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A Qualitative Investigation of Fixed Versus Growth Mindsets of Third and Fourth Grade Students

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by

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Abstract

The purpose of this study was to explore individual mindsets of elementary students and determine the extent to which mindsets reflect fixed or growth perspectives. During this qualitative study, individual interviews were conducted with third and fourth grade students, including ESL (English Second Language) students, middle class students as well poverty stricken students, special education students, and gifted students that attend South Heights Elementary. The findings report the mindsets of fixed or growth perspectives on perseverance through failures and personal grit. Conclusions were drawn based on the findings gathered to determine a correlation between students' mindsets and their involvement with a consistent, supportive adult as well as their current socioeconomic status.

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Chapter I

INTRODUCTION

Statement of the Problem

Could your way of thinking determine your destiny? Educators face many challenges attempting to grow the minds of the future. Children attend our public schools daily with unforeseen challenges for which they bear no responsibility in creating. The children's way of thinking may be a counteractive art of their education. The purpose of this study was to explore individual mindsets of elementary students and determine the extent to which mindsets reflected fixed or growth perspectives.

Significance of the Problem

The significance of the problem of why students are not achieving is astronomical. Intrinsic motivation plays a significant role in determining success rates. Having a growth mindset, versus a fixed mindset, could potentially derail the success of lower socioeconomic, at risk, and the "average" student failing academically.

The concept of a growth mindset was developed by psychologist Carol Dweck and popularized in her book, *Mindset: The New Psychology of Success* (2007). A mindset, according to Dweck, is a self-perception that people hold about themselves. An individual believing that they are either intelligent or unintelligent is a simple example of a mindset. People may also have a mindset related their personal or professional lives— "I'm a good teacher" or "I'm a bad parent," for example. People can be aware or unaware of their mindsets, according to Dweck, but they can have profound effect on learning achievement, skill acquisition, personal relationships, professional success, and many other dimensions of life (Growth Mindset, 2013).

Dweck's educational work centers on the distinction between fixed and growth mindsets. According to Dweck,

> in a fixed mindset, people believe their basic qualities, like their intelligence or talent, are simply fixed traits. They spend their time documenting their intelligence or talent instead of developing them. They also believe that talent alone creates success—without effort. (2007, p. 1)

Dweck's research suggested that students who have adopted a fixed mindset believe that they are either smart or dumb, and there is no way to change this. A result may be that they learn less than they could or learn at a slower rate, while also shying away from challenges (Growth Mindset, 2013). Dweck (2015) found that students' mindsets—how they perceive their abilities—played a key role in their motivation and achievement, and she found that if educators changed students' mindsets, educators could boost student achievement. More precisely, students who believed their intelligence could be developed (a growth mindset) outperformed those who believed their intelligence was fixed (a fixed mindset). And when students learned through a structured program that they could "grow their brains" and increase their intellectual abilities, they did better. Dweck also found that having children focus on the process that leads to learning (like hard work or trying new strategies) could foster a growth mindset and its benefits (Dweck, 2015).

Finally, Dweck's findings also suggests that when students with fixed mindsets fail at something, as they inevitably will, they tend to tell themselves they cannot or will not be able to do it. For example, "I just can't learn Algebra". Students with fixed mindsets may also make excuses to rationalize the failure; "I would have passed the test if I had had more time to study" (Growth Mindset, 2013). This is what students across the country are facing; however, students

of poverty stricken homes are more susceptible to developing a fixed mindset. At the extremes, students from the lowest-income families were twice as likely to endorse a fixed mindset as students from the top-income families and schools (Dweck, 2006).

Alternatively,

> In a growth mindset, people believe that their most basic abilities can be developed through dedication and hard work—brains and talent are just the starting point. This view creates a love of learning and a resilience that is essential for great accomplishment. (Dweck, 2006, p. 1)

Students who embrace growth mindsets—the belief that they can learn more or become smarter if they work hard and persevere—may learn more, learn it more quickly, and view challenges and failures as opportunities to improve their learning and skills (Growth Mindset, 2013). This mindset is embedded in instruction within the classroom culture, the home environment, and the community around the individual. The ability to change a student's outlook on challenges and failures is essential.

For educators whose mission is to help each young person under their care to develop to the fullest of their potential, the phenomenon of a dynamic and changeable brain – which health can, at least to some extent, be cultivated and nurtured – reinforces an intuitive understanding that schools can and do make a difference and that they may represent brain health centers (Daggett & Nussbaum, 2008). A school culture that facilitates positive socialization within a safe, secure, and caring learning environment can provide opportunities for to see the value of participation in physical activity and a healthful lifestyle. This, in turn, helps to engage and stretch every student in active, rigorous, and relevant learning that flexes mental muscles and nurtures retention, understanding, and achievement (Daggett & Nussbaum, 2008).

Dweck's (2006b) delineation between fixed and growth mindsets has potentially far-reaching implications for schools and teachers, since the ways in which students think about learning, intelligence, and their own abilities can have a significant effect on learning progress and academic improvement. If teachers encourage students to believe that they can learn more and become smarter if they work hard and practice, Dweck's (2006b) findings suggest, it is more likely that students will in fact learn more, and learn it faster and more thoroughly, than if they believe that learning is determined by how intelligent or unintelligent they are. Dweck's work has also shown that a growth mindset can be intentionally taught to students. Teachers might, for example, intentionally praise student effort and perseverance instead of ascribing learning achievements to innate qualities or talents—e.g., giving feedback such as "You must have worked very hard," rather than "You are so smart" (Growth Mindset, 2013).

Calls for the Study

Calls for the study were due to concern that Duckworth and Seligman (2005) gave that indicated student self-discipline (or self-monitoring and perseverance) was a better predictor of academic performance than an Intelligence Quotient (IQ). Duckworth and Seligman (2005) determined that self-discipline was a stronger predictor of success than a student's IQ score. This was due to the fact that it predicted fewer absences from school, more time spent studying, and less time watching television. According to Howard (2015), the students in today's society have a harder time disconnecting from stresses and an increase in being distracted by technology, namely- Twitter, Facebook, and text messages. This makes it difficult to focus on academics, which strongly affects the success within the classroom and grades. The tenacity for students to overcome the distractions and focus is rooted within their mindset (Growth Mindset, 2013).

In a study conducted by Dr. Larry Rosen, a psychology professor at California State University, a survey was administered to high school students and asked how often they switch from studying to doing something related to technology such as checking email, Facebook, texting or watching TV. Dr. Rosen proposed the research question, "What Does Research Show about Studying While Distracted by Technology?" Students were observed studying for a 15 minute period where they were told to "study something important." He found that students generally started to lose focus after about three minutes. On average "students only spent about 65 percent of the observation period actually studying." That is not exactly what one might consider "quality" studying time. Across all grade levels, 80% of students reported that they switch between studying and technology somewhat often to very often. This constant switch in focus was labeled "Continuous Partial Attention," meaning that most of the time, students are not focused on studying but rather are moving their attention back and forth between studying and various forms of technology (Howard, 2015).

Calls for the Study as Relevant to the Demographics

The following information is relevant to the study according to the specifics demographics of the research. According to the U.S. Bureau of Labor Statistics (2012), the unemployment rate was 8.3 percent as of January 2012. U.S. Census data revealed that from 2009 to 2010, the total number of children under age 18 living in poverty increased to 16.4 million from 15.5 million. Child poverty rose from 20.7 percent in 2009, to 22 percent in 2010, and at this time it was the highest it has ever been since 1993.

The poverty rates of children are particularly high among some racial and ethnic groups. The poverty rate for Black children was 38.2 percent; 32.3 percent for Hispanic children; 17

percent for non-Hispanic White children; and 13 percent for Asian children (U.S. Bureau of Labor Statistics, 2012).

Through their psychological research, Brooks-Gunn and Duncan (1997) concluded that residing in poverty has a large impact of less than positive effects on both physical and mental well-being of America's students. Poverty can affect students within their environments; this includes their home, school, and in their neighborhoods, and throughout their community. Children living in poverty have a higher rate of absenteeism, or leave school all together because they are more likely to have to work or care for family members. Also, 16 to 24-years-old students who come from low income families are seven times more likely to drop out than those from families with higher incomes. Forty percent of children living in poverty are not prepared for primary schooling and children that live below the poverty line are 1.3 times more likely to have developmental delays or learning disabilities than those who do not live in poverty. By the end of the 4th grade, African-American, Hispanic and low-income students are already 2 years behind grade level. By the time they reach the 12th grade they are 4 years behind. Astonishingly, less than 30% of students in the bottom quarter of incomes enroll in a 4-year school and among that group – less than 50% graduate (Do Something, 2013).

The Purpose of the Study

The purpose of this study was to explore individual mindsets of elementary students and determine the extent to which mindsets reflect fixed or growth perspectives. The majority of students who comprise the sample frame for the current study come from households that reflect lower socioeconomic statuses. A child born in the bottom 20% of family incomes is ten times more likely to stay there than a child in the top 20% is of falling to the bottom 20% (Greenstone, Looney, Patashnik, & Yu, 2013). However, according to Dweck (2006), the mindset of a child is

within their control. Through this study, I sought to learn more about how students make connections between mindset, achievement, and social well-being. Within this study I conducted individual interviews with students of a low socioeconomic demographic with questions that reveal information about their intrinsic motivation, perseverance, and social and emotional wellness.

In Chapter 2, I share a literature review addressing social and emotional wellness in lower socioeconomic demographics as well as the research on growth mindset and grit. I will also review literature on the strategies and programs that have been implemented across the United States that have not been successful in assisting poverty stricken students succeed.

Chapter II

LITERATURE REVIEW

Introduction

The following is a literature review of growth mindset versus a fixed mindset within lower socioeconomic demographics as well as the research on grit. Literature will be addressed on the strategies and programs that have been implemented across the United States that have not been successful in assisting poverty stricken students succeed to their potential. Census data will be shared to reveal the statistics of lower socioeconomic students in regards to success within the school setting. Home environments are also addressed as a factor related to students' growth or fixed mindset.

Growth Mindset

Growth mindset is substantial to the current study due to the near certainty that it retrains the brain to positively motivate itself. Dweck (2006b) found one of the most basic beliefs individuals carry about themselves, has to do with how individuals view and inhabit what they consider to be their personality. A fixed mindset assumes that our character, intelligence, and creative ability are static givens which we cannot change in any meaningful way, and success is the affirmation of that inherent intelligence, an assessment of how those givens measure up against an equally fixed standard; striving for success and avoiding failure at all costs become a way of maintaining the sense of being smart or skilled (Dweck, 2006b). Believing that a person's skills are carved in stone - the fixed mindset - creates an urgency to prove oneself over and over (Dweck, 2006b, p. 6). This creates a drive that consumes people; it builds a goal of proving themselves- in the classroom, in careers, and in relationships. Every situation becomes a call for confirmation of intelligence, personality, or character. This type of fixed mindset in

people causes every situation to be evaluated: Will I succeed or fail? Will I look smart or dumb? Will I feel like a winner or a loser? (Dweck, 2006). With a fixed mindset people believe that the traits they have are simply the "hand you were dealt" and they have to live with that. Continuing this analogy, Dweck (2006b) stated that people with a fixed mindset are always trying to convince themselves and others that they have a royal flush when they are secretly worried that they have a pair of tens.

Dweck (2006b) stated that a growth mindset, on the other hand, thrives on challenge and sees failure not as evidence of unintelligence but as a heartening springboard for growth and for stretching our existing abilities. Growth mindset is based on the belief that one's basic qualities are things they can cultivate through their efforts (Dweck, 2006b). Although people may differ in every which way- in initial talents and aptitudes, interests, or temperaments- everyone can still change and grow through application and experience. Out of these two mindsets, which individuals manifest from a very early age, springs a great deal of individual's behavior, relationship with success and failure in both professional and personal contexts, and ultimately the capacity for happiness (Dweck, 2006b). According to Achor (2012), when people work with a positive mind-set, performance on nearly every level—productivity, creativity, engagement—improves. Yet happiness is perhaps the most misunderstood driver of performance. Because success is a moving target—as soon as an individual hits their target, they raise it again—the happiness that results from success is fleeting. In fact, it works the other way around: People who cultivate a positive mind-set perform better in the face of challenge. Achor (2012) called this the "happiness advantage"—every business outcome shows improvement when the brain is positive.

Achor (2012) stated that a common misconception is that genetics, environment, or a combination of the two determines how happy people are. To be sure, both factors have an impact. But one's general sense of well-being is surprisingly malleable. The habits that are cultivated, the way people interact with coworkers/peers, how individuals think about stress—all these can be managed to increase personal happiness and chances of success (Achor, 2012).

A fixed mindset is reflective of someone who sees their abilities as pre-determined and unchanging (Dweck, 2006b). Someone exhibiting a growth mindset would see themselves as developing their abilities over time. Someone with a fixed mindset would look at their performance and say something along the lines of "I'm smart so I got the answer right"; or in the case of failure, "I'm stupid, so I will never understand this." When approached with a growth mindset, failure looks more like -well, I did not complete that successfully; how can I work on improving before I try it again? (Shives, 2014).

Dweck (2016a) stated that scholars are deeply gratified when their ideas catch on. And they are even more gratified when their ideas make a difference — improving motivation, innovation, or productivity, for example. But popularity has a price: people sometimes distort ideas, and therefore fail to reap their benefits. This started to happen with Dweck's research on growth versus fixed mindsets.

Individuals who believe their talents can be developed - through hard work, good strategies, and input from others - have a growth mindset according to Dweck (2006a). Growth mindset individuals tend to achieve more than those with a more fixed mindset - those who believe their talents are innate gifts. This is because they worry less about looking smart and they put more energy into learning. When entire companies embrace a growth mindset, their employees report feeling far more empowered and committed; they also receive far greater

organizational support for collaboration and innovation. In contrast, people at primarily fixed-mindset companies report more of only one thing: cheating and deception among employees, presumably to gain an advantage in the talent race (Dweck, 2006b).

Misconceptions of growth mindset. Growth mindset has become a buzzword in many major companies, even working its way into their mission statements. Dweck inquired about these companies only to find that peoples understanding of the idea is limited. According to Dweck, Walton, and Cohen (2014) there are three common misconceptions.

The first misconception is: I already have it, and I always have. People often confuse a growth mindset with being flexible or open-minded or with having a positive outlook — qualities they believe they have simply always had. Dweck and colleagues (2014) called this a false growth mindset. Everyone is actually a mixture of fixed and growth mindsets, and that mixture continually evolves with experience (Dweck et al., 2014). A pure growth mindset does not exist, which we have to acknowledge in order to attain the benefits that are sought (Dweck, 2016). The act of obtaining a completely pure growth mindset is unreasonable. No one person can fully believe that with grit and experience they can reach the final goal in all areas of life. For example, no matter how hard an uncoordinated, below average height person tries and practices, the odds are that they will never slam dunk a basketball on an average NBA height goal. There are certain situation and faucets of life that remain logical and fixed, even when the person is thought to have a growth mindset.

The second misconception is: a growth mindset is just about praising and rewarding effort. This is not true for students in schools, and it is not true for employees in organizations. In both settings, outcomes matter. Unproductive effort is never a good thing. It is critical to reward not just effort but learning and progress, and to emphasize the processes that yield these

benefits, such as seeking help from others, trying new strategies, and capitalizing on setbacks to move forward effectively.

