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# Relationships Between Self-Concept, Teacher Expectation, and Academic Achievement: An Analysis of Social-Emotional Well Being and its Relation to Classroom Performance

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# Chapter 1: Introduction

## Background

As a current teacher at McAlister Intermediate School in Suffield, Connecticut, I am interested in analyzing the relationship between a student's self-concept, their academic achievement, and the expectations that their teacher holds for them within the classroom. My personal interests lead to a literature review and subsequent study examining existing research surrounding self-concept, teacher expectation, and their relationships to academic achievement.

As early as 1902, the construct of self-concept has been studied by psychologists and sociologists alike. In 1977, Robert Calsyn and David Kenny determined using a self-enhancement model that self-concept is a primary determinant of academic achievement. In the same study, Calsyn and Kenny also used a skill development model, which determined that academic self-concept emerges mainly as a result of academic achievement (Marsh & Martin, 2010). The consequent studies surrounding causal research regarding self-concept have attempted to determine which "comes first"- self-concept or academic achievement, as well as to determine the statistically significant paths leading both to and from academic achievement and self-concept.

In 1980, Charles West, James Fish, and Robert Stevens found that there was a "significant" correlational relationship between self-concept and achievement (West, Fish & Stevens, 1980), and in a meta-analysis conducted by B.C. Hansford and J.A. Hattie in 1982, consisting of 128 total studies, it was found that there was a mean correlation of .212 between academic achievement and self-concept. Similarly, in 1968, Robert Rosenthal and Lenore Jacobson determined that students for whom teachers had high expectations for in terms of intellectual development displayed greater progress in the classroom when compared to those for

whom teacher expectations were lower (Chen, Thompson, Kromrey & Chang, 2011). Furthermore, in a study conducted by Christine Rubies-Davies, students in classrooms lead by teachers with high student expectations progressed further and achieved higher on reading assessments than those in classrooms lead by teachers with low student expectations (Rubies-Davies, 2006). Additionally, positive academic oral feedback from teachers was found by Chen and associates to be strongly related to general self-concept, academic self-concept, and non-academic self-concept (Chen et al, 2011).

While existing research clearly indicates that there is a relationship between self-concept and academic achievement, and academic achievement and teacher expectation, there is a lack of research addressing the relationship between all three variables. Because elementary aged students spend so much time with their one classroom teacher, and because classroom teachers are expected to demonstrate that their students are growing appropriately academically, an understanding of how teacher expectations and student self-concept impact academic achievement will improve the practice of many teachers.

## Statement of the Problem

Existing research has indicated that there is a relationship between academic achievement and self-concept, as well as a relationship between academic achievement and teacher expectations. There is, however, a lack of research analyzing the relationship between all three variables, as well as literature addressing how teachers can use this information to improve their teaching practice. Therefore, the research problem is to investigate and analyze the relationship between academic achievement, self-concept, and teacher expectation.

## Purpose and Significance of the Study

The purpose of this study is to contribute to the existing body of literature surrounding self-concept, academic achievement, and teacher expectation, as well as to start a dialogue among educators surrounding the implementation of these findings in their own educational institutions.

In working to analyze self-concept, academic achievement, and teacher expectation variables together, this study looks to provide a research-based literature background for teachers and administrators to refer to in order to build a greater understanding surrounding the importance of high expectations and bolstering student self-concept while in the classroom.

Ideally, the outcome of my research will generate both data and discourse surrounding the importance of fostering self-concept, setting and communicating high expectations for all students, and how to use these strategies to communicate with both students and parents. Furthermore, this study aims to provide educators with useful data in regards to using the fostering of self-concept and setting high expectations to increase academic achievement within their own classrooms or schools.

## Research Design

This study used an action research design to answer three research questions. Action research was chosen for this particular study in order to, "explore a practical problem with an aim toward developing a solution to a problem," and because action research designs exist to, "gather information about, and subsequently improve, the ways their particular educational setting operates, their teaching, and their student learning (Cresswell, 2012). In studying the relationship between academic achievement, student self-concept, and teacher expectation, I am

aiming to improve not only my own teaching, but to provide data in order to help others improve theirs, as well.

The study will be conducted at McAlister Intermediate School, a 3-5 school in Suffield, Connecticut. During the 2017-2018 school year, when the study will be conducted, there will be eight third grade classrooms, seven fourth grade classrooms, and seven fifth grade classrooms. The target population of my study will consist of all three grades, and the sample that I will study consists of eight total classes from Grades 3-5. These teachers were those that volunteered to participate in the study, along with their students, because they were particularly interested in learning more about how to use self-concept and teacher communication of expectations to increase the academic achievement of their students and improve their own practice.

Quantitative data collection methods were used to collect data for this mixed methods action research design to answer the three research questions. Data was collected using a modified version of the Piers-Harris Self-Concept Scale and close-ended survey questions with students, as well as close-ended survey questions with teachers. Furthermore, results from the STAR Math and STAR Reading tests were analyzed to gauge the academic achievement of participating classes. The Piers-Harris Self-Concept Scale is a research-based, newly revised standardized assessment used to gauge self-concept in children as young as second grade. The close-ended survey consisted of five questions, meant to gauge the student's perceptions of their teacher's expectations of them. The five questions were adapted from Panorama Education's CASEL social-emotional surveys with permission from the publisher. The close-ended survey administered to teachers, while longer than the one administered to students, was also adapted from Panorama Education's CASEL social-emotional surveys. In order to ensure that the questions for the surveys were sound, understandable, and specific, I worked to revise and fine-

tune them with the assistance of a licensed school psychologist, a panel of veteran teachers, and a focus group of fourth grade students. This collaborative effort ensured that my survey questions were reliable, easily understood, free from bias or technical jargon, and easy to speak to. All surveys, as well as the Piers-Harris Self-Concept Scale, were administered via Google Forms, which allowed the forms to be easily administered, anonymous, and easily analyzed. The survey was taken at the discretion of the teacher, and the student self-concept scale and accompanying survey were administered during class time of the teacher's choosing.

The quantitative data collected for the purposes of this study were analyzed in order to gain an understanding of the relationship between self-concept, academic achievement, and teacher expectation. The quantitative data from the Piers-Harris Self-Concept Scale, the student survey, and the teacher survey was uploaded into the *Statistical Package for the Social Sciences (SPSS)* software program. Using SPSS, the data was organized by class (each labeled with a letter to maintain anonymity) and descriptive statistics were used to analyze the data. Data tendencies, as well as a standard deviation, were used to analyze the quantitative data. As a result of quantitative data analysis methods, observations were made for discussion further in the study.

To ensure reliability and validity of the gathered data, I used pilot testing and expert review when creating and modifying my data collection instruments. To carry out the pilot testing, the student survey was administered to a sample of eight fourth-grade students. After administration, students participated in a debriefing session, in which they suggested changes to provide clarity and specificity. To pilot test the teacher survey and teacher interview questions, the survey was provided to a group of veteran teachers, and feedback was given regarding clarity, specificity, and freedom from jargon and bias. To carry out the expert review, each

instrument was also provided to a licensed and employed school psychologist, to ensure clarity, specificity, and freedom from jargon and bias.

