doesn't imply that everyone is the same or that anyone could be Einstein, but it does imply that everyone's intellectual ability can grow—and that even Einstein wasn't Einstein before he put in years of passionate, relentless effort.
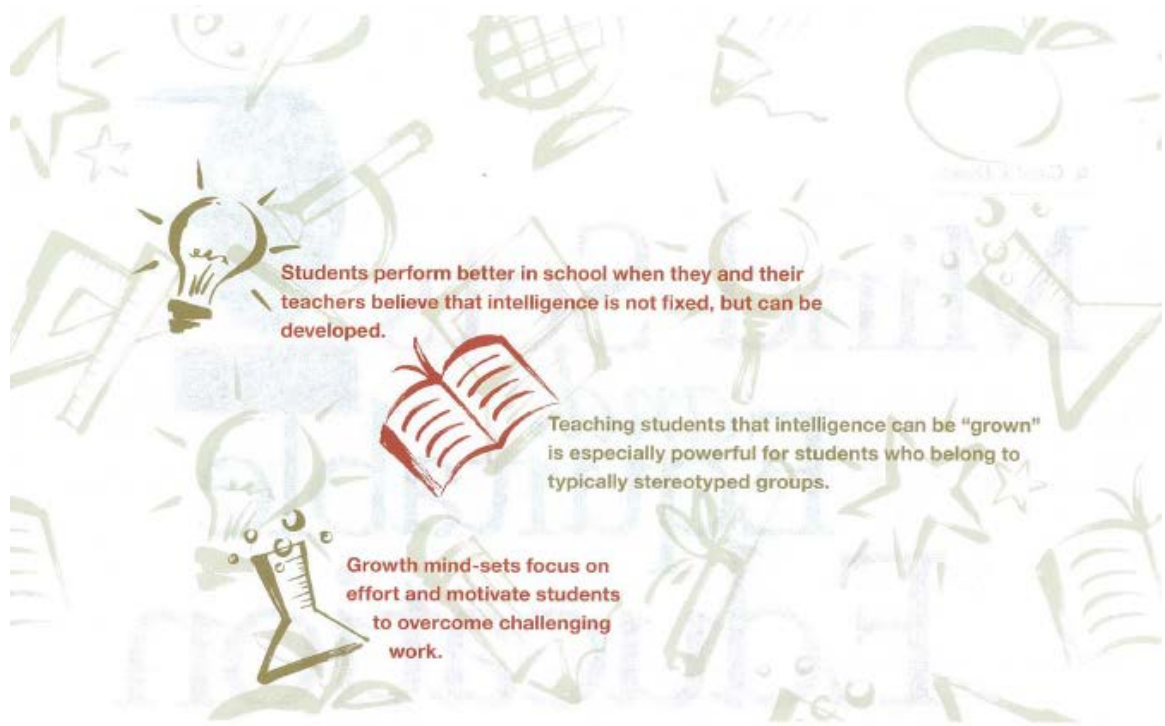
Recent research has shown that students' mind-sets have a direct influence on their grades and that teaching students to have a growth mind-set raises their grades and achievement test scores significantly (Blackwell, Trzesniewski, & Dweck, 2007; Good, Aronson, & Inzlicht, 2003). In addition, studies demonstrate that having a growth mind-set is especially important for students who are laboring under a negative stereotype about their abilities, such as Black or Latino students or girls in mathematics or science classes (Blackwell

et al., 2007; Good et al., 2003; Aronson, Fried, & Good, 2002). Adopting a growth mind-set helps those students remain engaged and achieve well, even in the face of stereotypes.

Students' Mind-Sets

To see the effect of mind-sets, my collaborators, Lisa Blackwell and Kali Trzesniewski, and I followed several hundred students in New York City during their difficult transition to seventh grade. We measured their mind-sets at the beginning of the school year and monitored their grades over the next two years to see how they had coped with the challenge. Despite their differing mind-sets, students entered seventh grade with similar mathematics achievement, but their grades jumped apart in their first term and continued to diverge over the next two years. The students with the growth mind-set (those who believed that intelligence could be developed) significantly outperformed their classmates who held a fixed mind-set. Why did this happen?