The third misconception is: just espouse a growth mindset, and good things will happen. Dweck et al. (2014) stated that mission statements are wonderful things. One cannot argue with lofty values like growth, empowerment, or innovation. However, occasionally the lofty values just amount to lip service (Dweck et al., 2014). Organizations that embody a growth mindset encourage appropriate risk-taking, knowing that some risks will not work out. These organization leaders reward employees for important and useful lessons learned, even if a project does not meet its original goals. The leaders support collaboration across organizational boundaries rather than competition among employees or units. The organizational leaders are committed to the growth of every member, not just in words but in deeds, such as broadly available development and advancement opportunities. And these such leaders continually reinforce growth mindset values with concrete policies (Dweck et al., 2014).

Dweck et al. (2014) stated that even if these misconceptions were to be corrected, it is still not easy to attain a growth mindset. Challenges are faced, criticism is received, or we may fare poorly when compared to others; these can easily cause insecurities or defensiveness. Insecurities and defensiveness inhibit growth mindsets. To remain in a growth zone, Dweck et al. (2014) stated that an individual must identify and work through challenges such as those listed above. Many managers and executives have benefited from learning to recognize when their fixed-mindset persona shows up and what it says to make them feel threatened or defensive (Dweck et al., 2014).

Where do mindsets come from? Every word and action can send a message. According to Dweck (2006b), these words tell children- or students, or athletes- how to think

about themselves. A word or action can be a fixed mindset message that says that they have permanent traits and those traits are being judged. Or it can be a growth mindset message that says the children are a developing person and the adult is interested in their development (Dweck, 2006b, p. 173). Education has a big influence on mindsets. If a teacher or parent promotes a growth mindset over a fixed mindset – such as by encouraging learning and improvement rather than praising talent and discouraging failure – this will have a lasting influence on how the kids view themselves (Vermeer, 2012).

Dweck (2006b) notes that parents, coaches, and teachers send mindset messages every day. These messages are meant to build success. Here are a few examples that may sound familiar:

You learned that so quickly! You are so smart!

Look at that drawing. He is the next Picasso.

You are so brilliant, you got an A without even studying!

These messages sound encouraging and supportive but listen more closely. The children may hear:

If I don't learn something quickly, I'm not smart.

I shouldn't try drawing anything hard or they'll see that I am not the next Picasso.

I'd better quit studying or they won't think I am brilliant.

Dweck (2006a) stated that praising children's intelligence and talent harms their motivation and their performance. Children love praise, however Dweck (2006a) argued that this boost only lasts for the moment. The moment the children hit a difficult time, their confidence goes out the window and their motivation hits rock bottom (Dweck, 2006b, p. 175).

If success means their smart, then failure means they are dumb. That is the fixed mindset (Dweck, 2006b).

Vermeer (2012) conducted a study, whereby students, mostly early adolescents, were given ten difficult problems from an IQ test. Some students were praised for their ability – "That's a really good score. You must be smart at this." – while others were praised for their efforts – "That's a really good score. You must have worked really hard." Right after the praise, the two groups began to differ in striking ways. The ability-praised students rejected a follow-up challenging task that they could learn from. The effort-praised students did not. When the students were told by researchers that these tests were going to be performed at other schools, the students were asked to write their thoughts about the test, as well as their test score, for other students. The ability-praised students lied about their test results almost 40% of the time! So telling children they are smart, in the end, made them feel dumber and act dumber, but claim they were smarter (Vermeer, 2012). Ordinary children were turned into liars, simply by telling them they were smart! Clearly that is not what we (teachers, parents, friends) intend when we praise kids as "gifted" or "talented", but nonetheless that is what happens (Vermeer, 2012).

Dweck (2006a) did not imply that children should not be praised. Praise that implies that we, as parents, coaches, or teachers, are proud of them for their intelligence or talent rather than the work they put in is the wrong kind of praise (Dweck, 2006a). The praise should be centered around the growth oriented process (Dweck, 2006a). Questions should be asked in a way that admires and appreciates the individual's efforts and choices. An example would be as follows. A student really studied for a test and their improvement shows it. They read the material over several times, they outlined it, and they tested themselves on it. It really worked!

Messages about Failure. According to Dweck (2006), failure is such a more delicate matter than praising students for success. Children may already have a tendency to feel discouraged and vulnerable. Dweck (2006a) gave examples of how to reassure a student when failure presents itself. Dweck (2006a) compared the possible growth mindset responses with the fixed mindset response options. First, an adult, whether that be a coach, teacher, or parent, should never say that they feel that the student was the best. This gives them no recipe to recover or to improve after failure. Second, blaming others for the loss or failure only teaches the student to blame others instead of looking at his or her possible deficiencies. Third, always place value on what the student did accomplish and how much they have improved instead of saying that the activity or sport did not really matter anyways. This just devalues what the student was trying to do well. Fourth, do not place emphasis on the ability of the student. According to Dweck (2006b), this is the most dangerous message. This implies that ability automatically takes the student where they want to go. All of the examples given so far are fixed mindset responses. The final response is an example of growth mindset. According to Dweck (2006b), the adult should tell the student that they did not deserve to win, score high, or whatever the failure may be. This seems hardhearted under the circumstances and of course the wording should be sensitive to the student's feelings. Dweck (2006b) gave an example of a father's explanation after his daughter did not win her first gymnastics meet.

> Elizabeth, I know how you feel. It is so disappointing to have your hopes up and to perform your best but not to win. But you know, you have not really earned it yet. There were many girls there who have been in gymnastics longer than you and who have worked a lot harder than you. If this is something you really want, then it is something you will really have to work for. (p. 181)

Dweck (2006b) stated that this situation not only spoke truth from the father but also taught Elizabeth how to learn from her failures and do what is needed to succeed in the future. The father sympathized deeply with his daughter's disappointment, but he did not give her a phony boost that would only lead to further disappointment.

According to Hochanadel and Finamore (2015), in an academic environment that teaches grit and fosters growth, students can learn to persist. Students who value effort are said to have a growth mindset. They perceive ability as a malleable skill (Hochanadel & Finamore, 2015). Those who believe intelligence is fixed and cannot be changed exert less effort to succeed. Vandewalle (2012) found, "When one holds a fixed mindset, that initial information becomes an anchor that impedes the likelihood of engaging in counterfactual thinking" (p 304). It also seems that goal orientation alone is not enough to predict learning. Students who persevere when faced with challenges and adversity seem to have what Angela Duckworth calls grit (2007).

Grit

Duckworth, Peterson, Matthews and Kelly (2007) established the term grit, as it is used in this study, and defined it as perseverance and passion for long-term goals. The researchers suggested that grit may be as important as other measures of intelligence to high achievement and success in life. Duckworth et al. (2007) explained that grit emphasizes stamina, which distinguishes it from other related personality factors such as self-control, in its specification of consistent goals and interests.

A gritty person shares the achievement aspect of conscientiousness, but grit requires sustained effort and interest in goals, notwithstanding failure, lack of progress and feedback, and difficulty. "The gritty individual approaches achievement as a marathon; his or her advantage is stamina" (Duckworth et al., 2007, p. 1088).

Duckworth and Seligman's (2005) original hypothesis was that grit was essential to high achievement. They interviewed many professionals within the investment banking, painting, journalism, academia, medicine, and law fields. Duckworth probed about what quality distinguishes star performers in their respective fields. The individuals referred to grit just as much as they did talent. Furthermore, many that Duckworth interviewed seemed surprised by the high achievements of peers who did not at first seem as gifted as others but whose sustained commitment to their ambitions was impressive. Likewise, a high number noted with awe that extremely gifted peers did not end up in more successful tiers of their professional field due to a lack of grit.

Duckworth et al. (2007) noted that the gritty individuals approach achievement as a marathon; their advantage is stamina. Whereas disappointment or boredom signals to others that it is time to change trajectory and cut losses, the gritty individual stays the course. Individuals high in need for achievement pursue goals that are neither too easy nor too hard, individuals high in grit deliberately set for themselves extremely long-term objectives and do not swerve from them— even in the absence of positive feedback (Duckworth et al., 2007). Grit, in contrast, can entail dedication to either implicitly or explicitly rewarding goals. Further, Duckworth et al. (2007) saw no theoretical reason why individuals would lack awareness of their level of grit.

Duckworth et al. (2007) established the construct of grit and pioneered the first study of the effect of grit on the academic performance of college students. As part of their broader study of grit in people of all ages, Duckworth et al. (2007) surveyed undergraduate psychology students at the University of Pennsylvania. Because the researchers were interested in predicting performance among high achievers, the researchers tested whether grit was associated with cumulative grade point averages (GPA) among undergraduates at an elite university. Further,

using Scholastic Assessment Tests (SAT) scores as a measure of general mental ability, Duckworth et al. (2007) tested whether grit would be orthogonal to intelligence and, therefore, explain variance in GPA over and beyond that explained by intelligence.

The researchers found that gritty students outperformed less gritty students. Grit scores were positively and significantly associated with GPAs. Grit was also negatively and significantly associated with lower SAT scores, suggesting that "smarter students may be slightly less gritty than their peers" (Duckworth et al., 2007, p. 1093). The researchers concluded that educators should encourage students to work with intensity and stamina in order to be successful. Duckworth (2007) stated that grit is not just having resilience in the face of failure, but also having deep commitments that a person remains loyal to over many years.

A study conducted comparing grit and work engagement by Suzuki, Tamesue, Asahi, and Ishikawa (2015) showed results that Japanese people are likely to be grittiest if they seek happiness through meaning, while U.S. people tend to be grittiest if they seek happiness through engagement. The results also showed that gritty people are likely to engage positively in their work. Students need to find a meaning as to what they are learning and/or grit and happiness through engagement in their work/studies.

Self-control involves the ability to resist temptation and control impulses in the short-term, whereas grit emphasizes perseverance in the pursuit of long-term goals (Dweck et al., 2014). Because high levels of achievement require sustained effort on difficult tasks, grit will be an important predictor of remaining in and succeeding in school (Dweck et al., 2014). Although grit is unrelated to IQ, grit predicts educational attainment, adolescents' and college students' GPA, retention among military cadets in demanding classes at West Point, and children's performance in the National Spelling Bee—accomplishments that all require increased study

time (Dweck et al., 2014). Academic success requires more than ability, and requires the application of ability and the growth of ability through sustained hard work. Mindsets, goals, and self-regulatory skills—non-cognitive factors that contribute to academic tenacity—play key roles in this enterprise (Dweck et al., 2014).

Jaeger, Freeman, Whalen, and Payne (2010) studied grit in engineering students at Northeastern University. The researchers asked two main research questions: 1) Is grit correlated to student characteristics, such as gender, academic level and SAT scores? 2) Does grit develop in students over time when grit scores of freshmen are compared to upperclassmen? The results of their study showed significant differences in the short grit survey (Grit-S) score only by gender, with female students possessing more grit than males. There was no significant mean difference in grit score by different academic levels, and SAT scores were not correlated with higher grit levels. Based on their findings, Jaeger et al. (2010) concluded that additional research on grit and student success can inform educators of strategies that foster and increase grittiness in students to contribute to their overall success.

Numerous published self-report measures were researched to give perspective on grit as it relates to success. The Perseverance Scale for Children (Lufi & Cohen, 1987), included 40 items and was tested on 322 Israeli children aged 7-13. The internal reliability of the scale (Cronbach alpha) was .66, and the test-retest reliability after 6 months was .77. The scale differentiated active gymnasts from non-gymnasts as well as persistent gymnasts from dropout gymnasts. It also stated the significance of persistence in everyday life.

A strong inclination toward an activity that people like, that they find important, and in which they invest time and energy is a passion. The Passion Scale developed by Vallerand and colleagues (2003) assessed two types of passion for activities: a harmonious and an obsessive

passion. Obsessive passion (OP) refers to a controlled internalization of an activity in one's identity that creates an internal pressure to engage in the activity that the person likes. Harmonious passion (HP) refers to an autonomous internalization that leads individuals to choose to engage in the activity that they like. HP promotes healthy adaptation whereas OP thwarts it by causing negative affect and rigid persistence (Vallerand et al., 2003).

The purpose of the Passion Scale was to study the processes which likely lead to the development of passion. Commonalities were found in relation to grit. The three studies in the Passion Scale used correlational and short-term longitudinal designs with varied populations ranging from beginners to experts reveal that identification with the activity, activity specialization, parents' activity valuation, and autonomy support predict the development of passion. The results showed that children and teenagers whose environment supports their autonomy are more likely to develop a harmonious passion than an obsessive one. Conversely, children and teenagers who highly value activity specialization, who rely heavily on their activity for self-definition, and whose parents highly value the activity are more likely to develop an obsessive passion (Vallerand et al., 2003).

Comparatively, the Career Advancement Ambition Scale (DesRochers & Dahir, 2000) refers to attitudes toward one's profession. Cassidy and Lynn (1989) developed a need for an achievement questionnaire that examines work ethic and desire for excellence. Work ethic and the desire for excellence are consonant with the construct of grit, but also addresses several other qualities such as the need for money, domination of others, superiority over competitors, and social status (Duckworth & Peterson, 2007).

Grit also differs from need for achievement, described by McClelland (1961) as a drive to complete manageable goals that allow for immediate feedback on performance. Whereas

individuals high in need for achievement pursue goals that are neither too easy nor too hard, individuals high in grit deliberately set for themselves extremely long-term objectives and do not swerve from them— even in the absence of positive feedback. A second important distinction is that need for achievement is by definition a non-conscious drive for implicitly rewarding activities and, therefore, impossible to measure using self-report methods (McClelland, Koestner, & Weinberger, 1992). Grit, in contrast, can entail dedication to either implicitly or explicitly rewarding goals. Further, Duckworth and Peterson (2007) saw no theoretical reason why individuals would lack awareness of their level of grit.

When non-cognitive factors are in place, like what the students need to think of themselves through self-talk or ways they adjust to learn through their learning style, they will look—and be—motivated. These non-cognitive factors describe what Dweck et al. (2014) called motivation, and fostering these mindsets and self-regulation strategies is what psychological researchers typically mean by motivating students. This is quite different than adults trying to motivate students through money and other rewards (Dweck et al., 2014). The type of motivation that students carry with them in the form of mindsets and skills is emphasized as well as the kind that educators promote by fostering these mindsets and skills.

Brown (2012) and Dweck (2006b) saw the critical roles of struggle and failure in the development of skills and character. Dweck (2006b) approached this topic from a more logical point of view, while Brown (2012) went to the heart of why we might cling fast to the self-defeating fixed mind set: our deep-seated fear of being vulnerable. Brown (2012) stated that vulnerability is the core of shame and fear and our struggle for worthiness but it is also the birthplace of joy and creativity, of belonging, and of love. Brown's research showed that we learned to protect ourselves from vulnerability - from being hurt, diminished, or disappointed -

by putting on emotional armor and acting invulnerable when we were children. Brown (2012) said that vulnerability is not a weakness; everyone is vulnerable, everyone needs support from friends and family. Trust and vulnerability go hand in hand.

Brown (2012) stated if individuals believe to be perfect, they can avoid feelings of shame, judgment and blame. These feelings impact how individuals look at and behave towards others. According to Dweck (2006a), this behavior of feeling perfect, feeling stupid, or how people spend their time, documenting their intelligence or talent, instead of developing as a person ultimately reflects a fixed mindset.

Hochanadel and Finamore (2015) stated that growth mindset can be taught to faculty, students and parents. The focus of growth mindset is on changing a student's thinking that their intelligence level is not a fixed number and can change. Grit in education is how one can achieve long-term goals by overcoming obstacles and challenges. Duckworth and Dweck collaborated, conducting studies to determine how a fixed belief that failure is permanent could prevent students from academic success. Duckworth concluded that having a "growth mindset" could develop grit. Identifying explanatory style using the Grit assessment is one way to determine where students can put their efforts to learn to persist in the face of academic challenges. Faculty should not focus on making just good grades, but how to challenge that person and teach them to create solutions. In addition, teaching a growth mindset and grit facilitates long-term goals and how to achieve those goals (Hochanadel & Finamore, 2015).