## Research Questions

The research questions guiding this study are as follows:

1. How does the way an elementary-school student responds to academic questions on the Piers-Harris Self-Concept Scale relate to their academic achievement, as assessed by standardized assessment?
2. How do a teacher's expectations of a student relate to the student's academic self-concept and their perceptions of their teacher's expectations?

These questions were written in an attempt to address the research problem, which was to investigate and analyze the relationship between academic achievement, self-concept, and teacher expectation

## Assumptions & Limitations

As is the case with action research projects, the data collected and analyzed during this study is unique to only McAlister Intermediate School in Suffield, Connecticut, a DRG C school. As a result, the findings can not be generalized to every school in the country, or even the state. The methodology, however, is transferable for those who are seeking to understand the relationship between self-concept, teacher expectation, and academic achievement. Additionally, the findings garnered in this study may be useful and instructive for schools that are seeking information on the relationship between these three variables.

## Definition of Terms

The phrase "self-concept" will be frequently used within this paper. For the purposes of this study, the definition is a relatively stable set of attitudes reflecting both description and

evaluation of one's own behavior and attributes as determined by Ellen Piers and Dale Harris, the authors of the Piers-Harris Self-Concept Scale (Piers & Herzberg, 2002). To the same end, the phrase "teacher expectation" will be defined as a teacher's evaluation of a student's potential behavior and their future academic achievement.

## Expected Findings

After reviewing the literature surrounding self-concept in elementary school students, teacher expectation, and self-efficacy, I expect to find that there is a statistically significant correlation between a student's self-concept score, their academic achievement as reported by their classroom teacher, and the classroom teacher's reported expectation level for their classroom as a whole. I am expecting to confirm that when a teacher holds higher expectations for their students as a group, individual student's self-concept is heightened, and their academic achievement increases as a result of the high expectations and heightened self-concept. I also expect that the data collected at McAlister Intermediate School will lend itself to the discussion surrounding teacher expectation, self-esteem, self-concept, classroom environment, and academic achievement. In Chapter Three, I go into further detail about these expected findings, as well as including a list of techniques used to ensure reliability and validity of the findings.

# Chapter Two: Literature Review

## Introduction

As traditional academic programming becomes progressively more in tune with the social and emotional needs of students, the construct of self-concept and its relation to social-emotional learning in kindergarten-12 (K-12) children becomes one that more experts in the field of education are focusing their attention on. In the Suffield Public School system, much of the 2017-2018 professional development focuses on social-emotional learning. Considering the rise in attention that is being paid to social and emotionally sensitive learning in present day education, the study of how a student's self-concept is linked to their academic performance, as well as their teacher's perceptions of their self-concept, seems vital.

A school offers a child a place to learn, practice, and demonstrate key academic benchmarks as they progress through grade levels. A teacher that is skilled in the art of teaching, and is able to differentiate instruction to target a student's' individual needs, is considered a successful and celebrated educator. This literature review will aim to research, identify and examine (a) the construct of self-construct and its place in existing educational research, (b) the relationship between a student's self-concept and their academic achievement, (c ) the relationship between a student's self-concept and their teacher's perception of that student's self-concept, and (d) assessments that measure the self-concept of children.

My current review of the existing literature surrounding these topics started with self-reflection into my own practice and experience teaching in various urban, rural, and suburban Connecticut school districts, which provided me with background knowledge from which I was able to structure my current research. The following keywords were used, both in combination with each other and separately, while searching databases that included *Education Resources*

*Information Center, ProQuest, Google Scholar,* and *JSTOR:* self-concept, expectations, Piers-Harris, assessment, achievement, self-belief, self-efficacy, self-perceptions, academic, causal, attributions, teacher, expectation, evaluation, measurement, and testing. I began with a broad search, then refined my findings by adding the words "and," "or," and, "with". For each research piece examined, I noted the (a) year of publication, (b) journal of publication, (c ) objective of the study, (d) findings of the study, and (e) the authors and their accreditations.

In this literature review, my research is divided into five overarching themes: (1)the construct of self-concept; (2) causal research regarding self-concept; (3) the relationship between teacher expectations and self-concept; (4) the relationship between academic achievement and self-concept, and; (5) research regarding the Piers-Harris Children's Self-Concept Scale. For each theme, existing research and its relevance to the current study is presented. To conclude the literature review, a summary is presented in which research is restated and synthesized.

## Review of the Literature

### *The Construct of Self-Concept*

For nearly 75 years, the term 'self-concept' has been one that has become associated with multiple definitions and has been subject to much debate. In consolidating the definitions found while researching for the current study, self-concept could be described in broad terms as the perception a person has about themselves. Ellen Piers and Dale Harris, the authors of the Piers-Harris Children's Self-Concept Scale, defined self-concept as a relatively stable set of attitudes reflecting both description and evaluation of one's own behavior and attributes (Piers & Herzberg, 2002). In a research review conducted by Shavelson, Hubner and Stanton in 1976, it was found that a review of definitions of self-concept published in various studies revealed seventeen different conceptual dimensions in which self-concept could be classified- stable,

changing, situational, phenomenal, internal, normative, absolute personal, non-evaluative, unidimensional and multidimensional being the most frequently applied (Shavelson et al, 1976). As a result of this tumultuousness in defining the construct, self-concept research has been limited in the past due to a lack of a consistent definition. Without one consistent definition, it is hard to correlate historically significant studies surrounding the construct of self-concept with one another. Charles Horton Cooley, American psychologist, posed in 1902 the idea of a "looking-glass self"- a group of ideas drawn from social interaction about how another individual views that person (Lynch, Foley-Peres, Sullivan, 2008). Carl Rogers, noted psychologist, stated in 1951 that, "the self is an organized configuration of self-perceptions...about an actual or idealized self of which the individual is aware," and in 1954, Abraham Maslow elaborated, proposing that individuals organized their needs into a hierarchy, in which they worked to satisfy their idealized or actualized self-image (Lynch et al, 2008).

Self-concept can only be self reported, as inferred self-concept by another is not self-concept, but another's attribution of one's self-concept. (Shavelson, Hubner & Stanton, 1976). A person's self-concept is formed through experience with and interpretations of one's environment (Marsh & Martin, 2011). Furthermore, self-concept also mediates the interpretation and influence of new events as they present themselves to an individual (Ames & Felker, 1979). Albert Bandura posited in 1986 that self-concept is a common mechanism of personal agency- that the construct influences outcomes of events in one's life (Bandura, 1976). He then proceeded to argue that while often used interchangeably, self-concept and self-efficacy are not identical concepts. Self-efficacy is a context-specific construct, in which an individual makes a judgement of their capabilities to perform a specific task. Self-concept is less specific, and refers to an individual's beliefs of their self-worth as a whole. Self-concept may be broken down into

academic and non-academic self-concept, but self-concept judgements are never task-specific- "Are you a good math student?" would be a self-concept judgement, while "Can you solve this specific math problem?" would be a self-efficacy judgement (Bandura, 1976). Susan Harter, a professor of psychology and longtime child development researcher, has posited that children just 3 or 4 years of age are able to describe themselves in concrete and observable terms, children aged 5-7 are able to elaborate on their personal attributes and competencies, and that children ages 8-11 are able to label their abilities and interpersonal characteristics, compare themselves to their peers, and integrate opposing attributes (Flahive, Chuang & Li, 2015).