Because they believed that their intellect could be developed, students with a growth mind-set focused on learning, believed in effort, and were resilient in the face of setbacks. Students with

Students perform better in school when they and their teachers believe that intelligence is not fixed, but can be developed.

Teaching students that intelligence can be "grown" is especially powerful for students who belong to typically stereotyped groups.

Growth mind-sets focus on effort and motivate students to overcome challenging work.

a fixed mind-set, however, worried more about looking smart and not making mistakes, thought that needing to make an effort to learn meant that their intelligence was deficient, and became discouraged or defensive in the face of setbacks because they believed that setbacks reflected limitations in their intelligence. After receiving a poor grade on a test, they said that they would consider cheating on the next test. In other words, their logic was that if you don't have ability, you have to find another way to succeed. It is no wonder that having a growth mind-set, with its emphasis on hard work in the service of learning, led to higher grades than having a fixed mind-set, with all of the worries and defenses that deflect students from applying themselves.

On the basis of those findings, we designed a workshop to teach students a growth mind-set. We took a group of seventh graders who were earning declining mathematics grades. Half of them attended eight sessions of a workshop that taught them great study skills. This was the control group. The other half attended eight sessions of a workshop that taught both study skills and training in the growth mind-set. These students learned that their brain was like a muscle: the

more they used it, the stronger it became. They also learned that every time they stretched themselves to learn something new, their brain formed new connections and that over time they could become smarter.

Students were galvanized by the idea that the growth of their minds was under their own control. We will never forget one boy who had always cut up with his friends. Upon hearing the growth mind-set message, he chased his friends away, looked up at us, and asked with great emotion, "You mean I don't have to be dumb?"

We found that the students who had gotten training in study skills alone continued to show declining grades. They did not gain the motivation to put their skills into practice. But the students in the growth mind-set workshop showed a marked improvement in their grades. And teachers noticed the difference too. Although the teachers did not know which students had attended which workshop, they singled out three times as many students from the growth mind-set group as from the control group for having shown clear changes in their motivation to learn—and they wrote extensively about the changes they saw in homework, class attention, study habits, and grades.

Other researchers, too, were finding that teaching a growth mind-set raised achievement test scores, as well as students' investment in and enjoyment of school (Aronson et al., 2002; Good et al., 2003). All of those findings made us eager to reach more students. How could we bottle the growth mind-set and disseminate it more widely? For this purpose, we developed a software program called

119

Messages That Promote a Growth Mind-Set

- We believe in your potential and are committed to helping everyone get smarter.
- We value (and praise) taking on challenges, exerting effort, and surmounting obstacles more than we value (and praise) "natural" talent and easy success.
- Working hard to learn new things makes you smarter—it makes your brain grow new connections.
- School is not a place that judges you. It is a place where people help your brain grow new connections.

Brainology (www.brainology.us) to teach students about their brains and the things they can do to make them work better. Students perform all kinds of experiments to see how stretching themselves to learn makes neurons in their brains form the new connections that make them smarter.

We tested Brainology in 20 New York City schools and virtually every student (anonymously) reported changing his or her ideas about learning and study habits. Most exciting, many reported using the image of their neurons making new connections to motivate themselves in school, saying that they pictured their neurons forming new connections when they paid attention in class and that when tempted to not study, they rejected that idea on the grounds that new connections would not be formed.

Educators' Mind-Sets

Rheinberg (as cited in Dweck, 2007), a researcher in Germany, measured teachers' mind-sets at the beginning of the school year. Some teachers believed that students had fixed intelligence and that they, as educators, had no influence on their students' basic intellectual capabilities. Other teachers believed that they could mold and en-hance their students' intellectual skills. Rheinberg then monitored the students' achievement over the school year. He found that when teachers had a fixed mind-set, the students who had entered their class as low achievers left as low achievers at the end of the year. When teachers had a growth mind-set, however, many of the students who had started the year as low achievers moved up and became moderate or even high achievers. Teachers with a growth mind-set don't just mouth the be-lief that every student can learn; they are commit-ted to finding a way to make that happen.