Academic Tenacity

The non-cognitive factors that promote long-term learning and achievement can be brought together under the label academic tenacity (Dweck et al., 2014). At its most basic level, academic tenacity is about working hard, and working smart, for a long time. More specifically,

academic tenacity is about the mindsets and skills that allow students to look beyond short-term concerns to longer-term or higher-order goals, and withstand challenges and setbacks to persevere toward these goals. Short-term concerns might involve worries about looking less than average or being excluded in school. Students might involve an unwillingness or inability to put off immediate gratification in favor of longer-term achievements. Any of these factors may make students less engaged with school, less likely to take advantage of opportunities to learn, and less equipped to meet challenges or setbacks, according to Dweck and colleagues (2014).

Academically tenacious students exhibit certain characteristics and behaviors. These students believe that they belong in school academically and socially. School is part of who they are and it is seen as a route to future goals, such as providing for their families or contributing to their community or society (Dweck et al., 2014). Academically tenacious students are engaged in learning, view effort positively, and can forego immediate pleasures for the sake of schoolwork. For example, they seek challenging tasks that will help them learn new things, rather than tasks in their comfort zone that require little effort, but also provide little opportunity to learn. Academically tenacious students are not derailed by difficulty, be it intellectual or social. Academically tenacious students see a setback as an opportunity for learning or a problem to be solved rather than as a humiliation, a condemnation of their ability or worth, a symbol of future failures, or a confirmation that they do not belong. This is true in the case of a specific assignment as well as with their studies in general. Academically tenacious students know how to remain engaged over the long haul and how to deploy new strategies for moving forward effectively. Some students bring these mindsets and skills with them to school, but these mindsets and skills can also be taught (Dweck et al., 2014).

Self-control is an even stronger predictor of success than a student's IQ score (Duckworth & Seligman, 2005), as self-control predicted fewer absences from school, more time spent studying, and less time watching television. In an age in which children encounter more and more distractions—such as Facebook, Twitter, and text messages—the ability to turn off distractions to focus on a difficult academic task may become increasingly important for success in school and in life (Dweck et al., 2014). The inner drive to study for a test while eliminating the want to play video games or browse the internet instead, is self-control. All of a student's challenges require sustaining effort despite distraction, boredom, frustration, and the lure of more enjoyable but less productive alternatives to studying (Duckworth & Seligman, 2005).

Failure of NCLB to Address Student Outcomes

Researching past aspirations and attempts to change the outcome of student success as well as those students in a comparable demographic to the current study. What did not work is always key information. To know where to venture to next needs a starting point. Understanding what failed, and why, is essential information to gain perspective for next steps.

In an effort to research past attempts that were geared towards helping struggling students, I familiarized myself even more with the No Child Left Behind (NCLB) law. NCLB became law in 2002 as an update to the Elementary and Secondary Education Act (ESEA) of 1965 (Klein, 2015). NCLB, which grew out of concern that the American education system was no longer internationally competitive, significantly increased the federal role in holding schools responsible for the academic progress of all students. And it put a special focus on ensuring that states and schools boost the performance of certain groups of students, such as English-language learners, students in special education, and poor and minority children, whose achievement, on

average, trails their peers. States did not have to comply with the new requirements, but if they did not, they risked losing federal Title I money (Klein, 2015).

Phillips and Flashman (2007) studied the effects of the increased student and teacher accountability implemented by the NCLB. Some of the positive results on teacher qualifications due to the NCLB include an increase in teacher's experience, an increase in the likelihood the teacher is certified, and an increase in the number of teachers who hold advanced degrees (Phillips & Flashman, 2007). The negative results of NCLB on teacher qualifications include a reduction in teachers' academic skills and little or no change in the amount of professional development opportunities provided to teachers (Phillips & Flashman, 2007).

According to Klein (2015), under NCLB, states must test students in reading and math in grades three through eight and once in high school. And they must report the results, for both the student population as a whole and for particular subgroups of students, including English-learners and students in special education, racial minorities, and children from low-income families. States were required to bring all students to the "proficient level" on state tests by the 2013-14 school year, although each state got to decide, individually, just what "proficiency" should look like, and which tests to use. In early 2015, the deadline had passed, but no states had gotten 100 percent of their students over the proficiency bar (Klein, 2015).

According to Klein (2015), major portions of NCLB have proven problematic, particularly as the law has matured without any congressional update or reauthorization. For instance, it is unclear what the two main remedies for low-performing schools did to improve student achievement. In many cases, students did not take advantage of the opportunity to transfer to another school, or get free tutoring. The students were unknowledgeable about the services available or they had no desire to pursue them. States and districts also had difficulty

screening tutors for quality. Some districts, including those in Chicago, successfully petitioned to offer their own tutoring services. States also generally shied away from employing dramatic school turnaround strategies for perennially failing schools (Klein, 2015).

Klein (2015) said that NCLB has also been criticized for growing the federal footprint in K-12 education, and for relying too heavily on standardized tests. And others said its emphasis on math and reading tests has narrowed the curriculum, forcing schools to spend less time on subjects that are not explicitly tested, like social studies, foreign language, and the arts. Education advocates also claimed the law has been underfunded. The original legislation called for major increases in education spending to offset the cost of reaching the ambitious goals of NCLB for student achievement, but federal spending never reached the lofty levels outlined in the law. By fiscal year 2007, for example, annual funding for the main NCLB program, Title I, was supposed to rise to $25 billion. It never got there. In fiscal year 2015, for example, Title I received about $14.5 billion (Klein, 2015).

According to Garcia and Thornton (2015), NCLB has failed. Now there is a chance to fix the law by refocusing on the proper federal role: equal opportunity. To do that, legislation must change the way it thinks about accountability.

Under NCLB, accountability has hinged entirely on standardized test scores, a single number that has been used to determine whether students graduate or teachers keep their jobs. Garcia and Thornton (2015) said the problem is that, a single test score is like a blinking check engine light on the dashboard. This light can tell us something is wrong with our car, but not how to fix what is wrong (Garcia & Thornton, 2015). This is also true of test scores. The scores can tell educators that there is a problem but it does not indicate how to fix it.

According to Garcia and Thornton (2015), what is needed instead is a whole dashboard of indicators that monitor better measures of success for the whole child — a critical, creative mind, a healthy body and an ethical character. And indicators of each student's opportunities to learn — what programs, services and resources are available (Garcia & Thornton, 2015). What is the background of the child? What supports do they need above and beyond the typical blue collar family? NCLB did not look at the students holistically, and this is a prime reason for failure to improve all students academically.

According to Garcia and Thornton (2015), success should be measured throughout the system — preschool to high school — but a standardized test tells educators and researchers so little. What is wanted to know is which students are succeeding in Advanced Placement and honors programs, where they earn college credit in high school. That is measureable. Also, which students have certified, experienced teachers, and access to the support professionals the students need, such as tutors, librarians, school nurses, and counselors. Researchers, teachers, and policy makers want to know which students have access to arts and athletic programs. This group also wants to know which middle school students are succeeding in science, technology, engineering and math tracks that will get them into advanced high school courses, which will get these students accepted to a university. This is also measureable. Finally, researchers, teachers, and policy makers want the data broken down by demographic groups, so it can ensure that all types of students have access to these resources.

Educational Opportunity

Real equal opportunity, of course, is not a "one size fits all" proposition. It means providing every child whatever he or she needs to learn, whether it is tutoring and mentoring, counseling or other services. If a student comes to school hungry or sick, can we really say that

she has an opportunity to learn? Of course not — and we must acknowledge this by seeing each student as a whole human being with individual needs (Garcia & Thornton, 2015).

Garcia and Thornton (2015) stated that educators and policy makers must also recognized that the misuse of test scores has had unintended negative consequences, especially for students at high-poverty schools. In service to high-stakes "test and punish" threats, schools with the most limited resources have been most likely to cut back on history, art, music and physical education, simply because they are not covered on standardized tests. Those are the schools where test prep has robbed students of quality one-on-one time with teachers. Teachers have told us that students in their schools have had recess cut back in order to clear more time for test prep, despite abundant research showing that exercise improves learning. The test was driving the instruction not student success.

Coleman (1968) suggested that equal educational opportunity may be interpreted in terms of equal educational outcomes. According to Howe (1989), Coleman's suggestions have taken some philosophical beating due to the fact of punitive conceptual relationships that underpin what Howe calls outcome entail choices. Howe (1989) argued that an educational outcome results from the existence of an opportunity plus the chance to exercise it. These choices freely vary among individuals; therefore, educational outcomes vary as choices to exercise educational outcomes. Howe (1989) challenged the view that conceptual relationships among opportunities, choices and outcomes serve in general to undermine the outcomes-based conceptions of equal educational opportunity. When applied to adults this view of conceptual relationships is plausible. However, Howe (1989) stated that when applied to children, the view faces serious difficulties. Children's capacity and responsibility for choice making are limited, the sense in which they enjoy opportunities are attenuated (Howe, 1989). Because the locus for choices and

the responsibility for outcomes that follow accordingly falls on the surrogates- the parents and the state- mandatory opportunities for children, such that equalizing certain educational outcomes is required in the name of equal educational opportunity (Howe, 1989).

Poverty

According to Capra (2009), because teacher quality is essential to student achievement, the revolving door of teachers in poverty-stricken areas exacerbates the inferior education and also discourages pursuit of higher education. Motivating the lower socioeconomic population of students means being involved in every aspect of their well-being and, in many cases, monitoring them closely inside and outside of the classroom (Capra, 2009). This approach is quite different from what these students will experience if they attend college. Becoming a successful college student requires discipline, autonomy, responsibility, as well as minimally developed communication and social skills. Capra (2009) stated that due to the demands of higher education, students that are graduating from disadvantaged public schools are not prepared for college- and generally prove this reality by failing their classes and dropping out within the first year.

Poverty does discriminate: 24.7 percent of the African American population and 20.7 percent of the Hispanic population are below the poverty line compared to 10.2 percent for Caucasians. Although real median income of Black households rose between 2006 and 2007, these households still claimed the lowest median income in 2007. American poverty continues its discrimination by affecting single women at far greater numbers (Capra, 2009). According to Capra (2009), households headed by women are more likely to experience poverty than households headed by men. This statistic is, of course, indicative of the fact that women earn approximately 78 percent of what men earn.

Parental and Adult Factors

Parents who are poor are likely to be less healthy, both emotionally and physically, than those who are not poor (Adler et al., 1993). Parental irritability and depressive symptoms are associated with more conflictual interactions with adolescents, leading to less satisfactory emotional, social, and cognitive development (Conger, Ge, Elder, Jr., Lorenz, & Simons, 1994). Additionally, poor parental mental health is associated with impaired parent-child interactions and less provision of learning experiences in the home (Conger, Conger, & Elder, 1997). Family income level was a predictor of school completion for all subgroups as well (Halpern-Felscher et al., 1997).

Through multiple studies, the mother's educational level was a predictor of school completion for all middle adolescents participating in the studies (Halpern-Felscher et al., 1997). Peters and Mullis (1997) found that parental education had a significant effect on academic achievement. The mother's education level had a 20% higher affect than the father's education level on the academic outcomes of adolescents (Peters & Mullis, 1997). Results on student achievement is believed to be due to the effect that the mother's education has on the specific ways of talking, playing, interacting, and reading with young children (Smith, Brooks-Gunn & Klebanov, 1997). A child born to a high school dropout has one in 17 chance of earning a bachelor's degree (Greenstone et al., 2013). Poverty consumes a child and their family. The socioeconomic status determines the experiences that a child and their family have as well as the nutrition they are able to put in their bodies. The restraints of these two factors alone can cause a child to begin early childhood education already behind other same age peers. Student achievement, particularly for at-risk students, is affected by the values and beliefs of the family and community (Shields, 1991).

Toxic stress is defined by psychologists and developmental neurobiologists to describe the kinds of experiences, particularly in childhood, which can affect brain architecture and brain chemistry. The experiences are typically harmful for an individual during development. Toxic stress response can occur when a child experiences major, frequent, and/or prolonged adversity- such as recurrent physical or emotional abuse, chronic neglect, caregiver substance abuse or mental illness, repeated exposure to violence, and/or the accumulated burdens of family economic hardship- without adequate adult support or, worse, where the adult is the source of both support and fear (Shonkoff, 2017). The National Scientific Council on the Developing Child (2014) stated that supportive and responsive relationships with caring adults as early in life as possible can prevent or reverse the damaging effects of a toxic stress response. The National Scientific Council on the Developing Child (2014) also stated that there is a strong connection between adverse early life experiences and a wide range of costly societal problems, such as lower school achievement, criminal behavior, reduced economic productivity, and poor health.

No matter what form of hardship or threats may have been experienced, the single most common research finding is that children who end up doing well have had at least one stable and responsive relationship with a parent, caregiver, teacher, or other adult. These relationships provide the support, scaffolding, and protection that both buffer children from developmental disruptions and help build key capabilities- such as the ability to plan, regulate behavior, and adapt to changing circumstances- that enable them to respond to adversity and thrive. In other words, positive experiences, supportive relationships, and adaptive skills build the foundation of what is commonly known as resilience (National Scientific Council on the Developing Child, 2015).

Parents, other caregivers, and teachers play a critical, protective role by providing positive learning experiences, buffering young children from the stresses of hardship or threat, and scaffolding the early development of adaptive skills that are building blocks of resilience (Shonkoff, 2017). Children develop within in an environment of relationships that begins in the family but also involves other adults who play important roles in their lives. These relationships affect virtually all aspects of development- intellectual, social, emotional, physical, and behavioral (Dawson & Fischer, 1994; Reis, Collins, & Berscheid, 2000).

If the adult's responses are unreliable, inappropriate, or simply absent, the architecture of the child's developing brain may be disrupted, and later learning, behavior, and health may be impaired. Young children and parents both can initiate and respond in this ongoing process (Pianta, Nimetz, & Bennett, 1997; Shonkoff & Phillips, 2000). Three fundamental shifts in thinking that informs most current policies and programs focused on young children according to Shonkoff (2017) are:

- Early experiences affect lifelong physical and mental health, not just learning.
- Healthy brain development requires protection from excessive stress, not just enrichment in a stimulating environment.
- Achieving breakthrough outcomes for children experiencing significant adversity requires that we support the adults who care for them to transform their own lives.

When children have positive early relationship experiences, they develop emotionally secure attachments with their caregivers that can buffer stress at various levels of intensity. If stress is severe and persistent, it becomes toxic and the emotional buffers provided by secure relationships are crucially important (Center on the Developing Child, 2007). When children have to cope with tolerable (less intense and temporary) stress, emotionally secure relationships

help children regulate their responses and, once the stress subsides, refocus on exploration and learning. What has been learned from brain research in the last 30 years is that the "tender loving care" advocated by early childhood educators for many decades is not only the kind way to treat children but a crucial part of early brain development (Lally & Mangione, 2017).

According to Price-Mitchell (2014) teens are influenced by a variety of adults and peers. Role models can be instrumental in developing career aspirations, educational goals, and consumer behavior. These role models can also motivate youth toward unhealthy behaviors, like bullying, cheating in school, or substance abuse. The more we, as adults, understand how and why role models influence teens, the better we can support young people in their journeys toward adulthood.