In much of the current research regarding the construct of self-concept, a nomological network of interrelationships has been used to define self-concept in comparison to other constructs (a between-construct comparison) and also to compare properties within the construct of self-concept (a within-construct comparison) (Shavelson et al, 1976). Much of this construct definition has been structured by the work of Shavelson and colleagues, and this nomological network has been studied to help define self-concept in recent research. In working to define the construct of self-concept, Shavelson and colleagues stated that the construct was both multidimensional and hierarchically organized, with perceptions of personal behavior in specific situations at the base of the hierarchy, inferences about self in broader domains (social, physical, and academic) in the middle of the hierarchy, and a global self-concept (also referred to as self-esteem) at the top of the hierarchy (Flahive et al, 2015). They also identified seven features critical to the definition of self-concept- that the construct may be described as organized, multifaceted, hierarchical, stable, developmental, evaluative, and differentiable (Shavelson et al, 1976). The first concept characteristic, organized, refers to one's system of organizing experiences and assigning them meaning. The second feature, multifaceted, refers to the

particular facets that reflect the category system implemented by the individual- categories such as social acceptance, physical attractiveness, and ability. The hierarchical feature refers to the aforementioned hierarchy, featuring perceptions of personal behavior in specific situations at the base of the hierarchy, inferences about self in broader domains in the middle, and a global self-concept at the apex. Stability, the fourth feature of self-concept, is situationally dependent on one's position in the hierarchy of self-concept. As one descends down to the bottom of the hierarchy, self-concept varies greatly depending on the situation. General self-concept, however, is more stable. A fifth feature of self-concept is that it is developmental. This refers to the increasingly differentiated self-concept between individuals as age also increases, and the stages in which children are able to describe their own self-perceptions. A sixth feature, self-concept's evaluative nature, refers to the ability of an individual to make self-concept judgements in an evaluatory way. One can judge against absolute standards, such as the "ideal", or to significant others. The final characteristic- differentiability- posits that self-concept is influenced by specific experiences in one's life (Shavelson et al, 1976).

Historically, a unidimensional perspective of self-concept was widely accepted and used in research. A unidimensional perspective emphasizes a single domain of self-concept, typically referred to as self-esteem (Marsh & Martin, 2011). As Shavelson's research became more widely accepted, multidimensional perspectives began to emphasize the aforementioned multiple components of self-concept. Marsh and Craven reported in 2006 that while the acceptance of a multidimensional perspective of self-concept varies across social science disciplines, it's strongest support and widest acceptance is from the educational psychology field, with a strong focus on academic self-concept and its relation to academic achievement, school grades, student learning, and other academic outcomes.

While the lack of a commonly accepted definition of the construct as a whole has restricted the breadth of research into self-concept, the work of Shavelson and his colleagues has created a multidimensional definition used commonly in modern research, especially in the field of educational psychology. Using both within- and between-network comparisons, as well as the hierarchical perspective proposed by Shavelson, self-concept research and its application to the field of education has become a widely studied phenomena.

*Causal Research Regarding Self-Concept*

In 1977, Robert Calsyn and David Kenny studied self-enhancement and skill development models of the relationship between self-concept and academic achievement. According to the self-enhancement model, it was found that self-concept is a primary determinant of academic achievement. Contrarily, the skill development model determined that academic self-concept emerges mainly as a result of academic achievement (Marsh & Martin, 2010). Consequently, a commonly posed question in the field of education is, "Which comes first- self-concept or academic achievement?" Unsurprisingly, there is no clear answer. A growing body of reciprocal effects model research supports the theory that academic self-concept both affects and is affected by academic achievement (Marsh & Martin, 2010). Thusly, most researchers are now focused on determining whether there are statistically significant paths leading both from and to academic achievement and self-concept, in support of both self-enhancement model predictions and skill development model predictions.

In 1990, Herbert W. Marsh tested the causal ordering of academic self-concept and academic achievement using data from the nationally representative US Youth in Transition study. Data from early 10th grade (Time 1), late 11th grade (Time 2), late 12th grade (Time 3) , and 1 year after high school (Time 4) were considered using four standardized test scores, self-

concept as gauged by self-report responses, and school grades. At Time 2, it was found that self-concept was influenced by academic ability and Time 1 self-concept, but it was not influenced by Time 1 grades. It was also found at Time 2 that grades were influenced by Time 1 self-concept and Time 1 grades. At Time 3, school grades were discovered to be significantly influenced by Time 2 self-concept and Time 2 grades. Similarly, Time 4 self-concept was significantly influenced by Time 2 self-concept (there was no Time 3 self-concept measure), but not by Time 3 grades (Marsh, 1990). Summarily, these findings support the effect of prior self-concept on subsequent school grades.

In 2005, Jeffrey Valentine, David DuBois, and Harris Cooper conducted a meta-analysis of the existing research regarding the relationship between or self-concept and academic achievement. In analyzing a total of 55 publications and 60 total samples, they concluded that the effect of prior self-concept on subsequent achievement after controlling for the effects of prior achievement was highly significant, and positive in 90% of the studies in their meta-analysis. Valentine and colleagues went on to posit that the effects of prior self-beliefs were significantly stronger when the self-belief measure was based on academic self-beliefs, rather than global measures of self-esteem. Furthermore, it was determined by Valentine and his colleagues that when the self-belief measures and achievement measures were match in terms of subject area (for example, mathematics achievement and mathematics self-concept), the effects of self-concept on subsequent achievement was significantly stronger (Marsh & Martin, 2010).

In 2005, Marsh and a different group of colleagues tested the mediating variable of intrinsic motivation by using structural equation modeling of longitudinal data based on two large, nationally representative samples of German high school students. This study expanded causal ordering reciprocal effects models to include academic interest, school grades,

achievement test scores, and academic self-concept. In both studies, it was found that the effect of prior math self-concept was “substantial” for later math performance, as well as on math test scores. Furthermore, prior self-concept also significantly influenced measures of academic interest beyond the effects of earlier measures of school performance, achievement test scores, and academic interest (Marsh & Martin 2010). These results indicate the positive effects of academic self-concept on academic interest and academic achievement, gauged by standardized test scores and school grades.

In synthesizing research conducted regarding the causal relationship between academic self-concept and academic achievement through the lens of education, questions often arise surrounding the role of this relationship in the classroom. Given the aforementioned research, it is reasonable to assume that there is some kind of a cyclical relationship between academic achievement and self-concept, and that each influences the other. In 1979, this causal relationship was discovered by Carole Ames and Donald Felker, who studied 64 sixth-grade children. These children were classified as either high or low self-concept based on the Piers-Harris Self-Concept Scale, then were given  tasks on which they succeeded or failed. It was found that high self-concept children, more than low, attributed their success to high levels of skill, and engaged in more self-reward for their success. In contrast, low self-concept children responded to their failure with higher levels of self-punishment than high self-concept children (Ames & Felker, 1979). These findings demonstrated that children who have differing levels of self-concept also have differing causal interpretations of achievement outcomes, and use differing levels of self-reinforcing behaviors. In this study, low self-concept children seemed to have a predisposition to self-critical behavior, impacting their future achievement in these areas. As posited by the likes of Alfred Bandura, Paul Pintrich, and Dale Schunk, researchers in the

area of self-concept, “students lacking confidence in skills they actually possess will be less likely to engage in tasks requiring those skills and put forth the needed effort, and will be more likely to quit when the task becomes challenging,” (Mattern & Shaw, 2010).