People with a growth mind-set don't put people in categories and expect them to stay there, but people with a fixed mind-set do. They

not only believe in fixed traits, but they also believe that they can quickly and accurately judge those traits. This means that once they have decided that someone is or is not capable, they are not very open to new information to the contrary. And they may not mentor people who they have decided are not capable.

When teachers decide that certain students are not capable (or when principals decide that certain teachers are not capable), they may not take steps to help them develop their potential. In a recent study, we took people who had a fixed or growth mind-set and we asked them to respond to a seventh-grade student who had received a poor grade on the first mathematics test of the year. Those who had a fixed mind-set comforted the student and told the student that not everyone could be good in mathematics.

In sharp contrast, those who had a growth mind-set said that they knew that the student could do better, encouraged the student to try harder, and gave the student specific suggestions for study and learning strategies. For the educator with a fixed mind-set, learning is the students' responsibility. If students don't have what it takes, so be it. But for the educator in a growth mind-set, learning is a col-laboration in which the teacher has great responsibility.

It is essential for educators to communicate that they hold a growth mind-set. Recently, we studied college sports teams. At the beginning of the year, we asked athletes to tell us how much they thought their coaches believed success came from natural talent and how much they thought their coaches believed success came from practice and hard work. The more that athletes thought their coaches believed in hard work over natural talent, the better the athletes did that year. Students know what educators value—they pick up their messages and act on them.

In fact, adults are always sending messages that shape students' mind-sets. For more than a decade, my collaborators and I have studied the effects of praising students' intelligence as opposed to praising their effort (Mueller & Dweck, 1998). When adults praise students' intelligence after a student performs well, they send a fixed mind-set message: you're intelligent and that's what I value in you. When adults praise effort (or strategies), however, they send a growth mind-set message: you can build your abilities through effort.

What happens when students have been praised for their intel-ligence or their effort and then they encounter difficulty? The dif-ferences are remarkable. Those who are praised for intelligence lose their confidence and motivation, their performance plummets, and they are ashamed of their difficulty (almost 40% of them lie about their score). But those who are praised for effort remain undaunted and their performance continues to improve. In fact, many of them enjoy the challenge.

Mind-Set and Stereotyping

Teaching a growth mind-set seems to decrease or even close achieve-ment gaps. When Black and Latino students adopt a growth mind-

120

set, their grades and achievement test scores look more similar to those of their non-stereotyped peers. When female students adopt a growth mind-set, their grades and achievement test scores in mathematics become similar to those of their male classmates. In these studies, every group seemed to benefit from holding a growth mind-set, but the stereotyped groups gained the most (Aronson et al., 2002; Blackwell et al., 2007; Good et al., 2003).

This makes sense. A negative stereotype is a fixed mind-set belief that certain abilities are inherent and that your group doesn't have them. If negatively stereotyped students have a fixed mind-set and find themselves struggling, that stereotype may haunt and discourage them. But if stereotyped students have a growth mind-set—even if they grant that their group may have underperformed historically—they believe that through their effort and the support of educators they can develop their abilities. In that case, students may expect to struggle and not experience difficulty as insurmountable.

Teachers and administrators should send messages that intelligence is fluid, and they need to hear such messages too. They need to keep growing, especially in these challenging and changing times. Thus, they, too, need permission to learn—the freedom to stretch themselves, make mistakes, and try again. Only in growth mind-set cultures, where teachers and administrators are encouraged to fulfill their potential, will they be able to help their students fulfill *their* potential in schools that are free of bias. **PL**.

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Carol S. Dweck *is the Lewis and Virginia Eaton Professor of Psychology at Stanford University. She has recently won the Klingenstein Award for Leadership in Education, the Ann Brown Award for contributions to developmental psychology, the Donald Campbell Award in social psychology, and the E. L. Thorndike Career Achievement Award in educational psychology. She is the author of* Mindset: The New Psychology of Success *(2007, Ballantine Books).*

121

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