Behavior is learned from the environment through the process of observational learning (McLeod, 2016). In society, children are surrounded by many influential models, such as parents within the family, characters on children's TV, friends within their peer group and teachers at school. These models provide examples of behavior to observe and imitate, e.g., masculine and feminine, pro and anti-social etc. Children pay attention to some of these people (models) and encode their behavior. At a later time they may imitate (i.e., copy) the behavior they have observed. The children may do this regardless of whether the behavior is 'gender appropriate' or not (McLeod, 2016). As these experiences accumulate through adolescence, teens decide what socially acceptable behavior is and what is not. Teens also learn strategies for achieving their goals (Price-Mitchell, 2014).

School Readiness

School readiness reflects a child's ability to succeed both academically and socially in a school setting. It also requires physical well-being and appropriate motor development,

emotional health and a positive approach to new experiences, age-appropriate social knowledge and competence, age-appropriate language skills, and age-appropriate general knowledge and cognitive skills. It is well documented that poverty decreases a child's readiness for school through aspects of health, home life, schooling and neighborhoods (Ferguson, Bovaird & Mueller, 2007).

According to Ferguson et al. (2007), six poverty-related factors are known to impact child development in general and school readiness in particular. The six factors are the incidence of poverty, the depth of poverty, the duration of poverty, the timing of poverty (e.g., age of child), community characteristics (e.g., concentration of poverty and crime in the surrounding neighborhoods, and school characteristics) and the impact poverty has on the child's social network (e.g., parents, relatives and neighbors). A child's home has a particularly strong impact on school readiness. Children from low-income families often do not receive the stimulation and do not learn the social skills required to prepare them for school. Typical problems are parental inconsistency (with regard to daily routines and parenting), frequent changes of primary caregivers, lack of supervision and poor role modeling. Very often, the parents of these children also lack support. Chaos and inconsistency becomes the norm for these children at risk.

Sum and Fogg (1991) found that poor students are ranked in the 19th percentile on assessments while students from a mid-upper income family are ranked in the 66th percentile on assessments. In data from the Early Childhood Longitudinal Study (ECLS) measuring kindergarten students' achievement on the ECLS reading achievement assessment, low-income students scored at about the 30th percentile, middle income students scored at about the 45th percentile, and upper-income students' scores at about the 70th percentile (Rowan, Cohen, & Raudenbush, 2004). Students from low income families consistently, regardless of ethnicity or

race, score well below average (Bergeson, 2006). The extent of poverty has a significant effect. Children from very poor households, income below 50% of the poverty line scored 7 to 12 points lower than children from near-poor households while children in poor households, income between 50 to 100% of poverty line, scored 4 to 7 points lower (Smith et al., 1997).

The evidence reviewed in *The Effects of Poverty in Children* (1997), supported the conclusion that family income can substantially influence child and adolescent well-being both cognitively and emotionally. Currently, schools are not in a position to equalize this gap, which presents a concern. According to Ferguson et al. (2007), these findings have shown that socioeconomic disadvantage and other risk factors that are associated with poverty (eg, lower parental education and high family stress) have a negative effect on cognitive development and academic achievement, smaller effects on behavior and inconsistent effects on socioemotional outcomes.

Smith and colleagues (1997) used data from the Children of the National Longitudinal Survey of Youth (NLSY) and the Infant Health and Development Program (IHDP) that compared children in families with incomes less than half of the poverty threshold to children in families with incomes between 1.5 and twice the poverty threshold. The poorer children scored between 6 and 13 points lower on various standardized tests of IQ, verbal ability, and achievement. These differences are very large from an educational perspective and were present even after controlling for maternal age, marital status, education, and ethnicity. A 6- to 13-point difference might mean, for example, the difference between being placed in a special education class or not. Children in families with incomes closer to, but still below, the poverty line also did worse than children in higher-income families, but the differences were smaller. The smallest differences appeared for the earliest (age two) measure of cognitive ability; however, the sizes of

the effects were similar for children from three to eight. These findings suggested that the effects of poverty on children's cognitive development occur early (Smith et al., 1997). Compounding this problem is that the standards movement of the 1990s and No Child Left Behind have forced high poverty schools to concentrate on literacy and math to meet testing requirements, while subjects like science and social studies are generally reduced to short vignettes that lack both content and critical thinking (Capra, 2009).

Living Conditions

Living in extreme and persistent poverty has particularly negative effects on academic achievement, psychosocial outcomes, and health. Poverty is linked with negative conditions such as substandard housing, homelessness, inadequate nutrition and food insecurity, inadequate child care, lack of access to health care, unsafe neighborhoods, and under resourced schools which adversely impact our nation's children. Poorer children and teens are also at greater risk for several negative outcomes such as poor academic achievement, school dropout, abuse and neglect, behavioral and socioemotional problems, physical health problems, and developmental delays. These effects are compounded by the barriers children and their families encounter when trying to access physical and mental health care. Economists estimate that child poverty costs an estimated $500 billion a year to the U.S. economy; reduces productivity and economic output by 1.3 percent of GDP; raises crime and increases health expenditure (Holzer, Schanzenbach, Duncan, & Ludwig, 2008).

According to the Effects of Poverty, Hunger and Homelessness on Children and Youth (2000), poverty has a particularly adverse effect on the academic outcomes of children, especially during early childhood. Chronic stress associated with living in poverty has been shown to adversely affect children's concentration and memory which may impact their ability

to learn. The National Center for Education Statistics (2010) reported that in 2008, the dropout rate of students living in low-income families was about four and one-half times greater than the rate of children from higher-income families (8.7 percent versus 2.0 percent). The academic achievement gap for poorer youth was particularly pronounced for low-income African American and Hispanic children compared with their more affluent White peers. Under resourced schools in poorer communities struggle to meet the learning needs of their students and aid them in fulfilling their potential, as well as, inadequate education contributes to the cycle of poverty by making it more difficult for low-income children to lift themselves and future generations out of poverty (Effects of Poverty, Hunger and Homelessness on Children and Youth, 2000).

Children living in poverty are also at greater risk of behavioral and emotional problems. Some behavioral problems may include impulsiveness, difficulty getting along with peers, aggression, attention-deficit/hyperactivity disorder (ADHD) and conduct disorder. Some emotional problems may include feelings of anxiety, depression and low self-esteem. Poverty and economic hardship is particularly difficult for parents who may experience chronic stress, depression, marital distress and exhibit harsher parenting behaviors. These are all linked to poor social and emotional outcomes for children. Unsafe neighborhoods may expose low-income children to violence which can cause a number of psychosocial difficulties. Violence exposure can also predict future violent behavior in youth which places them at greater risk of injury and mortality and entry into the juvenile justice system (Effects of Poverty, Hunger and Homelessness on Children and Youth, 2000).

According to the Effects of Poverty, Hunger and Homelessness on Children and Youth (2000), children and teens living in poorer communities are at an increased risk for a wide range

of physical health problems including low birth weight and poor nutrition. Poor nutrition can be manifested in different ways such as inadequate food which can lead to food insecurity/hunger, lack of access to healthy foods and areas for play or sports which can lead to childhood overweight or obesity, chronic conditions such as asthma, anemia and pneumonia as well as risky behaviors such as smoking or engaging in early sexual activity. Children in poverty also have a higher risk of exposure to environmental contaminants, e.g., lead paint and toxic waste dumps and exposure to violence in their communities which can lead to trauma, injury, disability and mortality (Effects of Poverty, Hunger and Homelessness on Children and Youth, 2000).

However, even if a person is not categorized as being below the poverty line yet is still being hindered by financial struggles, they should not be discounted in the noted struggles. For example, parents from disadvantaged backgrounds were not only more likely to have their babies born prematurely, but these prematurely born children were also disproportionately at higher risk for school failure than children with a similar neonatal record from higher income families (Ferguson et al., 2007).

Another possible pathway through which family income operates has to do with the neighborhoods in which poor families reside. Poor parents are constrained in their choice of neighborhoods and schools. Low income may lead to residence in extremely poor neighborhoods characterized by social disorganization (crime, many unemployed adults, neighbors not monitoring the behavior of adolescents) and few resources for child development (playgrounds, child care, health care facilities, parks, after-school programs) (Wilson, 1987).

The affluence of neighborhoods is associated with child and adolescent outcomes (intelligence test scores at ages 3 and 5 and high school graduation rates by age 20) over and above family poverty. Neighborhood residence also seems to be associated with parenting

practices, over and above family income and education. Neighborhood effects on intelligence scores are in part mediated by the learning (Klebanov, Brooks-Gunn, & Duncan, 1994).

The School's Role

Longitudinal studies carried out in the United States have been crucial in demonstrating some of the key factors in producing and maintaining poor achievement. Lisa Blackwell of Columbia University and Carol Dweck and Kali Trzesniewski of Stanford University worked with low income African American, Hispanic, and South Asian students in an urban school setting to examine the students' mindsets about intelligence as they made the challenging transition to junior high school (7th grade). Students' mindsets were assessed at the beginning of 7th grade by asking them to agree or disagree with a series of statements, such as, "You have a certain amount of intelligence, and you really cannot do much to change it". Although students with more of a fixed mindset and students with more of a growth mindset entered junior high school with identical past achievement test scores, their math grades differed by the end of their first term and diverged increasingly over the next two years. Students with a growth mindset showed continuous improvement; those with the fixed mindset did not (Dweck et al., 2014).

Carol Dweck, Lisa Blackwell, and Kali Trzesniewski's findings have gone well beyond a model that blames schools or a student's background for academic failure. Comparisons of the academic growth curves of students during the school year and over the summer showed that much of the achievement gap between low and high socioeconomic status students could be related to their out-of-school environment (families and communities). This result strongly supports the notion that schools play a crucial compensatory role; however, it also shows the importance of continued support for disadvantaged students outside of the school environment among their families and within their communities (Ferguson et al., 2007).

Dweck's (2006b) delineation between fixed and growth mindsets has potentially far-reaching implications for schools and teachers, since the ways in which students think about learning, intelligence, and their own abilities can have a significant effect on learning progress and academic improvement. If teachers encourage students to believe that they can learn more and become smarter if they work hard and practice, Dweck (2006b) suggested, it is more likely that students will in fact learn more, and learn it faster and more thoroughly, than if they believe that learning is determined by how intelligent or unintelligent they are. Her work has also shown that a growth mindset can be intentionally taught to students. Teachers might, for example, intentionally praise student effort and perseverance instead of ascribing learning achievements to innate qualities or talents—e.g., giving feedback such as, you must have worked very hard, rather than, you are so smart (Dweck 2006b).

Daggett and Nussbaum (2008) stated that they think society confuses obedient students with motivated students, and many of the children who are struggling learners have not had the life experience outside of school to prepare them for school. This aspect works against them when they walk into school. This reiterates the lack of a wide vocabulary and social skills in lower socioeconomic students (Smith et al., 1997).

Daggett and Nussbaum (2008) went on to say that they created the terms rigor and relevance to accompany relationships. Relevance makes rigor possible. The problem is that what is relevant to one child is not relevant to the next child, which is why the third R -- which is relationships -- is so important. Educators need to know why their students are struggling. Educators must know what is causing the lack of success in order to make a movement to do what they need to change their teaching. It is also important for educators to know their

students. Educators need to know what is interesting to them, whether it is football, baseball or the arts.

One additional way to help close the achievement gap with struggling learners is through looping, which is not a practice that all schools do (DeWitt, 2012). Looping is when a teacher moves to the next grade level with his or her students from one year to the next. Representatives from the International Center for Leadership in Education (ICLE) travel around the country and work with schools, dramatic differences in the schools are seen where looping is a common practice. Students who loop with their teachers show a dramatic increase in achievement in the second year with that teacher. The teacher is more familiar with the student's home life, personality, quirks, socioeconomic status, academic status, and habits. The teacher is able to build a relationship with the students as well as their parents/guardian. It also helps deal with the summer slump that many students experience. In addition, students who loop with their teachers already have a relationship with them when they start the second year, so they are immediately engaged in the school year. The relationship piece is established that relates to success in not only lower socioeconomic students, but all students.

The role of schools in helping poverty stricken students is essentially finding the correct motivation and relationship. Building intrinsic motivation and grit. Ultimately, teachers must find ways to drive instruction around the area of each student's interest. What one teaches does not change but how one teaches should be focused on the interest and skills of each individual student. Successful teachers focus on student interests, learning styles, and aptitudes - not just the content they are covering (DeWitt, 2012).

Daggett and Nussbaum (2008) answered the question, what do school personnel and leaders have to do to change the climate in their buildings or districts to make sure that all

students are held to high expectations no matter the condition of their background? Their response is that the number one rule is no excuses. Secondly, school leaders should nurture their best teachers and reward them; do what is best for great teachers. School leaders must find out what they are doing right and spread it like confetti around their building; others will start to notice. It is imperative to coach the average teachers and have a blunt conversation with failing teachers. There is no profession that has had all of their practitioners successful. Education is not an exception to that but many school leaders pretend that all of their teachers are successful (DeWitt, 2012). Some teachers may not have the ability to eliminate excuses or the ability to see beyond the trials and hurdles of lower socioeconomic hardships. They do not see the potential of great in every student; these teachers lack the passion of educating the whole child. If school leaders do these three rules within their buildings and districts they will have the opportunity to move their entire teaching staff forward and the problem of high expectations for all students will be solved.

Teachers need to place an emphasis on sparking a desire to learn or motivation by not only helping to restore the child's self-image but also by encouraging students to see the demands and rewards of schooling. Children will work hard, for intrinsic rewards, only if they have a very good reason (Ciaccio, 2000). Ciaccio (2000) also discussed the technique of total positive response to student misbehavior as a method of developing relationships with students and a method of effective classroom management. Every incidence of student misbehavior is dealt with in a positive versus negative manner in an effort to disarm students that may exhibit some of the most challenging behaviors. Total positive response involves the use of positive strategies to meet student needs, combined with caring and total acceptance. The challenge is to

find the positive in the negative. Ciaccio (2000) stated because at-risk students have egos that are often severely damaged, criticism can cause them to tune teachers and authority out.

According to Ferguson et al. (2007), both parenting style and parental involvement, inside and outside of the school environment, have an impact on a child's early development. Potential dropouts can be predicted as early as first grade and identified with accuracy by third grade (Sparks, 2013). Characteristics of parenting such as predictability of behavior, social responsiveness, verbal behavior, mutual attention and positive role modeling have been shown to have a positive effect on several aspects of child outcome. Ferguson et al. (2007) said that parental involvement, such as frequency of outings and problem-based play, creates greater intellectual stimulation and educational support for a child, and develops into increased school readiness.

According to Capra (2009), public schools must serve the poor with additional school-based clinics, low income housing subsidy initiatives to reduce mobility, expansion of early childhood education, drop-out intervention programs, and after school programs to avert dangerous time for children. Capra (2009) stated that the students should be educated on the causes and true statistics on poverty.

Programs that directly address poverty and its impact on education do work (Capra, 2009). Geoffrey Canada, a social activist and author, founded the Harlem Children's Zone in 1990. This ambitious project began as a one-block experiment, but rapidly spread to nearly 100 blocks as its success became apparent. The goal of the project is simple: fully support families devastated by poverty and create a culture that values education and positive behavior. The program begins with a baby college that targets early childhood and infant/toddler development (Capra, 2009). The Harlem Children's Zone continues through elementary and secondary school

by enriching the educational experience with highly qualified teachers, a diversified curriculum, individual mentors, and after school programs. Finally, students are guided through the college application process and because the expectation to attend college has been present since infancy, it becomes a natural process (Capra, 2009). These initiatives, if adequately supported, will increase the chances of a poor child remaining in school and attending college (Capra, 2009).