Research into the causal relationship between academic achievement and self-concept has revealed that there is no straightforward, one-way relationship. Rather, it has been found that academic achievement impacts self-concept, and that self-concept impacts subsequent academic achievement. As a consequence of earlier research, studies focused on the relationship between these two variables were, and continue to be, a major area of focus in the field of educational psychology.

*Academic Achievement and Self-Concept*

The relationship between academic achievement and self-concept in students is one that has been widely studied for the past few decades, especially with the rise of social and emotional teaching and learning in the realm of education. Focusing on the cyclical relationship between academic achievement and self-concept has become an important lens through which to view achievement in schools.

In 1980, Charles West, James Fish, and Robert Stevens researched relationships between general self-concept and school achievement, as well as academic self-concept and school achievement. They determined that school achievement is “causally predominant” over academic self-concept, and that the primary contributing factors to academic self-concept are school achievement, and social feedback from others (West, Fish & Stevens, 1980). Additionally, West and his colleagues found that there was a “significant” correlational relationship between self-concept and achievement. These correlations ranged from .18 to .50 (West et al, 1980). In a

meta-analysis surrounding the relationship between academic achievement and self-concept conducted by B.C. Hansford and J.A. Hattie in 1982, consisting of 128 total studies, 202,823 total persons, and 1,136 correlations produced during the coding of research, it was found that these correlations ranged from -.77 to .96, with a mean of .212, a standard deviation of .231, and a median of .231 (Hansford & Hattie, 1982). To further analyze these correlations, an AMT procedure was conducted to garner a measure of center that restricted the influence of extreme observations on the value of the estimator. Using the AMT, an "average" correlation of .23 was found among all of the variables considered (Hansford & Hattie, 1982). In considering all of these estimates, Hansford and Hattie determined that the average relationship between self-concept and measures of academic performance and achievement was in the range of .21 to .26 (Hansford & Hattie, 1982). In conducting their meta-analysis, it was also found that there was no significant relationship between gender and overall self-regard, that there was an increase in the relationship between self-concept and academic achievement during the formal schooling period (.12 to .27), and that there was a trend for students of a lower socioeconomic status to have a less positive relationship between self-concept and academic achievement. The researchers also determined that the relationship between the two variables was higher for Anglos (citizens of the United States, Canada, Australia, and Britain) than that for blacks (Hansford & Hattie, 1982).

In studies conducted in the last thirty years surrounding the construct of self-concept and its relationship to academic achievement, various degrees of correlation have been determined. According to the meta-analysis conducted by Hansford and Hattie, correlations ranged from -.77 to .96 of the 1,136 correlations studied (Hansford & Hattie, 1982). Of these 1,136 correlations discovered between academic achievement and self-concept, 944 of them were positive, 22 were zero, and 170 were negative, indicating that the majority of the research regarding this

relationship indicates that there is, indeed, a positive relationship between the two (Hansford & Hattie, 1982).

In conducting my literature review to gain an orientation for my own research, I discovered multiple studies describing this positive correlation. In a study focused on mathematics self-efficacy, achievement, and math homework conducted based on achievement data from the 2003 Program for International Student Assessment (PISA), it was revealed that when mathematics self-efficacy was added as a predictor of mathematics achievement in addition to gender, race, time spent on mathematics homework and homework support, it was found that the model accounted for 44% of the total variation in mathematics achievement. Thusly, mathematics self-efficacy explained an additional 20% of the total variation in mathematics achievement beyond that predicted by race, gender, and homework related variables (Kitsantas, Cheema & Ware, 2011). While self-concept and self-efficacy are not the same construct, they are closely related, and these findings should be considered as an indicator of a positive relationship between self-concept and mathematics achievement.

In a study conducted on 159 academic underachievers in 7 elementary schools in a major American metropolitan school system, participants took both the Metropolitan Achievement Test (MAT) and the Piers-Harris Children's Self-Concept Scale. On all seven dependent measures within the study, the high reading achievement group (based on the MAT) scored the highest mean self-concept score, and the low reading achievement group scored the lowest mean self-concept score (Rogers, Smith & Coleman, 1978). Furthermore, when the ability groups were based on mathematics achievement, it was found that low math achievers garnered significantly lower self-concept scores than either the medium or high achievers (Rogers et al, 1978). When the students studied were grouped by ability within their classroom group on the basis of reading

or math achievement scores, a “strong positive relationship” was found between academic achievement and self concept- an average composite self-concept score of 9 points for reading and almost 13 for math (Rogers et al, 1978).

Throughout much of the research studied to gather an orientation for my own research, it was apparent that self-concept and academic achievement share a positive relationship, to varying degrees across studies. Awareness of this relationship on the part of all educators would result in an increase in social-emotional support and encouragement when teaching students, which may consequently result in students with higher self-concept, and thusly, achievement at higher levels.

*The Relationship between Teacher Expectations and a Student’s Self-Concept*

Often, teachers and educators hear about how they are expected to motivate, inspire, and improve their students throughout the school year. Quite rarely, however, are concrete examples, theories, or strategies for doing so discussed. As a result, it is possible that many teachers are unaware of the relationship between the expectations that they hold for their students and their student’s self-concept.

The work of Robert Rosenthal and Lenore Jacobson in 1968 revealed that students for whom teachers had high expectations for in terms of intellectual development displayed greater progress in the classroom when compared to those for whom teacher expectations were lower (Chen, Thompson, Kromrey & Chang, 2011). Building upon this work, Brophy (1983) and Weinstein (1989) stated, based on their own work, that teacher expectations strongly influence the expectations that students hold for themselves (Chen et al, 2011). “Teacher Expectancy” can be defined as a teacher’s evaluation of a student’s potential behavior and their future academic achievement. Often, this evaluation is based on the ascribed characteristics of students- things

like parent's education level, parent's occupations, student gender, and student race- and achieved characteristics of students- past academic achievement and educational ambitions, for example. Teachers may hold both academic expectations and non-academic expectations of their students, both of which occur within the school environment. Academic expectations relate to academic achievement, while non-academic expectations are concerned with behavioral expectations, among other characteristics. These expectations are communicated through both oral and written communication, as well as non-verbal communication such as body language, facial expressions, and other non-verbal outlets.

In studies conducted by Weinstein and various colleagues in 1982 and 1988, students were most likely to report that low and high-achieving students received markedly different teacher treatment, and that students felt that teachers gave high-achieving students more positive feedback, more chances, greater choice in academic tasks, and less directed work than the same teachers provided to students for whom they had lower expectations (Chen et al, 2011). Because those lower-achieving students were presented with fewer chances, choices in task and directed work, they rarely achieved as highly as those that were perceived as higher-achieving by their classmates. In five studies, spanning 1979 to 2000, Weinstein and colleagues used the Teacher Treatment Inventory, a self-report questionnaire used to determine a student's perceptions of how their teachers treat them as students, with first through fifth graders to determine perceptions of treatment by teachers of both high and low achievers. They determined that, when compared to low achievers, the majority of students that reported felt that teachers interacted more positively with high-achievers, that teachers held higher expectations for high-achievers, and that teachers offered them greater opportunities for leadership (Rubie-Davies, 2006). Babad, in 1990, extended Weinstein's work by conducting a factor analysis of teacher behavior toward

students. She derived three factors- learning support, emotional support, and pressure. Her study indicated that students tended to perceive that low-achieving students received more learning support and less pressure than higher-achieving students, but that low-achieving students receive less emotional support from their teachers than their high-achieving classmates (Chen et al, 2011). Babad later reported that while teachers did seek to display warmth and emotional support to all students with equality, students were able to determine that some of these displays were not genuine- that teachers showed a natural affection for high-achieving students through body language that was not present when communicating with lower-achieving students (Rubie-Davies, 2006). Subsequently, as a result of less pressure and less emotional support, lower-achieving students frequently do not receive the academic challenge and emotional support needed to grow as a student. Similar to Babad's study of communications between teachers and students was Babad, Bernieri and Rosenthal's 1987-1991 study investigating student interpretation of teacher behaviors using video. Israeli teachers were filmed interacting with both high and low achievers in their classrooms. The video clips were first shown to Israeli students, who spoke the same language as the teachers, and then to students in New Zealand who did not understand Hebrew. Fourth grade Israeli students were able to tell when teachers were talking to high or low achieving students, even though the students were not shown in the frame of the video at all, and the video lasted only ten seconds. 10 year old students in New Zealand were also able to recognize when the teacher on the screen was interacting with high or low achievers based on facial expressions, tone, and body language alone, as they could not understand the language (Rubie-Davies, 2006). This study showed not only the strength of nonverbal communication between teacher and student, but the amount of opportunity a teacher has to convey expectations, feedback, and warmth, both verbally and nonverbally.

The expectations that a teacher holds for his or her students, whether conscious or not, have an effect on any given student's academic growth. In a study conducted by Christine Rubies-Davies on 256 students from 12 classrooms in Auckland, New Zealand, self-perceptions of students placed in the classrooms of high and low expectation teachers were analyzed. The high expectation teachers, six in total, held expectations that were higher than their achievement in reading as measured at the end of the previous year. The average expectation group, made up of three teachers, held expectations that were high, but not as high as the first group of teachers. The low expectation teachers, three in total, held expectations that were below the end of the year reading achievement from the previous year. On a scale from 1 to 7, student reading scores in the high expectation group grew from a 3.52 to a 4.80, a growth of 1.28 points. Student scores in the average expectation group grew from a 3.80 to a 4.06, a growth of .26 points. Student scores in the low expectation group grew from a 4.69 to a 4.78, a growth of only .9 points (Rubies-Davies, 2006). While the students in the low and average expectation groups made progress, those gains were smaller than those of the students in the high expectation groups. The results of this particular study demonstrate the impact that teacher expectations hold on student achievement. In addition to the achievement test, all students involved in the study also participated in the completion of the Reading, Mathematics, Physical Abilities, Peer Relations, and Teacher Opinion subscales of the Self Description Questionnaire-1, a self-concept self-reporting assessment. In the reading subscale, it was found that there was no statistically significant difference in the self-concept score between the three groups of students at the beginning of the year. By the end of the year, however, a statistically significant difference was found between the three groups- the mean score for the low expectation group was significantly lower than the mean scores of the high expectation and average expectation group (Rubie-

Davies, 2006). The same held true when the Mathematics subscale was analyzed, but not when the Physical Abilities or Peer Relations subscale scores were analyzed (Rubie-Davies, 2006). When mean beginning and end of year subscale scores were analyzed for the Teacher Opinion subscale, significant differences were found. At the beginning of the year, the mean score for the high expectation group was significantly greater than the average expectation group. At the end of the year, it was found that the difference between the high and average expectation groups had disappeared, by that the mean scores for the high expectation group were significantly greater than the mean scores for the low expectation group (Rubie-Davies, 2006). It is apparent that in the academic areas, a student's self-concept changed to match their teacher's expectations of them- while there was no difference in mathematics self-concept at the beginning of the year, by the end of the year the self-concept for the high and average expectation group had increased, while the low-expectation group had declined (Rubie-Davies, 2006). Because teacher expectations had no significant statistical bearings on the Peer Relations or Physical Abilities subscales, this study suggests that teacher beliefs and expectations of students influence self-concept in curricular areas more so than non-curricular areas.

Teacher feedback is a crucial way in which a student's general and academic self-concept is forged. In a literature review conducted by PC Burnett in 1999, it was revealed through relevant literature that positive statements and interactions made by "significant others" in a student's life- people like friends, parents, siblings, and teachers- were related positively to general self-concept. Contrarily, negative statements and interactions with significant others were associated negatively with general self-concept (Chen et al, 2011). These findings exhibit the importance of both written and oral feedback from teacher to student, and how positive feedback was more valuable to students when it comes to academic growth than negative

feedback. Additionally, in an investigation into the effectiveness of oral feedback on enhancing academic self-concept, Craven and colleagues discovered that appropriate performance feedback given by credible others, like teachers, modestly enhances both general and academic self-concept over a short period of time (Chen et al, 2011). In a study conducted on 1,598 Taiwanese children in Grades 3-6 by Yi-Hsin Chen and associates, a structural model of relationships between perceived oral feedback from teachers and student self-concept revealed that greater positive academic oral feedback from teachers was positively correlated to higher self-concept, while more negative academic oral feedback from teachers was associated with lower self-concept (Chen et al, 2011). Additionally, positive academic oral feedback from teachers was more strongly related to general self-concept, academic self-concept, and non-academic self-concept than negative academic oral feedback. Those Taiwanese elementary school students who perceived that they received more positive academic feedback tended to have higher self-concept in all three areas, while those perceiving that they received more negative feedback showed lower self-concept (Chen et al, 2011). The same study concluded that students for whom teachers held high performance expectations in the classroom tended to perceive more positive and less negative oral feedback than the students that were perceived as low-performers by teachers, and that teachers self-reported that they more frequently use criticism toward students for whom they hold lower expectations (Chen et al, 2011). This study supports the theory that positive feedback is related to a student's academic self-concept, and that a teacher's expectancies and oral feedback can become a self-fulfilling prophecy, of sorts, for student self-concept.

The relationship between teacher expectation, self-concept, and academic achievement is one that is vital to understand in order to foster growth in the classroom. The studies that have

been conducted have come to a decided conclusion that when a teacher holds high expectations for their students, the students have shown more academic growth.

*The Piers-Harris Children's Self-Concept Scale*

Self-concept is one of the most popular concepts in current psychological literature, but as previously discussed, the definitions of self-concept are often poorly constructed, and the construct itself is difficult to assess and quantify. While multiple assessments for self-concept are currently widely used, the variation between assessments requires the user to have a deep understanding of the construct, purpose, and intended audience of the assessment being used. Some commonly used self-concept assessments gauge global self-concept, more commonly referred to as self-esteem, while some focus more narrowly on specific aspects of self-concept, such as academic self-concept, athletic self-concept, and so on. Some, like the Piers-Harris Children's Self-Concept Scale, provide the user with a total score and cluster scores- an overall measure of self-concept as well as measures of more specific aspects of the user's self-concept.

Frequent methods of questioning used in existing self-concept assessments include rating scales, checklists, Q-sorts, and free responses. Rating scales are the most frequently used, composed of a set of statements to which the individual being assessed has to agree or disagree to varying degrees. Checklists require the individual being assessed to check off all descriptions of themselves, while Q-sorts involve the individual sort self-descriptors into piles ranging from "most like me" to "least like me", with a predetermined maximum amount assigned to each pile. Free response questions are not frequently included in most self-concept assessment tools, but exist in much self-concept discussion. This simply requires the individual being assessed to complete partial statements with their own self-beliefs.