Hamre and Pianta (2005) identified 910 students in the first grade that were at risk for school failure. These children were identified at the ages 5-6 on the basis of demographic characteristics and the display of multiple functional (behavioral, attention, academic social) problems reported by their kindergarten teachers. By the end of first grade, at-risk students placed in first-grade classrooms offering strong instructional and emotional support had achievement scores and student – teacher relationships commensurate with their low-risk peers; at-risk students placed in less supportive classrooms had lower achievement and more conflict with teachers. These findings have implications for understanding the role that classroom experience may play in pathways to positive adaptation (Hamre & Pianta, 2005).

According to Hamre and Pianta (2005), at the intersection of areas of education and developmental science is the question of whether students' everyday instructional and social interactions with teachers in the classroom may themselves ameliorate the risk of school failure. If this were the case, focused efforts related to teacher training and support, curriculum implementation, and assessments of classroom settings could be used more strategically to counter the tendency toward poor outcomes for such children. Research on everyday classroom processes that may alter trajectories for students at risk has its foundations in the process – product research from the 1960s to 1980s that focused attention on observable teacher behaviors (Brophy & Good, 1986; Gage & Needels, 1989) and in developmentally informed theories of

schooling that focus attention on socioemotional, motivational (Connell & Wellborn, 1991; Deci & Ryan, 1985; Eccles, 1993; Wentzel, 2002) and instructional (Resnick, 1994; Stevenson & Lee, 1990) experiences in classrooms that trigger growth and change in competence.

Morrison and Connor (2002) argued that the effects of schooling on development have to be modeled at the level of specific forms of input and resource that are matched to specific child needs, abilities, and skills. Thus, according to Morrison and Connor (2002), it is not only necessary to conceptualize and measure the classroom setting (or school) in terms of specific aspects of the instructional or social environment, but also to gauge the effects of those experiences relative to how well they match the child's capacities and skill. In this view, school effects are predominantly in the form of interactions between specific inputs from the classroom and the characteristics of the child.

In recent large-scale observational studies of pre-k to elementary classrooms, two dimensions consistently emerge: instructional support and emotional support (National Institute of Child Health Human Development, Early Child Care Research Network, 2002; Pianta, La Paro, Payne, Cox, & Bradley, 2002; Pianta, La Paro, & Hamre, 2005). Interestingly, these two dimensions, to some extent, predict differentially children's social and academic outcomes, confirming theoretical views that various developmental needs of children may interact differentially with the qualities of school settings (Connell & Wellborn, 1991; Morrison & Connor, 2002). These two broad dimensions of everyday teacher – student classroom interactions-emotional and instructional support- with theoretical and empirical links to student development, can be a starting point for examining interactions with child and background characteristics, particularly attributes that place children at risk for school failure (Hamre & Pianta, 2005).

Conclusion

Connections between the literature on poverty, mindsets, grit, and academic tenacity within the school setting will serve as a foundation for the current study. With the supported knowledge of the negative impact of poverty on academic success, health, socioemotional statuses and the overall longevity of success, as well as, the positive impact of instilling a growth mindset with supportive adults, will serve as a basis for the desired results for the selected study population. Chapter 3 will provide a description of the selected setting. This description will be detailed along with how the study will be conducted. The questions and processes will be described as well as updated census data specifically for Henderson, KY and the population of students that will be involved in the study.

Chapter III

METHODOLOGY

The following is a demographic setting and description of South Heights Elementary School. This specified setting is in regards to the qualitative study on growth mindset versus a fixed mindset within lower socioeconomic demographics. Detailed census data is shared to reveal the statistics of lower socioeconomic students in regards to success within the school setting of South Heights Elementary in Henderson, KY.

The purpose of this study was to explore individual mindsets of elementary students and determine the extent to which mindsets reflect fixed or growth perspectives. The majority of the students in this study derive from low socioeconomic households and are not achieving due to multiple factors that are out of their control. However, the mindset of a child is within their control. This study was focused more towards the effect of having a growth mindset versus a fixed mindset on achievement and social well-being. Within this study I interviewed students of a low socioeconomic demographic with questions, within an individual interview setting, that revealed information about their intrinsic motivation, perseverance, and social and emotional wellness. The research questions, "How do individual mindsets, from a heterogeneous population within a low socioeconomic elementary school, effect a student's educational performance?" and "Are there connections, within subgroups, to predict a student's mindset?" were answered.

Why Qualitative Research?

The cyclical poverty status is a persistent problem and education is a strong predictor of that poverty status. According to Hoynes, Page, and Stevens (2006), among individuals living in families in which the head has less than a high school education, 31.3 percent are below the

poverty line, compared with just 9.6 percent of those whose head of household has at least a high school education. This is an argument for stepping into the school setting to study the current mindsets of students from all different socioeconomic statuses, especially ones from poverty stricken homes. This qualitative study gave me an inside look of the components of a mindset. Each individual student had their own story to contribute to the research of mindset which cannot be quantitated with numbers. Qualitative research lends itself to the social, intimate, and individualized approach.

Site Selection Justification

The study site is South Heights Elementary School in Henderson, KY. The selection for this site was relevant to me due to the demographics of the particular school (which will be described later in this paper) as well as by the request of the Superintendent of Henderson County Schools to determine the mindset of third and fourth graders attending school within a lower socioeconomic demographic setting and to possibly later compare to students attending a higher socioeconomic demographic school. South Heights Elementary has had tremendous growth in test scores over the past fifteen years with no change in the demographics; plus, the culture has a reputation for being uncommon. I also chose this site for the fact that she teaches at the school and has seen the struggles of poverty on her students yet their perseverance to succeed despite the hurdles. Determining the growth mindset versus the fixed mindset of these students would be valid for future studies to recreate the culture and learning strategies in similar schools.

History of Site Location's Test Scores

Based on the Kentucky Department of Education (2016), South Heights has made consistent progress in the Commonwealth Accountability Testing System (CATS). This test was administered before the year 2013. South Heights' growth chart starts with the baseline score

from the year 2000. In the year 2000, South Heights' school index score was 46.9. This score continuously grew, without decline, to 93.67 in the year 2011. In the year 2011-2012 the Kentucky Performance Rating for Educational Progress (K-PREP) was adopted.

According to the Department of Education (2016), beginning in the 2011-12 school year, and continuing in 2014-2015, Kentucky used the Kentucky Performance Rating for Educational Progress tests to assess students in grades 3 through 8 in reading and mathematics, 4 and 7 in science, 5 and 8 in social studies, 5, 6, 8, 10, and 11 in writing, and 4, 6, and 10 in language mechanics. The K-PREP is a standards-based test, which means it measures how well students are mastering specific skills defined for each grade by the state of Kentucky.

South Heights scored in the 62nd percentile in the state of Kentucky in 2012-2013 then jumped to the 99th percentile in 2013-2014 which categorized them a School of Distinction. According to GreatSchools.org, South Heights' K-PREP scores resulted in 64% of fourth graders score proficient or better in the area of language mechanics in 2014 and 74% score proficient or better in 2015. In the area of math, fourth graders scored 66% proficient or better in 2014 and 53% proficient or better in 2015. Reading scores for fourth graders in 2014 were 64% proficient or better and 2015 was 61% proficient or better. Science scores in 2014 for fourth graders were 70% proficient or better, there was no score listed for 2015.

Kentucky Performance Rating for Educational Progress (K-PREP) for fifth graders at South Heights Elementary in the past two years were just as impressive. GreatSchools.org reports 68% in 2014 and 47% in 2015 scored proficient or above in the area of math. In the area of reading, 63% in 2014 and 59% in 2015 scored proficient or above. In 2014 the fifth graders scored 85% proficient or above in the area of social studies and in 2015 they scored an astounding 91% proficient or above. Fifth graders in 2014 scored 39% proficient or above in the

area of writing and in 2015 they scored 50% proficient or above. South Heights continues to be at the top of the state in test scores and is currently named a Proficient School by the Department of Education. Distinguished cut scores are 72.8 for elementary in the state of Kentucky, South Heights scored a 72.3.

Demographics of the Selected Site

As of September 27, 2016, South Heights had a total membership of 572 students in kindergarten through fifth grade. South Heights was comprised of 64.3% white (not Hispanic), 16.6% African American, 8.4% Hispanic, 10.7% two or more races, and 0% American Indian, Asian, or Native Hawaiian students. There were 52.6% male students and 47.4% female students that attended South Heights Elementary. According to the Kentucky Department of Education (2016), South Heights had a total of 494 (86.4%) students that received free lunch and 18 (3.1%) students that received reduced lunch. The overall attendance rate at South Heights Elementary was 95% which was above the state average of 94.5%.

There were several programs at South Heights. These programs consist of English Language Learners (ELL), Special Education, the Homeless Program, and the Gifted and Talented Program. Within the school 19 (3.3%) students were taking part in the ELL program. This number was compared to the district as a whole serving ELL students with 121 (1.7%) students and the state of Kentucky with 24,707 (3.8%) students. The Special Education population within South Heights was 111 (19.4%) students compared to the district with 1,008 (12.4% and the state with 88,199 (13.5%). The Homeless Program served 62 (10.8%) students compared to the district with 359 (5.0%) and the state with 27,657 (4.2%). The Gifted and Talented program served 41 (7.2%) students compared to the district with 1,350 (18.8%) and the state of Kentucky with 104,516 (15.9%).

The community that South Heights is located in is made up of small houses, apartments, a drug and addiction recovery center for women, trailer parks, and community funded housing complexes. The number of students that had at least one parent involvement at a parent teacher conference was 358. The number of parent votes for School Council (SBDM) was 29 and the number of parents actually serving on the SBDM was 51. The number of volunteer hours that has been banked as of September 2016 was 3,399.

The effects of income and parental education on student test scores are very similar to their effects on years of schooling and likelihood of attending college. Grissmer, Looney, Patashnik, and Yu (2000) analyzed math and reading standardized test scores from the National Education Longitudinal Study (NELS), a nationally representative sample of approximately 25,000 8th graders begun in 1988. They found that the income variable had a statistically significant positive effect on both math and reading test scores. They also found that both mother and father's educational attainment had a positive and significant effect on math and reading test scores, with the greatest effect realized from having college educated parents (Borg, Borg, & Stranahan, 2012).

South Heights, as a school, felt like an outlier. However, it felt like it was approaching a metaphoric wall. Culture improvements and instructional strategy improvements help tremendously, but the need to build internal capacity of the students is essential. As a result of this study, hopefully the knowledge of the mindset of the students has assisted to continue the line of progression.

Criteria of Students Chosen

The students that were chosen to participate in this study were a random, heterogeneous sampling of South Heights' population. South Heights currently has four fourth grade

classrooms and four third grade classrooms. One third grade class and one fourth grade class were chosen to participate in this qualitative study. I chose these particular classes due to the heterogeneous mixture of students as well the collaboration relationship that I had with the lead teachers. The sampling size is approximately 10 students (5 in one class and 5 in the other), with a wide variety of ESL (English Second Language), special education, middle class, minority, poverty stricken students and students with 504 plans. These students were interviewed during their morning breakfast and arrival time. The chosen students did not miss instruction time and were allowed to eat breakfast during the interview. During this study there was a possibility that students would transfer into the selected classes and/or move out due to the high transient rate of the site selected.

Data Collection Process

The data collection process took a series of months preceded by a submitted document to the Institutional Review Board (IRB). Individual interviews were set up with students that included a series of questions assessing their theory of intelligence, their support system within their home, beliefs about effort, goals, and their responses to failure. One researcher collected the responses through note taking and a recording device during the beginning of class time, when breakfast was being eaten, with prior permission by the teachers and parents.

Data was collected on both nonverbal and verbal responses. The data that was gathered was analyzed to draw comparisons of students' answers to be categorized in the domain of fixed or growth mindset. Possible follow-up questions were asked for clarification of the answers. These transcripts were coded then analyzed. The case by case analysis would place students within domains that were compared to find commonalities (socioeconomic background, parental support, extra services, etc.).

Limitations

Although this research has reached its aims, I ran into some limitations during the study. First, due to the timeframe for the given study, I had a small population to interview and gain data from. The two specified classes gave me a limited number of students to begin with which led to an even smaller population that returned parent permission slips. This could limit the findings due to the students with supportive adults returning the signed permission slip and/or parents not understanding what they were being asked to sign. I created this limitation by not personally reaching out to the parents with a detailed explanation of what was expected from their child.

Second, the students were interviewed a week after the state testing. This may have skewed some of the students' responses when asked if they have ever worked hard. Although it was more than likely a valid answer, the KPREP (Kentucky Performance Rating for Educational Progress) was fresh on their minds.

The timeframe of the interviews were short. I only had access to the students for the interviews during their breakfast time. This one on one session was limited to approximately 20-30 minutes. If the students were able to process and not be restricted by the clock, I may have had more detailed responses.

One interview question that was asked was unknown due to the lack of conversation about it in their home which created another limitation. The question that inquired if their parents went to college or if their future goals line up similarly with that of their parents. The majority of the students could not answer, for certain, if their parents attended college or even what their parent(s) did for an occupation.

Another limitation to this study was the fact that South Heights Elementary was and is well-known for the strong culture within the building. The students that were interviewed could have developed a growth mindset due to the fact that they attend a school that places emphasis on relationships and grit on a daily basis. The teachers have been trained with growth mindset vocabulary and interact with the students in a positive and encouraging, goal driven attitude. Goals and future careers are a part of the dialogue between teachers and students within this building.

Researcher Bias

I am a Caucasian, heterosexual, cisgender female, and I have lived in the Southeast region of the United States for all of my life. Prior to conducting the research study, I worked as an exceptional child self-contained educator for 8 years before moving into a collaborative resource position, also working with exceptional students, for 3 years in an elementary setting. My experiences working with a diverse population of students and being close to their parents/guardians ultimately led to my interest in performing this qualitative research to gain more knowledge about what drives students to achieve in a low socioeconomic demographic area. As an educator, I was seeing students with similar home lives and socioeconomic statuses have much different academic patterns. I have heard students voice struggles about lack of support, lack of nutrition, financial obstacles, substance abuse, violence, incarcerated parents, and a deficiency of daily living needs such as hot water, shelter, clothing that properly fits, etc. I wanted to see if I could pinpoint the reasons for certain students' success compared to other peers in the same demographic area. I engaged into the original research project in hope of growing an understanding of the grit, academic tenacity, and growth mindset embedded in the

students that succeed academically, while living in a poverty stricken neighborhood with daily obstacles hindering their chances to thrive.

As I concluded my research I began to examine my bias as a researcher due to my positionality as an educator and as growing up as an upper middle class Caucasian female in a well nurtured family and environment (neighborhood and home). I feel as if I reflected on these biases throughout my paper but not in an in depth sequence. It is difficult to eliminate the fact that students may have not answered with full honesty due to my familiar position as a teacher within the building. Were their responses subconsciously skewed due to my professional position? This could be a bias that cannot be completely eliminated within the study.

As the researcher in a qualitative study, I am the data collector. It is reasonable to expect that my personal background and personal beliefs could create a bias within the study. Even though I have familiarized myself with the population within the research setting for many years as well as built strong relationships, it is impossible to rule out the variables of my personal experiences. As a member of the opposite socioeconomic status it was important to be mindful to not highlight the extreme differences between my personal upbringing and the upbringing of the interviewees. My own biases may have influenced the participants' responses as well as my interpretations of the study.

Chapter IV

FINDINGS AND DISCUSSIONS

This chapter outlines the findings from the data analysis. The purpose of this study was to explore individual mindsets of elementary students and determine the extent to which mindsets reflect fixed or growth perspectives. The majority of the students in this study derive from low socioeconomic households and are not achieving due to multiple factors that are out of their control. The research questions, "How do individual mindsets, from a heterogeneous population within a low socioeconomic elementary school, effect a student's educational performance?" and "Are there connections, within subgroups, to predict a student's mindset?" were coded and analyzed.