The original Piers-Harris Children's Self-Concept Scale, or Piers-Harris, as it is commonly referred, was developed in the 1960's as an assessment to be used in clinical and educational evaluations. The assessment was based on the idea that individuals maintain consistent beliefs about themselves throughout their lives. These beliefs are developed and stabilized throughout childhood as a result of the interaction between the individual and their environment, as well as the individual and the behaviors and attitudes of others. While this may change over time as a result of environmental or developmental changes, or changes in priorities or values, this change is never rapid, or a response to an individual experience or intervention (Piers & Herzberg, 2002).

The Piers-Harris assessment was written based on the following six assumptions:

1. Self-concept is phenomenological in nature- not something that can be observed directly, but something that must be inferred from behaviors or assessed through self-report.
2. Self-concept has both global and specific components- it reflects how an individual feels about the characteristics that describe them as a person as a whole, as well as an individual's self-appraisal in regards to specific areas of functioning.
3. Self-concept is relatively stable- in children, more situationally dependent, but growing increasingly stable over time.
4. Self-concept has an evaluative, as well as a descriptive, component- representing an individual's accumulating judgements concerning themselves, as well as internalized judgements gathered from others.
5. Self-concept is experienced and expressed differently by children at various stages of development- as children grow in age, self-concept becomes increasingly differentiated as they integrate experiences and background knowledge.

6. Self-concept serves to organize and motivate behavior- the belief that an individual's' action is guided by their judgement of whether a new behavior is consistent with their own self-image. (Piers & Herzberg, 2002).

The original Piers-Harris assessment was based off of the work of Arthur Jersild, a developmental psychologist who asked children what they like and dislike about themselves. The statements were then grouped into eleven subcategories- physical appearance, clothing and grooming, health and physical well-being, home and family, recreational enjoyment, ability in play and sports, academic performance and attitudes about school, intellectual abilities, special talents, "Just Me, Myself," and personality characteristics, inner resources, and emotional tendencies. An initial set of 164 questions, written as simple declarative statements, were then written to reflect these eleven aspects of children's self-concept (Piers & Herzberg, 2002). In order to reduce response bias, half of the statements were phrased negatively ("I behave badly at home") and half were phrased positively ("I have many friends"). Most, but not all, items were written to avoid double-negative constructions and qualifiers like "many" or "often" (Piers & Herzberg, 2002).

These 164 preliminary items were administered to 90 children from grades 3 through 5. The items were read aloud while children followed along, and it was determined that the children understood the statements and that the assessment could be completed in about 35 minutes (Piers & Herzberg, 2002). Items answered one way by less than 10% or more than 90% of individuals were inspected, and most were dropped, leaving 140 items. After a second pilot, conducted on 127 sixth-grade students, the thirty highest and thirty lowest scores were identified, and items only remained on the assessment if they (a) discriminated significantly between the high and low scoring groups, and (b) if they were answered in the expected direction by at least 50% of the

high scoring group (Piers & Herzberg, 2002). By the end of the two pilots, 80 items remained on the original Piers-Harris assessment. In 1963, Ellen Piers investigated the multidimensional nature of self-concept in regards to the assessment by conducting a principal components analysis using a sample of 457 sixth graders. Varimax rotation indicated that there were six interpretable factors that accounted for 42% of the variance in item responses. These factors were later labeled Behavior, Intellectual and School Status, Physical Appearance and Attributes, Anxiety, Popularity, and Happiness and Satisfaction, and became the basis of the cluster scales of the Piers-Harris assessment (Piers & Herzberg, 2002).

A total score, out of a possible 80, was calculated by crediting one point to each item answered in the direction of positive self-concept. In the same way, cluster scales were scored by crediting one point for each item answered in the direction of positive self-concept in the context of the cluster (Piers & Herzberg, 2002).

The primary goals for the revision of the Piers-Harris assessment were to update and improve the test's normative data and its item set (Piers & Herzberg, 2002). During the normatization of the original Piers-Harris in the early 1960's, the sample was recruited from one single public school system in rural Pennsylvania, which was relatively homogenous (Piers & Herzberg, 2002). Additionally, when the cluster and validity scales were developed, they were normed on different samples than what was used to norm the Total score (Piers & Herzberg, 2002). Furthermore, some items on the assessment were written with language that children had difficulty understanding, due to outdated language or low-frequency words (Piers & Herzberg, 2002). Finally, there were items that had relatively limited psychometric utility in terms of self-concept assessment that could be deleted, as determined by several researchers (Piers & Herzberg, 2002).

In an attempt to re-standardize the assessment, a sample of 1,387 American students, 7 through 18 years old and distributed in proportion to the ethnic groups present in the U.S. Census, were assessed (Piers & Herzberg, 2002).

In order to improve the assessment in terms of psychometric utility, items that contributed only to the Total score and not to any of the six cluster scores, as well as items including outdated language (such as, “I have lots of pep”) were targeted for possible elimination. Statistical analyses established that deleting these items, 20 in all, would result in no appreciable loss in Total score or cluster score reliability, and that scores from the new 60-item assessment correlated highly with the original 80-item set (Piers & Herzberg, 2002). Additionally, the reduction of twenty question results in a significant administration time decrease for the assessment. Further revisions made to the assessments include a change in language regarding “cluster scores”- it was determined that the term “domain score” was more functionally appropriate for the assessment, considering that the questions are attempting to determine specific domains of an individual’s self-concept (Piers & Herzberg, 2002). Additionally, the Anxiety scale was renamed “Freedom from Anxiety”, to clarify the meaning of a high score in the domain- many were accidentally interpreting a high score in the Anxiety domain as high levels of anxiety, which was not the correct interpretation. Similarly, the Behavior domain was renamed Behavioral Adjustment (Piers & Herzberg, 2002).

The original Piers-Harris assessment included one Validity scale- an Inconsistent Responding (INC) index, which was designed to identify random response patterns from individuals completing the assessment. In the revised Piers-Harris 2 assessment, two Validity scales are present- an extensively resolved INC scale, as well as a Response Bias (RES) index, which helps the test user identify deviant response sets (Piers & Herzberg, 2002). To construct

the INC scale, the 60 items on the Piers-Harris 2 were examined to determine pairs of items in which it was possible to produce inconsistent responses- for example, “It is hard for me to make friends,” and “I have many friends.” Following, a correlation matrix was formed for all 60 items. Pairs that correlated at $r \geq .25$ were analyzed, and pairs were retained if the items created the possibility for logically inconsistent responses. Then frequency tables were created for all retained pairs to determine which response combinations (i.e., a yes on one item but a no on the other) occurred least frequently in the sample- pairs were retained if they produced a pair of inconsistent responses that occurred in less than 10% of the sample. These procedures produced an INC scale of 15 items, with no duplicate items and distributed evenly amongst the six domain scales. This index is scored by crediting 1 point for each pair of items for which the individual taking the test gives the identified combination of inconsistent responses, resulting in a possible INC index score ranging from 0 to 15. When a child scores 4 or higher on this index, the assessment score is interpreted as inconsistent- any Piers-Harris 2 set that resulted in an INC index score of 4 or higher had a 91% probability of being completed at random (Piers & Herzberg, 2002).

The Response Bias (RES) scale measures the tendency for positive or negative result bias. A positive bias demonstrates a tendency of the respondent to answer yes regardless of the question, while a negative response bias means the opposite. The RES index allows the test administrator to take this bias into account when interpreting the results of the Piers-Harris 2. This index is a count of the number of items to which the respondent answered “yes”, meaning the possible score range for the RES index is 0 to 60. High RES scores indicate a positive response bias, while low RES scores indicate a negative response bias. In the Piers-Harris 2 standardization sample, the mean RES score was 29.39, and the standard deviation was 5.28 with

a normal distribution of scores. Cutoff scores for interpretation were set at +/- 2 standard deviation units, corresponding to RES scores of 40 and 18, respectively. As a result, respondents who scored 40 or above are identified as having given a disproportionate amount of yes answers, while respondents scoring 18 or below were identified as having given a disproportionate amount of no answers (Piers & Herzberg, 2002).

Following the revisions made to the assessment, coefficient alpha values for the 80-item original Total (TOT) score and the revised 60-item TOT score were .93 and .91, respectively- indicating that both versions demonstrate significant internal consistency, and that no reliability had been lost in the revision process (Piers & Herzberg, 2002). Furthermore, the original and the revised TOT scores correlate at .98, which indicates that the scores are functionally equivalent (Piers & Herzberg, 2002). Moderator effects for the assessment were examined by calculating average T-scores for groups defined by moderator variables, then compared to the average T-score for the entire sample. After testing for age, sex, ethnicity, cultural differences, socioeconomic status, and U.S. geographic region, it was determined that one set of non-stratified normative data could be applied to interpret assessment scores from the Piers-Harris 2 (Piers & Herzberg, 2002). As a whole, the revised manual for the Piers-Harris 2 assessment indicates that,

> *"The Piers-Harris 2 is a reliable and valid instrument for the measurement of children's self concept...the revised measure has excellent internal stability, and the measure's test-retest reliability is upheld by numerous studies of the original Piers-Harris. ...Construct validity is further supported by studies indicating that the original and revised instruments show expected relationships with self-concept questionnaires… and several studies support the criterion validity of the Piers-Harris by showing that it can differentiate between groups that would be expected to differ in self-concept," (Piers & Herzberg, 2002).*

While no official computer-administered version of the Piers-Harris 2 assessment currently exists, researchers have created rudimentary versions to analyze the respondent preference between the traditional paper-and-pencil version and the possible multimedia version. 248 children from first through fourth grade in three elementary schools in the northern part of Taiwan were divided into two groups- in the first session, group one was administered a multimedia version of the Piers-Harris 2, while the other group took a traditional version. Four weeks later, the group switched assessment methods and completed the questions again (Flahive et al, 2015). When comparing the six-factor model between the multimedia and paper-and-pencil versions of the Piers-Harris 2, results indicate that both versions have a clear, distinct 6-factor structure of children's self concept, and that the factor structures are the same in both groups (Flahive et al, 2015). Furthermore, equivalence between the two versions were examined by calculating Intraclass Correlation Coefficients (ICCs) between the corresponding total score and the scores of the subdomains at two levels- the total study sample and the grade level. The ICC for the total sample was found to be .81, while the grade ranges range from .77 to .86. The ICCs for the scores of the domain scales of the total sample range from .65 (Popularity) to .78 (Intellectual and School Status) (Flahive et al, 2015). Additionally, researchers found that 52% of the respondents preferred the multimedia version when compared to the paper-and-pencil version, 63% responded that the multimedia version was easier to answer, and 74% were willing to answer the score again when provided with the opportunity to complete it digitally, as opposed to 35% that reported being willing to answer all items again via paper-and-pencil (Flahive et al, 2015). As a whole, the study indicated that the scores of the multimedia and the paper-and-pencil versions of the assessment were "highly equivalent," and that participants had a higher motivation to participate in the multimedia version of the assessment (Flahive et al, 2015).

Similarly, in a study conducted on 279 students ranging from 8 to 17 years old in which 57 of the participants completed the paper-and-pencil version of the test, while 222 participants completed a multimedia version. As a result, researchers determined that no differences emerged between modes of administration for cluster scale or total scale validities, with a total .90 coefficient alpha score (Simola & Holden, 1992).

## Summary

The purpose of this literature review was to research, identify, and examine the concept of self-construct and its place in existing educational research, the relationship between a student's self-concept and their academic achievement, the relationship between a student's self-concept and their teacher's perception of that student's self-concept, and assessments that measure the self-concept of children. Key themes that were discovered in the process of my research were the construct of self-concept, causal research regarding self-concept, the relationship between teacher expectations and self-concept, the relationship between academic achievement and self-concept, and research regarding the Piers-Harris Children's Self-Concept Scale.

The literature that was reviewed revealed a large amount of existing research in the separate areas of self-concept, academic achievement, teacher perception, and the Piers-Harris Children's Self-Concept Scale. There were no studies, however, that centered around how a teacher's perception of a student relates to their self-concept, and how their academic achievement is impacted.

# Chapter 3: Methodology

## Purpose

The purpose of this study was to analyze the relationship between a student's self-concept, teacher perception of a student's self-concept, and student achievement in a classroom setting. This purpose led to the creation of the following research questions:

1. How does the way an elementary-school student scores on the Piers-Harris Children's Self-Concept Scale impact their academic achievement when participating in activities inside the classroom, as determined by the student and the teacher?
2. How do a teacher's expectations of a student relate to the student's academic self-concept?

In working to answer these research questions, this purpose led to an examination of how a student's self-concept impacts them academically, and how this impact could be either lessened or heightened by a student's teacher, dependent on the teacher's perception of the student's self-concept. Furthermore, the research sought to explore how both teachers and parents can work to use a student's Piers-Harris Self Concept Scale scores to differentiate instruction and communication to best facilitate the education of the student.

## Research Design

John W. Cresswell described action researchers as those that, "explore a practical problem with an aim toward developing a solution to a problem," (Cresswell, 2012). He goes on to state that action research designs are, "systematic procedures done by teachers...to gather information about, and subsequently improve, the ways their particular educational setting operates, their teaching, and their student learning," (Cresswell, 2012). This study will aim to understand how to use a student's Piers-Harris Self-Concept Scale score to improve the teaching

and learning process within a classroom setting by using multiple forms of quantitative data collection. This quantitative approach to gathering data will allow me to gain data-based knowledge from both teachers and students in order to work to answer my research questions.

Multiple sources of quantitative data will be used in order to attempt to answer my research questions. In the table below, the question and the corresponding data collection methods can be found.