Analytic Processes

The research was conducted through ten individual interviews after parent and student permission was gained. I used a recording device during the interviews to capture the full dialogue of the students. The students were chosen based on their enrollment in one of two homeroom classes. One class being fourth grade and the other being third grade. After parent permission was gained, via a permission slip sent home with the student, I chose ten students that was comprised of a diverse group of students. The student population chosen included special education students, an English Second Language (ESL) student, a student with a 504 plan, both males and females, and general education students. These students were interviewed during their breakfast time through a series of predetermined questions. The students' responses were then color coded to reflect similar responses and themes throughout the study. These themes were determined based on the similarities of the responses. As I heard the students mention particular words, or phrases, I highlighted them to later place in categories. These categories helped me

determine the themes of the study due to the repetitiveness of the students' responses to individual questions. Three themes were determined to be strong and supported by student responses.

Consistent Adult Support

The first theme that was determined in the research was the fact that the interviewees had supportive adults in their lives. A definition to the term used, supportive adults, is a consistent adult in the life of the student. This adult does not have to necessarily be the biological parent or even a relative. Occasionally the supportive adults that were mentioned lived outside of the students' home. Some of the students mentioned several supportive adults within their everyday lives as well as same aged peers. All ten participants mentioned a consistent supportive adult.

With a happy demeanor, Sally (a female Caucasian fourth grade special education student) stated,

> My friends and my teachers, my principal and everybody. They encourage me by saying things that make me feel better. If I feel discouraged they tell me I can do it. They encourage me to continue to try harder and work harder.

By Sally saying the adults encouraged her, through their encouraging words, relates to the theme found that supportive adults have an impact. This is evidence of the theme because of the supportive context she relates between her adults and encouragement. Sally also noted that she has grandparents that live next door to her home. They are actively involved with her life and accomplishments daily. Sally was talking quickly when she mentioned that her mom wants her to succeed in academics so she started a chart. "My mom wants me to reach certain goals that's why I have a chart. I try to reach my goal before I start something new. Sometimes I have more than one goal going at a time." Sally was being held accountable to meeting expectations

by her mother. By the chart, designed to track progress in both academics (i.e. spelling grades) and personal weaknesses (i.e. handwriting), Sally felt supported and encouraged.

This is also supported by Sally's response when she was asked the question regarding if she had someone to go to when she was excited, happy, or sad. She responded, "I go to my mom. She is excited for me. If I'm sad she tells me everything is going to be alright and makes me feel better." The fact that these students go to the adult in their life suggests that they feel comfortable and safe with sharing feelings of excitement, sadness, or if they need help navigating a difficult situation.

Clark, a male Hispanic ESL general education fourth grade student, was asked if he felt encouraged at school. As he nervously fidgeted in his swivel chair he said, "The teachers make me happier and I get happy to finish and I want to pass it." He was speaking in regards to any assignment or test. Clark's response to the question follows the theme that the supportive adults in his life, in this case a teacher, make him try harder and feel better about himself. When he was asked if he felt encouraged at home he also made a qualifying statement. Clark said, "If I am excited I would tell my family. If I was sad I still tell my family. Mom would give me a big hug." Being a student categorized as needing support services from ESL professionals, Clark's response to having both a teacher and a parent as a consistent adult in his life was encouraging. His grit and ambitions could be contributed to multiple adult role models in his life. Hamre and Pianta (2005) conducted a study on classroom support and child risk. "The current study provides evidence that across two important domains of child functioning in the early grades of school, achievement, and relationships with teachers, the quality of everyday classroom interactions in the form of instructional and emotional support moderates the risk of early school failure." (Hamre & Pianta, 2005, p.961). This strengthens my reasoning behind Clark's grit and

ambitions. His statements about support and happiness correlate to being able to work through failures and obstacles. Accountability from those adults in his life anchor support and stability.

As the interview started for Michael, a fourth grade general education student, I could barely hold the grin off my face. The amount of joy that he carried with him as he entered my room was contagious. He sat in the middle chair and grinned from ear to ear. He tried to make small talk but continuously told me how happy he was to be able to sit and talk with me for a while. He was full of life and very eager to begin the interview.

Michael proudly exclaimed, "If I'm at home, I go to mom or dad. If I'm here {at school} I go to a teacher around me." This was in regards to what he would do if he had exciting or saddening news. "I also feel encouraged at school and safe and very relaxing. My teachers and my classmates encourage me. The teachers at this school encourage me to do more things and tryout more and new things," exclaimed Michael after being asked if he felt encouraged at school. The theme is supported again that consistent adults, that are supportive in a student's life, can have an impact.

Barbie entered the interview room with a shy demeanor. Barbie is a Caucasian 11-year-old general education student. As the interview was underway Barbie gradually let down her guard. When Barbie was asked if she felt encouraged at school she smiled. Barbie then states, "Mrs. Coursey (teacher) gives hugs and says that I can do it." "Mrs. Reed, Mrs. Crowley and Addison (a student) encourage me too. She (Addison) helps me out if I don't know stuff." Barbie also admitted to sometimes hiding from Mrs. Coursey, alluding to not being held accountable, but Mrs. Coursey finds her anyways. She smiled and said, "I like getting hugs from Mrs. Coursey."

The shy and quiet demeanor of this child is easily lost within the classroom. Having the consistent adult support encourages these students to persevere through challenges as well. The accountability and mutual respect from student to teacher, in this case, is what is driving this student to succeed.

Ginger is a fourth grade general education student who lives with her mom, stepdad, and younger brother. When asked if Ginger had a problem, exciting news, or a saddening situation, who would she go to for advice, she stated, "Mrs. Overton (librarian) because she's nice and sweet. I trust her." The supportive adult in the student's life is building that relationship to have an impact on the students' lives and building trust. Ginger was asked who all encourages her. She answered, "Mom, mostly mom. But Mrs. Overton encourages me and so does Mr. Carroll." Although Ginger was a quiet student and answered with short, direct answers, her face told a story. When she spoke about these adults in her life she had a certain glow to her face. It was a glow of happiness and respect. She seemed grateful to be encouraged and supported by them due to the sense of pride she had while speaking. As the interviewer, I felt a sense of accountability towards these adults from Ginger.

Mariah, a biracial fourth grade student, was asked the same question, "When you have a problem, exciting news, or a saddening situation, who do you go to for advice?" "Why?" She smiled a sweet smile as she said, "My mom. Because she is my role model and helps me to try again."

Mariah's response to the questions supports the theme of a supportive adult because she uses the words "role model" and "helps me". These words make me understand that without this support, the student may have chosen to give up or not have someone as a role model in their life. When asked who she turns to when she has a problem, exciting news, or a saddening

situation she stated, “My mom. Because she is my role model and helps me to try again.” Mariah also spoke about her friends at school and how they encourage her. Her friends are not adults but she included them in her support system. As children grow up, many of their supportive adults have an influence on the child’s selection of friends. This could possibly relate back to the support of Mariah’s mother and her influence on adequate friend selection. When speaking of her friends, Mariah said, “The friends tell me to not feel sad and keep practicing and you’ll get it right.”

Mark, a third grade student, was asked about if he felt encouragement from home. Mark answered, “Yes, by dad.” He spoke about how his dad worked at a factory and was recently married to his stepmother. Mark said, “They tell me to do my best.” He said that when he has a problem, exciting news, or a saddening situation he goes to multiple members of his family like his sister, mom, or dad. “Because they can help me by giving me advice,” stated Mark. As Mark spoke he answered with confidence. He did not ponder long when answering the questions about his support system. By the answers that Mark gave, it demonstrated that he felt confident about his support system and secure in finding advice. This aligns with the theme that supportive adults play a factor in a student’s mindset and grit.

Bridget is a 9-year-old general education third grader. She lives with her mom, dad, little sister, and twin brother. Bridget was excited to be involved with the research. When asked who she goes to if she has a problem, exciting news, or a saddening situation, she answered, “Either my mom or Mrs. Schutt or Mrs. Craig because Mrs. Schutt has a counseling college degree. There is a girl in my class that is always mean to me and stuff, so I just ask them what to do and they say just ignore it and go on with your learning.” Bridget also spoke about her mom and her encouragement from home. She said, “My mom encourages me to read books because I’m

like… the… cat… is… running… down… the… street. She tells me to just keep reading." Bridget is a struggling reader and needs the supportive encouragement to not give up. Bridget's positive attitude can be related to the consistent adult support that she has in her life, both at school and at home.

Tony is a male third grade student with a 504 designed for his ADHD (Attention Deficit Hyperactivity Disorder). Tony lives with both of his parents and two sisters. Tony was very entertaining during the interview process. He is a very literal young man. When asked about who he may talk to when he has a problem, saddening situation, or exciting news, Tony replied, "Usually I talk to myself first, then I go to my parents. I go to them because they are the closest around. I also go to my family." Even though he stated that his parents were the closest around, he still implied that he was comfortable speaking to them about situations in his life. I asked him about his encouragement at school. He replied, "I feel encouraged at school by my teachers. They teach me stuff I should know."

Shannon is a biracial fourth grade special education student. Shannon lives with her mom, dad, and one sister. When I asked Shannon if she felt encouraged at school, her face lit up. She replied, "Yes. By (you) Ms. Keown and Mrs. Reed. I feel pretty loved at home and at school." Shannon told me that she felt encouraged at home as well. She said, "I go to my mom or dad. Because they can tell me something that is encouraging." The acknowledgement of these supportive adults in her life correlate to the theme that gritty and growth mindset students have consistent supportive adults in their life. These adults can be within the school building or under their own roof, possibly in both places.

In the review of literature, supportive references were found to reinforce the importance of a supportive figure to create growth mindset. The encouragement to continue after failure is

essential. Dweck (2006) did not imply that children should not be praised. The praise should be centered on the growth-oriented process. Questions and statements should be stated and asked in a way that admires and appreciates their effort and choices (Dweck, 2006). During the interviews the students eluded to encouragement around their efforts not around how they performed.

Try, Try Again

While conducting the research, another theme was found. The theme that was found, or eluded to, was that the students would try again after failure. "Try again" means that the student would not stop attempting the same goal after a failure the first try.

Each student was given a scenario: You have practiced for months and attended every clinic for the X team. When tryouts arrive you do not perform your best which results in not making the team. Then the students were asked, "How do you handle the failure? What are your thoughts?" All but two students answered in a growth mindset format, meaning that they would try again or learn from their failure.

When given the scenario of repeated challenges a theme emerged from several of the interviewees. The words "try again", based on several examples from the students, eluded that they would try the task over after failure. Some other phrases that were similar to try again were: keep going, never give up, and keep practicing. Mark stated, "I would be upset with myself but I would try again." Clark confidently commented, "I wouldn't give up."

After I gave Tony the same scenario he replied nonchalantly, "I would try again the next time and hopefully get the nerves out of me so I don't do the same things I did last time." By Tony saying that he would get the nerves out of him so he would not do the same things that he did last time demonstrated that he would not stop and exhibit resilience to keep trying. This is

the same for Mark and Tony. I saw the same type of confidence in Mariah when she answered, "I will wait until next year and try again. I would feel sad but I have to get over it."

Bridget paused and looked down, she shrugged and said, "I just will try again next time and I'll keep trying harder." Her face seemed as if this was the only appropriate response as if she was filled with a motto of no excuses. I saw the same confidence in Sally. Her dimples were shining as her smile grew bigger. She said, "I would get back up there and try again with my friend. I would have my friend come up there to make me feel more confident. I would try again. I would learn from my mistake of what I did on stage."

Michael was very animated with his answer to the scenario about not making the team. His response to failure came with a personal story. He said, "Well, I'll just wait until next year when the sign-ups are here. I'll keep practicing and try to make the team next year. I'll keep getting better and make the team next year." Michael then continued to tell me about a time when he was faced with failure. "Like last year I didn't make the basketball team but this year I did. Last year I kept practicing, I've been practicing for three years. But I guess last year I didn't practice enough. So I started practicing for like a year and played ABA for 2 years then basketball here (South Heights) for one year. I got here 2 years ago, well, I got here ½ of last year. I was here last year a good enough time to not miss tryouts. I made it and I'm making football this year too." Michael's response to failure regarding not making the teams did not stop him from practicing and striving for his goal of being a basketball and football player. He demonstrated perseverance and grit. Pride and a rewarding smile illuminated from him.

Ginger laughed when she was asked about botching the tryouts and resulting in failure. She related it to forgetting the lines in a play, she was active in the school's drama club. Although she giggled, and was slightly hesitant, she said, "I would probably run off the stage. I'd

try again." The fact that Ginger expressed the emotion of embarrassment, she continued to say that she would try again and not give up. This demonstrates grit and the ability to fail forward.

Shannon and Barbie answered in a slightly different way. When asked what Shannon would do after the failure presented itself, she answered, "Just um go see if there is another thing for me to do. There's other stuff I can do. I would just move on to the next thing." Although she would move on to another challenge, she did not mention that she would try the current obstacle again. Barbie related her failure to trying out for a part in a play. She was not much into sports but enjoys drama. Barbie answered, "Really I would give up, or I would sit there and think about what they said my part was. Sometimes I get nervous and laugh, I forget. I may read it again or redo it again a couple times. I would rather stop it or redo it all over again."

Barbie's answer was inconsistent with having a growth mindset. Her initial reaction was to give up. The more she thought about it she pondered trying again. This may indicate that Barbie is transforming a fixed mindset to a growth mindset but not completely committed to failing forward and having grit.

During the review of literature, grit was referenced and related to growth mindset characteristics. Duckworth et al. (2007) noted that the gritty individuals approach achievement as a marathon; their advantage is stamina. Simply not being willing to give up is stamina. Academic tenacity is about the mindsets and skills that allow students to look past short-term concerns to long-term or higher-order goals, and withstand challenges and setbacks to persevere toward these goals (Dweck et al., 2014). Even after the scenario was given about trying for long periods of time and failing at the tryout, the students stated that that they would not give up.

Gaining Intelligence

The third theme that was gained from the research was the explanation as to if there is something a person could do to make them smarter or are they born that way. The students were each asked if they thought people were born either smart or not smart. All but one of the students answered that they thought people were not born smart and they have to do certain things to gain intelligence.

Mariah pondered the question for a few seconds. She looked down and said, "No. Because when they are born they are just a baby they don't know anything yet." She also noted that to make herself smarter she studies. This implies that Mariah understands in order to learn, actions must be taken.

When Tony was asked the question about if he thought people are born smart he looked puzzled. After the inquisitive look left his face he replied, "No, because they would have to learn intelligence as they grow." Tony's answer was blunt and to the point. I asked what he thought people could do to make themselves smarter. As he fidgeted he said, "Learning or going to preschool or going to other schools as they grow up." Tony's answer indicates that he understands there is a process to gaining intelligence. He implies that peoples' minds grow as they interact in both an academic setting and a social setting like a school building.

Bridget had no expression on her face when she was asked the question about whether she thought people were born smart. Her reply was, "No, because, like, most people don't really know anything when they are born." Her responses continued when I asked her if she felt people could make themselves smarter. She said, "Um, yes, by like if you like go read a book and the cat says meow you should just keep reading books to practice. That will make you smarter and practice everything." Although her responses were choppy and had pauses between thoughts,

Bridget's answers align with a person being able to gain intelligence. This indicates a growth mindset in the aspect of perseverance to practice and continue to grow in specific areas, in her case, reading.

When Ginger was asked the same question about if people are born smart, she giggled and said, "No. 'Cause I mean, they don't even know their alphabet when they are born." She told me that to gain intelligence people could listen to their teacher and learn more. This relates to what Mark said when he answered the same question. He said, "No, because they don't know anything they just know how to cry." He also stated that people gain intelligence by listening and paying attention.

I asked Sally about if she thought people were born smart. She smiled her sweet smile and said, "No, actually yes. Because that if you're not smart there's a way to become smart because you can go to school and never quit school." Sally took the question to another level and mentioned people gaining intelligence by attending school and never quitting school. Sally went on to say, "Pay attention in class. Do your homework, study, prepare for a big test you have the next day, and study hard the day before the test."

Clark answered the question about if people are born smart very quickly. He said, "No, the baby will get smarter." This indicates that Clark understand that people gain intelligence. When I inquired about how he makes himself smarter he said, "I learned. I learned my subjects." I felt as if Clark was relating his gain of intelligence to learning a new language and adapting to the subjects taught when he moved to Kentucky. Clark's answers correlate with a growth mindset and the knowledge that intelligence is gained by having academic tenacity and grit.

I asked Shannon if she thought people were born smart. She replied that they were but then followed it with, "because you learn a lot". As the researcher, I felt as if Shannon did not

completely understand the question. When Shannon was asked what she thought she could do to make herself smarter. Her response was, "Listen to the teachers and watch what they show me." This implies that she understands that people gain intelligence and are not born as smart as they can possibly be. Barbie was asked the same question about people being born smart. She replied after a long pause, "Listening to Mrs. Reed (teacher) and listen to her giving us clues about answers. I think really hard about what Mrs. Reed says. Practice what is taught." By Barbie and Shannon answering in these ways, it shows that they understand that learning is gained through effort. The same as Barbie and Shannon, Michael's response correlates. Michael said, "The more they test me the bigger my brain gets and the more it will fit."

All of these replies imply that the students understand that learning has to be gained and sought after, not just imbedded when you are born. The follow up question, in regards to how people can make themselves smarter, indicated that the students understand that gaining knowledge takes effort and is not embedded when a person is born. The correlation between the interviewees responses were very similar.

This relates to my review of literature in several ways regarding growth mindset characteristics. Growth mindset is based on the belief that your basic qualities are things that you cultivate through your efforts (Dweck, 2006b). The students believe that effort and attention is needed to grow intelligence. A fixed mindset is reflective of someone who sees their abilities as pre-determined and unchanging (Dweck, 2006b). Individuals who believe that their talents can be developed – through hard work, good strategies, and input from others – have a growth mindset according to Dweck (2006b). Given these responses and the reviewed literature, I could determine growth mindset qualities in particular students.

Conclusions

The three themes, of consistent supportive adults, trying again after failure, and gaining intelligence, became clearest through the research after being coded. The three themes began to intertwine. The quotes from the students related to the three themes and were closely correlated. Therefore, the lines began to blur. It became difficult for the me to decipher if the reason the students were trying again and not giving up was based on the support from an adult or if they were a gritty individual, or if both played a factor. The introduction of the theme, regarding gaining intelligence, let me know that these students were aware that individuals were not born smart; procedures can be put in place to increase intelligence. The results of the three themes gave me enough information to determine if the interviewees had a growth or a fixed mindset.

Chapter V

ANSWERING THE RESEARCH QUESTIONS

This chapter concludes the qualitative research of individual interviews based on growth mindset in students living in a low socioeconomic environment. Based on the small population of a diverse group of ten students that participated in this study, I provide answers to the research questions in regards to the three themes that I identified. These themes were consistent supportive adults, trying again after failure, and gaining intelligence. To accomplish that goal it became necessary to reach some prerequisite goals. Determining the individual students' home-life, how the student felt about failures, and if they had any consistent adult support in their life was critical to analyzing the interviews. The analysis was critical as to how the students' responses and their growth or fixed mindset was determined. How the conclusion was connected with the field of education, regarding perseverance and grit, assumed a high degree of importance during the literature review that was conducted for this dissertation. Literature findings support conclusions and generated questions for future methodologies and research avenues. Conclusions for implications for future practices and research are also given in this chapter. The importance of growth mindset through research was reiterated and how it relates to educational performances.

Answering the Research Questions

Student responses from the qualitative interviews enhanced the findings, adding depth, insight, clarification, and new ideas. The results of the collected data and analysis processes are described in the paragraphs that follow. Then I explore areas where future research is needed and offers insights into the findings and implications for educators and parents, especially in early childhood institutions. Questions two through eight during the individual interviews can be

directly linked to educational performance. Refer to Appendix A for a list of the questions to guide your understanding.

How do individual mindsets, from a heterogeneous population within a low socioeconomic elementary school, effect a student's educational performance? The research question, "How do individual mindsets, from a heterogeneous population within a low socioeconomic elementary school, effect a student's educational performance?" was analyzed through data collection and coding. The data gathered from the study found that 9 out of 10 students that were interviewed, stated that listening and paying attention in school and in the home will assist a student in growing smarter. This indicates that students learn from those around them, whether good or not so good characteristics. When compared to educational performances, students with a growth mindset have a want to listen and learn because they understand that people are moldable and not predetermined with intelligence. When asked if there are things that people can do to get smarter Bridget stated, "Um, yes, by like, if you're going to read a book and this cat says meow you should just keep reading books to practice. That will make you smarter and practice everything."

When asked why the students do their homework the students that were perceived to have a growth mindset answered with future goals in mind and mentioned learning new things. The next question was presented regarding future goals and how the students would individually reach those goals. Educational performance requires goals, in some cases lofty ones, and stepping blocks along the way (ie. homework). Without knowing where the student is going, it is very difficult to have a purpose for the work in school. The students that were perceived to have a growth mindset spoke about college degrees and careers. Tony thought for a minute and answered, "I have literally no idea yet." As a third grader, I thought this was an honest answer

that should not be discredited due to the fact that his body language suggested he had many interests and could not choose just one at that time.

When asked about learning new things, I would perceive a person with a growth mindset answering this with excitement and not reluctantly, especially when I added that the new thing they are learning may be hard for them. Eight out of 10 students answered this with what is perceived as a growth mindset perspective. Educational performance is based on learning new things. Without the growth mindset and willingness to face failures and work hard at something that does not come easy, educational performance will suffer.

The students were asked to explain a time they felt like a hard worker. Students with growth mindsets would draw on their perseverance and grit to overcome a failure or something that was a struggle to them. A fixed mindset student would face adversity and possibly give up on the endeavor altogether. Nine out of the ten students that were interviewed gave an answer that exhibited a growth mindset. Michael explained, "Training my dogs, definitely. When you train your dogs it takes a long time. The most I trained my dog is to catch a stick like to pick up a stick and throw it so they bring it back to you. I taught my dog how to catch a tennis ball." He was very proud of his dedication to training his dogs. Michael's answer was opposite of Shannon's. When asked if Shannon ever felt like she worked hard her response was said while looking down, "Never. I guess on my spelling test. Just on spelling test." With educational performance, the students need to feel that they can achieve. The students will eventually face a difficult subject that will require hard work. If the student has a fixed mindset and lacks grit, this will hinder educational performance in the classroom.

Students with growth mindsets often set goals and strive to accomplish those goals. The students were interviewed about if they have ever set goals and not reached them due to starting

something new. Tony replied, “Yes, but apparently I still want to do the old things so I combine the old with the new things.” This exhibits a growth mindset answer. Tony feels as if he has enough grit to pursue the old goal but determination to start a new goal as well. Michael answered similarly. Michael stated, “I would try to make another goal and work around that goal and see if I could still meet that goal and try to improve a new goal.” Six out of the ten felt that they pursued goals until they were completed. This weighs heavily on educational practices due to the fact that content builds and reaching a goal that may be adventitious would require grit and a growth mindset that was not afraid of failure.

Students with growth mindset exhibit grit and perseverance to overcome obstacles, even failures. This relates to educational performance due to the fact that test can challenging. If faced with studying and then failing, the student would need to learn from their mistakes, self-reflect and find the grit to either retake the test or study harder next time. If the student has a fixed mindset and perceives themselves as dumb which leads to giving up, that student is now at risk for dropping out or behavioral concerns to avoid academics.

The students were asked what they would do in a certain scenario that involved practicing for months and attending every clinic for a particular team of their choosing. The scenario ended with a huge failure and they did not make the team as a result. The students were asked how they would handle the failure. Shannon said, with a shrug, “Just, um, go see if there is another thing for me to do. There’s other stuff I can do. I would just move on to the next thing.” This is not an example of grit or growth mindset. In the face of a failure she is not reflecting and persevering. Michael answered the question much more confident. “Well, I’ll just wait until next year and the sign-ups are here. I’ll keep practicing and try to make the team next year. I’ll

keep getting better and make the team next year," exclaimed Michael. Nine out of the ten answered with a growth mindset perspective.

Are there connections, within subgroups, to predict a student's mindset? Subgroups were identified to answer the second research question, "Are there connections, within subgroups, to predict a student's mindset?" Potential subgroups that were identified were gender, race, grade level, English Language Learners (ELL) and Non-ELL, family dynamics, and special education versus general education. The interviewees were made up of 6 girls and 4 boys. Three students were 3rd graders and 7 were 4th graders. Four students in the study were identified as biracial, 4 were Caucasian, 1 Hispanic, and 1 African American. Five general education students were represented along with 2 504 students and 3 special education students. One of the special education students was serviced for speech only and the other 2 were identified with a specific learning disability (SLD). One student was serviced as an ELL student. The family dynamics ranged within the interviewees. Five students lived with both their mother and their father with siblings, one student lived with both his mother and his father along with cousins, an uncle and aunt, and his siblings. Three students lived in a divorced home with step parents. All ten students were considered to live in a low socioeconomic demographic area.

Based on these subgroups, I saw no detectable patterns within these students because out of the 10 interviewed, 9 were considered to have growth mindset tendencies. Whether the subgroup linked to growth mindset is not determined. This leads to a possible future study concerning the school's culture. If the culture is strong, does it fill in the gaps to support a growth mindset in the students.

Implications for Practice

Educational practitioners would benefit from having an awareness of the population of students within their organization. The benefit would come from seeing which students have growth or closed mindsets and gather a baseline. Growth mindset instruction for all students would be beneficial. Having conversations with students about how effort can morph into success in all areas of their life including positive academic results. Making connections with effort and positive academic practices will inspire and motivate students to perform their best without fear of failure. If the vocabulary is stressed to always get an A or score distinguished, the students will form a fixed mindset when that does not occur every single time. The students need to feel pride in their efforts and learn from their shortcomings. Educational practitioners should not just tell the students to study for an upcoming exam, they should explain why studying is important and the more effort given the more knowledge gained. This frame of conversation will not stress the numerical outcome or letter grade, it emphasizes the effort and grit to persevere. The students need to know why they are putting this effort and energy into a task. Praising that effort, even if it is small and the result is less than what was expected, the student is more likely to try harder next time instead of feeling like giving up.

The educational practitioners should make a point to have students have interactions with positive role models within their academic careers. School personnel cannot afford to wait or hope that each student has a supportive adult at home that cares about their efforts and builds ambitions. The personnel should identify if the students have a positive role model, whether in the school setting, in the celebrity mix, or in the home. Time should be applied to determine if the role model they choose exhibits a growth mindset.

According to Price-Mitchell (2014), the answer to a student exhibiting a growth mindset lies in the mindsets that they adopt toward achieving goals. For example, young people are more likely to be inspired by positive role models when they have growth mindsets – when the students can see themselves as active learners and achievers who accomplish goals through hard work and perseverance. With this type of mindset, youth strive to achieve their best selves. And they look toward role models to show them the way (Price-Mitchell, 2014).

Price-Mitchell (2014) also stated that a growth mindset can be contrasted to a prevention mindset. When youth approach life with a desire to prevent or avoid disasters and negative outcomes, they are more likely to gravitate toward role models who will help them learn avoidance strategies. These strategies might include cheating on tests or using drugs and alcohol to escape life challenges.

Implications for Future Research

Further research should be conducted on the students that are identified with having a growth mindset. Questions should be asked about role models and what types of conversations are being had between them and the student. All of the students in this study reported that they had supportive adults in their life. When one student in the study was determined not to have a growth mindset it raised the question, why not? It seemed as if the supportive adult was the main weighing factor to creating a growth mindset. So to answer the question of "why not?" future research should be done to determine what types of conversations are being had between the adult and the student.

The one student that was not determined to have a growth mindset noted that she had supportive adults in her life but when asked about perseverance and not giving up she answered with mainly fixed mindset responses. Future research could target the depth of the conversations

between the student and the adult. The question could be asked if the conversations are surface level and comfortable or are they encouraging and inspiring? Is grit a value shared by the supportive adult in the life of a child identified with a growth mindset?

Another future research study could be conducted on the specific schools. Was the culture of this particular school so strong that it filled in the gaps to build a growth mindset within the students? Different settings could be evaluated through a qualitative study then compared to determine if school culture plays a role in the mindsets of the students.

A mixed methods (quantitative/qualitative) study could be conducted. A mixed methods study would directly correlate the students' academic achievement in state tests after the students are determined to have a growth or a fixed mindset. The following research question could be presented, "Do students with a growth mindset excel in academic achievement tests?"

Conclusions

The author concluded through the literature review that lower socioeconomic areas have higher dropout rates, higher at risk students, and students with lower academic achievement. However, the literature review also concluded that students with a growth mindset, whether affluent or poverty stricken, can overcome obstacles to reach self-determined goals. The school setting plays a substantial role in creating growth or fixed mindsets in students, especially in a poverty stricken area due to the consistency of supportive adults. This was the basis for the study to be conducted at South Heights Elementary in Henderson, KY.

The research concluded that 9 out of the 10 students that were interviewed exhibited a growth mindset. This conclusion was based on the individual interviews with the students. Coding and analysis of the answers were compared with a typical growth mindset response and a fixed mindset response. The one student that was determined to have a fixed mindset, Shannon,

mentioned giving up or changing her mind often without finishing her task at hand. She also stated that she did her homework "to get it over with" and more of a compliance issue than a learning opportunity. Shannon did state that she had supportive adults in her life, however she spoke about these adults encouraging her by giving her rewards (tactile, edible, etc.) when she did something well. These actions are supported in the literature to create a fixed mindset. The supportive adult of a growth mindset child will encourage by praising effort and grit.

Even though a more exhaustive study, analyzing the responses of many more students is warranted for a more detailed picture of growth mindset, it is evident that spending time on proactive growth mindset qualities are not without value. The students that were interviewed were great examples of having a positive view about how potential growth and hard work can result in success. Even with a small research population and all but one seemingly growth mindset children, it is not harmful to use the vocabulary and instill grit with support in all students. It would be beneficial to expand the research over multiple settings, demographics, and culture types to remove bias and receive a more valid picture of fixed versus growth mindset in today's student population.

References

Achor, S. (2012). Positive Intelligence. *Harvard Business Review*. Retrieved from https://hbr.org /2012/01/positive-intelligence

Adler, N. E., Boyce, T., Chesney, M. A., et al. (1993) Socioeconomic inequalities in health: No easy solution. *Journal of the American Medical Association, 269*, 3140-3145.

Bergeson, T. (2006). Race, poverty, and academic achievement. Retrieved from http://www.doh. wa.gov/SBOH/ESS/documents/Race&Poverty.pdf

Borg, J., Borg, M., & Stranahan, H. (2012). Closing the achievement gap between high-poverty schools and low-poverty schools. *Research in Business and Economics Journal*. Retrieved from http://www.aabri.com/manuscripts/111012.pdf

Brooks-Gunn, J., & Duncan, G. (1997, September). The effects of poverty on children. *The Future of Children, 7*(2), 55-68.

Brophy, J. E., & Good, T. L. (1986). Teacher behavior and student achievement. In M. L. Wittrock (Ed.), *Handbook of research on teaching* (3rd ed., pp. 275-328). Indianapolis, IN: Macmillan Publishing.

Brown, B. (2012). *Daring greatly: How the courage to be vulnerable transforms the way we live, love, parent, and lead*. New York, NY: Gotham Books.

Capra, T. (2009). Poverty and its impact on education: Today and tomorrow. *Thought & Action*. Retrieved from http://www.nea.org/assets/docs/HE/TA09PovertyCapra.pdf

Cassidy, T., & Lynn, R. (1989). A multifactorial approach to achievement motivation: The development of a comprehensive measure. *Journal of Occupational Psychology, 62*(4), 301-312.

Ciaccio, J. (2000). A teacher's chance for immortality. *The Education Digest, 65*(6), 44-48.

Center on the Developing Child (2007). The impact of early adversity on child development (InBrief). Retrieved from www.developingchild.harvard.edu.

Center on the Developing Child at Harvard University (2015). Supportive relationships and active skill-building strengthen the foundations of resilience: Working paper no. 13. Retrieved from www.developingchild.harvard.edu.

Coleman, J. (1968). The concept of equality of educational opportunity. *Harvard Educational Review, 38*(1), 7-22

Conger, R. D., Conger, K. J., and Elder, G. H. (1997). Family economic hardship and adolescent adjustment: Mediating and moderating processes. In G. Duncan and J. Brooks-Gunn (Eds.) *Consequences of growing up poor* (pp. 288-310). New York, NY: Russell Sage Foundation.

Conger, R. D., Ge. S., Elder, G. H., Jr., Lorenz, F. O, & Simons, R. L. (1994). Economic stress, coercive family process and developmental problems of adolescents. *Child Development, 65*(2), 541-561.

Connell, J. P., & Wellborn, J. G. (1991). Competence, autonomy, and relatedness: A motivational analysis of self-system processes. In R. Gunnar & L. A. Sroufe (Eds.), *Minnesota symposia on child psychology* (pp. 43-77). Hillsdale, NJ: Erlbaum.

Daggett, B. & Nussbaum, P. (2008, July). How brain research relates to rigor, relevance and relationships. Retrieved from http://www.leadered.com/pdf/How_Brain_Research _Relates_ to_RRR_2014.pdf

Dawson, G., & Fischer, K. W. (1994). *Human behavior and the developing brain*. New York, NY: Guilford Press.

Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. New York, NY: Plenum.

Desrochers, S., & Dahir, V. (2000). Ambition as a motivational basis of organizational and professional commitment: Preliminary analysis of a proposed career advancement ambition scale. *Perceptual and Motor Skills, 91*(2), 563–570.

DeWitt, P. (2012, January 4). Rigor, relevance & relationships. Retrieved from http://blogs.edweek.org/edweek/finding_common_ground/2012/01/rigor_relevance_relationships_an_interview_with_bill_daggett.html

Do Something. (2013). Retrieved from https://www.dosomething.org/us/facts/11-facts-about-education-and-poverty-america

Duckworth, A., & Peterson, C. (2007). Grit: Perseverance and passion for long-term goals. *Journal of Personality and Social Psychology, 92*(6), 1087-1101. doi:10.1037/0022-3514.92.6.1087

Duckworth, A. L., Peterson, C., Matthews, M. D., & Kelly, D. R. (2007). Grit: Perseverance and passion for long-term goals. *Personality Processes and Individual Differences, 92*(6), 1087-1101.

Duckworth, A. L., & Seligman, M. E. P. (2005). Self-discipline outdoes IQ in predicting academic performance of adolescents. *Psychological Science, 16*(12), 939-944.

Dweck, C. (2006a). Mindset. Retrieved October 2, 2016, from http://mindsetonline.com/whatisit/about/

Dweck, C. (2006b*). Mindset: The new psychology of success*. New York, NY: Random House.

Dweck, C. (2015). Carol Dweck Revisits the 'Growth Mindset'. *Education Week*. Retrieved

from http://www.edweek.org/ew/articles/2015/09/23/carol-dweck-revisits-the-growth-mindset.html

Dweck, C., Walton, G., & Cohen, G. (2014). *Academic Tenacity: Mindsets and Skills that Promote Long-Term Learning*. Bill & Melinda Gates Foundation.

Eccles, J. S. (1993). School and family effects on the ontogeny of children's interests, self-perceptions, and activity choices. In J. Jacobs (Ed.), *Nebraska symposium on motivation: Developmental perspectives on motivation, 40, (pp.* 145-208. Lincoln, NE: University of Nebraska Press.

Effects of poverty, hunger, and homelessness on children and youth. (n.d.). Retrieved from http://www.apa.org/pi/families/poverty.aspx

National Scientific Council on the Developing Child. (2014). Excessive stress disrupts the architecture of the developing brain. Retrieved from http://developingchild.harvard.edu/wp-content/uploads/2005/05/Stress_Disrupts_Architecture_Developing_Brain-1.pdf

Ferguson, H., Bovaird, S., & Mueller, M. (2007, October 12). The impact of poverty on educational outcomes for children. Retrieved from http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2528798/

Gage, N. L. & Needels, M. C. (1989). Process – product research on teaching: A review of criticisms. *Elementary School Journal, 89*(3), 253-300.

Garcia, L., & Thornton, O. (2015, February 13). 'No child left behind' has failed. Retrieved from https://www.washingtonpost.com/opinions/no-child-has-failed/2015/02/13/8d619026-b2f8-11e4-827f 93f454140e2b_story.html?utm_term=.f7a8881488a4

Greenstone, M., Looney, A., Patashnik, J., & Yu, M. (2013). Thirteen economic facts about social mobility and the role of education. Hamilton Project Policy Memo. Washington,

DC: The Brookings Institute. Retrieved from http://www.brookings.edu/research/reports/2013/06/13-facts-higher-education

Grissmer, D., Flanagan, A., Kawata, J. and Williamson, S. (2000). Improving student achievement: What state NAEP test scores tell us. Santa Monica, CA: RAND.

Growth mindset. (2013, August 29). Retrieved from http://edglossary.org/growth-mindset/

Halpern-Felscher, B. L., Connell, J. P., Spencer, M. B., Aber, J. L., Duncan, G. J., Clifford, E., Crichlow, W. E., Usinger, P. A., Cole, S. P., Allen, L., & Seidman, E. (1997). Neighborhood and family factors predicting educational risk and attainment in African American and White children and adolescents. In J. Brooks-Gunn, G. J. Duncan, and J. L. Aber (Eds.), *Neighborhood poverty* (pp 146-173). New York, NY: Russell Sage Foundation.

Hamre, B. & Pianta, R. (2005). Can instructional and emotional support in the first-grade classroom make a difference for children at risk of school failure? *Child Development, 76*(5), 949-967.

Hochanadel, A. & Finamore, D. (2015). Fixed and growth mindset in education and how grit helps students persist in the face of adversity. *Journal of International Education Research, 11*(1), 47-50.

Holzer, H., Schanzenbach, D., Duncan, G., & Ludwig, J. (2008). The economic costs of childhood poverty in the United States. *Journal of Children and Poverty, 14*(1), 41-61.

Howard, M. (2015, May 27). Distracted by Technology: Focusing Attention on Homework. Retrieved from https://www.beyondbooksmart.com/executive-functioning-strategies-blog/distracted-by-technology-focusing-attention-on-homework

Howe, K. (1989). In the defense of outcomes-based conceptions of equal educational opportunity. *Educational Theory, 39*(4), 317-336.

Hoynes, H., Page, M., & Stevens, A. H. (2006). Poverty in America: Trends and explanations. *Journal of Economic Perspectives, 20*(1), 47-68.

Jaeger, B., Freeman, S., Whalen, R., & Payne, R. (2010). Successful students: Smart or tough? Paper presented at 2010 Annual Conference and Exposition: Research on the First Year. American Society of Engineering Education. Retrieved from https://peer.asee.org/successful-students-smart-or-tough

Kentucky Department of Education. (2016). Our children, our commonwealth. Retrieved from https://applications.education.ky.gov/src/Profile.aspx

Klebanov, P. K., Brooks-Gunn, J., and Duncan, G. J. (1994). Does neighborhood and family poverty affect mother's parenting, mental health and social support? *Journal of Marriage and Family, 56*(2), 441-455.

Klein, A. (2015, April 10). No Child Left Behind. Retrieved from http://www.edweek.org/ew/section/multimedia/no-child-left-behind-overview-definition-summary.html

Lally, J. R., & Mangione, P. (2017). Caring relationships: The heart of early brain development. *Young Children, 72*(6), 17-24.

Lufi, D. & Cohen, A. (1987). A scale for measuring persistence in children. *Journal of Personality Assessment, 51*(2), 178-185.

McClelland, D. C. (1961). *The achieving society*. Oxford, England: Van Nostrand.

McClelland, D. C., Koestner, R., & Weinberger, J. (1992). *How do self attributed and implicit motives differ?* New York, NY: Cambridge University Press.

McLeod, S. A. (2016). Bandura - social learning theory. Retrieved from www.simplypsychology .org/bandura.html

Morrison, F. J., & Connor, C. M. (2002). Understanding schooling effects on early literacy: A working research strategy. *Journal of School Psychology, 40*(6), 493-500.

National Institute of Child Health Human Development, Early Child Care Research Network (NICHHD-ECCRN). (2002). The relation of first grade classroom environment to structural classroom features, teacher, and student behaviors. *Elementary School Journal, 102*(5), 367-387.

Pianta, R. C., La Paro, K. M., & Hamre, B. K. (2005). *Classroom Assessment Scoring System (CLASS)*. Unpublished measure. University of Virginia, Charlottesville, VA.

Pianta, R. C., La Paro, K. M., Payne, C., Cox, M. J., & Bradley, R. (2002). The relation of kindergarten classroom environment to teacher, family, and school characteristics and child outcomes. *Elementary School Journal, 102*(3), 225-238.

Pianta, R. C., Nimetz, S. L., & Bennet, E. (1997). Mother-child relationships, teacher-child relationships and adjustment in preschool and kindergarten. *Early Childhood Research Quarterly, 12*(3), 263-280.

Peters, H. E. & Mullis, N. C. (1997). The role of family income and sources of income in adolescent achievement. In G. Duncan and J. Brooks-Gunn (Eds.), *Consequences of growing up poor* (pp 340-381). New York, NY: Russell Sage Foundation.

Phillips, M. & Flashman, J. (2007). How did the statewide assessment and accountability policies of the 1990s affect instructional quality in low income elementary schools? In A.Gamoran (Ed.), *Standards-based reform and the poverty gap* (pp 45-88). Washington, D.C.: Brookings Institution Press.

Price-Mitchell, M. (2014). How Role Models Influence Youth Strategies for Success. *Roots of Action*. Retrieved from https://www.rootsofaction.com/role-models-youth-strategies-success/.

Reis, H. T., Collins, W. A., & Berscheid, E. (2000). Relationships in human behavior and development. *Psychological Bulletin, 126*(6), 844-72.

Resnick, L. (1994). Situated rationalism: Biological and social preparation for learning. In L. A. Hirschfeld & S. A. Gelman (Eds.), *Mapping the mind: Domain specificity in cognition and culture* (pp. 474-493). New York, NY: Cambridge University Press.

Rowan, B., Cohen, D.K., & Raudenbush, S.W. (2004). Improving the educational outcomes of students in poverty through multidisciplinary research and development. Retrieved from http://www.isr.umich.edu/carss/about/Prospectus.pdf

Shields, P.M. (1991). School and community influences on effective academic instruction. M. S. Knapp and P. M. Shields (Eds.), *Better schooling for the children of poverty: Alternatives to conventional wisdom* (pp 313-328). Berkeley, CA: MrCutchan Publishing Corp.

Shives, K. (2014, October 30). Failing forward. *Inside Higher Ed*. Retrieved from https://www.insidehighered.com/blogs/gradhacker/failing-forward

Shonkoff, J. (2017). Breakthrough impacts: What science tells us about supporting early childhood development. *Young Children*, *72*(2), 8-16.

Shonkoff, J. P. & Phillips, D. A. (Eds). (2000). *From neurons to neighbourhoods: The science of early child development.* Washington, D.C.: National Academy Press.

Smith, J. R., Brooks-Gunn, J., & Klebanov, P. (1997) The consequences of living in poverty for

young children's cognitive and verbal ability and early school achievement. In G. J. Duncan and J. Brooks-Gunn (Eds.), *Consequences of growing up poor* (pp. 132-189). New York, NY: Russell Sage Foundation.

South Heights Elementary School. (2016, September). Retrieved from http://www.greatschools.org/kentucky/henderson/665-South-Heights-Elementary-School/quality/#Test_scores

Sparks, S. D. (2013, July). Dropout indicators found for first graders. *Education Week, 32*(37). Retrieved from http://www.edweek.org/ew/articles/2013/07/29/37firstgrade.h32.html?tkn=YRXFxf2U7fneiqZztQQsojrJgXCEYZRzZxk&cmp=ENL-EU-NEWS1

Stevenson, H. W., & Lee, S. (1990). Contexts of achievement. *Monographs of the Society for Research in Child Development, 55*(1/2), 1-119. Chicago, IL: The University of Chicago Press.

Sum, A. M. & Fogg, W. N. (1991). The adolescent poor and the transition to early adulthood. In P. Edelman and J. Ladner (Eds.), *Adolescence & poverty: Challenge for the 1990s* (pp. 37-110). Lanham, MD: Center for National Policy Press.

Suzuki, Y., Tamesue, D., Asahi, K., & Ishikawa, Y. (2015). Grit and Work Engagement: A Cross-Sectional Study. *PLOS One 10(9)*. Retrieved from https://doi.org/10.1371/journal.pone.0137501.

Vallerand, R. J., Blanchard, C., Mageau, G. A., Koestner, R., Ratelle, C., & Le´onard, M., Gagne, M. & Marsolai, J. (2003). Les passions de l'Aˆme: On obsessive and harmonious passion. *Journal of Personality and Social Psychology, 85*(4), 756-767.

Vandewalle, D. (2012). A growth and fixed mindset exposition of the value of conceptual clarity. *Industrial & Organizational Psychology, 5*(3), 301-305. doi:10.1111/j.1754-9434.2012.01450.x.

Vermeer, A. (2012). Mindsets: Where do they come from? *Self-Awareness*. Retrieved from https://alexvermeer.com/mindsets-where-do-they-come-from/

Wentzel, K. (2002). Are effective teachers like good parents? Teaching styles and student adjustment in early adolescence. *Child Development, 73*(1), 287-301.

Wilson, W. J. (1987). *The truly disadvantaged: The inner city, the underclass, and public policy*. Chicago: University of Chicago Press.

Appendix A

Intelligence

1. Do you feel that people are born smart? Explain your answer.
2. Do you feel that there are things that you can do to make you smarter? Explain your answer.

Goals

3. Tell me why you do your homework?
4. Tell me your plans and ultimate goals for your future. How are you going to reach your goals? Are these similar goals to that of your parents' current situation?

Effort

5. How do you feel about learning new things? What if the new things are difficult for you?
6. Tell me about a time when you felt like a hard worker.
7. Do you often set goals and not reach them due to pursuing something new? Explain your answer.

Responses to Failure

8. You have practiced for months and attended every clinic for the X team. When tryouts arrive you do not perform your best which results in not making the team. How do you handle the failure? What are your thoughts?

Support System

9. When you have a problem, exciting news, or a saddening situation, who do you go to for advice? Why?
10. Do you feel encouraged when you are at home? If so, by who? Do you feel encouraged at school? If so, by who? Explain your answers on how they encourage you.