*Research Questions and Corresponding Data Collection Methods*

| Research Question | Methods |
|---|---|
| How does the way an elementary-school student scores on the Piers-Harris Children's Self-Concept Scale impact their academic achievement when participating in activities inside the classroom, as determined by the student and the teacher? | • Piers-Harris Self-Concept Scale<br>• Close-ended survey questions<br>• STAR Math & STAR Reading Scaled Scores |
| How do a teacher's expectations of a student relate to the student's academic self-concept? | • Close-ended survey questions |

**Self-Concept Scale**

A comprehensive description of the Piers-Harris Self-Concept Scale can be found in the previous literature review chapter. For the purposes of my research study, and in the interest of garnering as much participation as possible, the Piers-Harris Self-Concept Scale will be adapted to a Google Forms survey, and will be pared down to sixteen questions that focus on the Academic domain from the original sixty. In conducting my literature review, multiple studies concluded that the scores of multimedia and the paper-and-pencil versions of the assessment were "highly equivalent," and that participants had a higher motivation to participate in the multimedia version of the assessment (Flahive et al, 2015). Similarly, in a study conducted on

279 students ranging from 8 to 17 years old in which 57 of the participants completed the paper-and-pencil version of the test, and 222 participants completed a multimedia version, it was determined that no differences emerged between modes of administration for cluster scale or total scale validities. Overall, the two versions had a total .90 coefficient alpha score (Simola & Holden, 1992). Students will complete this Google Form adaptation of the Piers-Harris scale completely anonymously, and all results will be destroyed following the conclusion of the research.

**Close-Ended Survey**

Students that participated in the Piers-Harris Google Form survey to assess their self-concept will also participate in a brief, 5-question, Likert-scale survey asking them to answer questions regarding their teacher's expectations of them as a student academically, and how they perceive their teachers understanding of their own self-concept. By limiting the survey to five questions, and by creating each question to be close-ended, the elementary aged students will not feel overwhelmed. This survey will be administered anonymously,

## Data Analysis Methods

This research is aiming to understand the relationship between student self-concept, teacher expectation, and academic achievement. After data collection and analysis, I will discuss how data collected regarding these domains can be used to communicate with parents and improve instruction within the classroom.

After quantitative has been collected and cleaned, descriptive statistics will be used to analyze the quantitative data collected from the Piers-Harris Google Form survey, the five-question close-ended survey for students, and the close-ended survey administered to participating teachers. The Piers-Harris Google Form will be scored using standard methodology

for the assessment as outlined in the assessment handbook. Frequency statistics, or measures of general tendencies in the data (i.e., mean, median and mode) will be found, as well as variations within the overall self-concept scores (i.e., variance, standard deviation, and range). Student survey scores and Piers-Harris scores will be tested for any possible correlations, as well. The data will be downloaded from the survey database and uploaded into the *Statistical Package for the Social Science (SPSS)* program for further analysis and the creation of visual aids to display and share the findings.

As an end result of the analysis of the quantitative data collection, relationships between student self-concept, teacher expectation, academic achievement, and future implementation of data to differentiate instruction should emerge.

## Sample

Participants in the study included 162 total students and eight total teachers from McAlister Intermediate School, an elementary school in Suffield, Connecticut. McAlister Intermediate School is a DRG C school with 421 students in grades 3 through 5.

## Instruments

Within the study, various instruments will be used to gather both qualitative and quantitative data to arrive at conclusions to the research questions. Descriptions of each instrument, their design, their pilot testing, and connection to the examination of the research questions can be found below.

### Piers-Harris Self-Concept Scale

The Piers-Harris Self-Concept Scale, its research base, design, revision, and application are discussed at length within the literature review chapter of this study. For the purposes of this

research, the scale will be adapted to a Google Forms survey to be administered electronically to participating students. Previous research has found that administering the assessment via computer yields statistically equivalent results.

**Student and Teacher Surveys**

In addition to completing the Piers-Harris Self-Concept scale, students will also be administered a five question, close-ended survey regarding their perceptions of the expectations that their teacher holds for them. The student survey was written based on the Panorama Education organization's surveys for social and emotional learning. Their surveys were written within the framework outlined by the Collaborative for Academic, Social, and Emotional Learning (CASEL), and were adapted for the purposes of my research with full permission from the publishers. The survey will allow insight into student's perceptions of the expectations their teachers hold for them, which is data that will eventually be analyzed for correlations with teacher expectation survey data and self-concept assessment data.

Teachers participating in the study will also complete a survey regarding the expectations that they hold for their students. The survey was adapted from the Panorama Education organizations CASEL surveys with full permission from the publishers, and will allow for insight into how the expectations teachers hold for their students, as well as how they perceive the self-concept of their students, relate to the student's self-concept and academic performance.

To ensure validity, survey questions will be subjected to face validity testing with professionals in the field of both psychology and elementary education. Survey questions will be revised as deemed necessary by these voluntary professionals.

### STAR Reading and STAR Math Standardized Assessments

In addition to providing survey data, teachers participating in this study will also share their September benchmark scores from the STAR Reading and STAR Math assessments. Both assessments are computer administered, adaptive, standardized assessments that gauge a student's content knowledge in the areas of both Reading and Math. Students receive a scaled score for each subject area, calculated based on the difficulty of questions and the number of correct responses. Because the same range is used for all students, scaled scores can be used to compare student performance across grade levels.

## Expected Findings

After reviewing the literature surrounding self-concept in elementary school students, teacher expectation, and self-efficacy, I expect to find that there is a statistically significant correlation between a student's self-concept score, their academic achievement as reported by their classroom teacher, and the classroom teacher's reported expectation level for their classroom as a whole. I am expecting to confirm that when a teacher holds higher expectations for their students as a group, individual student's self-concept is heightened, and their academic achievement increases as a result of the high expectations and heightened self-concept. I also expect that the data collected at McAlister Intermediate School will lend itself to the discussion surrounding teacher expectation, self-esteem, self-concept, classroom environment, and academic achievement.

## Assumptions and Limitations

As is the case with action research projects, the data collected and analyzed during this study is unique to only McAlister Intermediate School in Suffield, Connecticut, a DRG C school.

As a result, the findings can not be generalized to every school in the country, or even the state. The methodology, however, is transferable for those who are seeking to understand the relationship between self-concept, teacher expectation, and academic achievement. Additionally, the findings garnered in this study may be useful and instructive for schools that are seeking information on the relationship between these three variables.

## Reliability and Validity of Instruments

To ensure the reliability and validity of the five-question survey instrument created to gather student's thinking regarding their teacher's expectations of them, as well as the survey administered to teachers to gauge student expectation, I will employ the strategies of pilot testing and expert review. In order to ensure that the interview questions to be asked to teachers, and the close-ended survey questions to be administered to students, are logical, easily understood, and accurate, I will work with a licensed school psychologist to review the questions. Furthermore, a pilot test of the questionnaire will provide me with a deeper understanding and sense of perspective on my instrument, and will provide me with feedback regarding the question design and overall construction of the survey (Cresswell, 2012). While creating the five-question student survey, as well as the interview questions, I will seek feedback from fellow researchers regarding the construction and question design, as well as from fellow elementary school teachers to help refine the questions.

# Chapter Four: Presentation of Findings

## Introduction

The purpose of this action research was to gather, analyze, and discuss the relationships between a student's self-concept, teacher expectation, and academic achievement. Specifically, this study aimed to prove that there is a relationship between the three, and that when a teacher holds high expectations for a class, students have a higher sense of self-concept, and academic achievement is higher than that of classes where teachers hold lower expectations.

In this chapter, quantitative data regarding student self-concept, teacher expectation, and academic achievement in eight classrooms at McAlister Intermediate School in Suffield, Connecticut is analyzed for themes and relationships between the three variables. To begin, the sample used to collect survey data will be described in detail. Following, the research methodology and data analysis techniques used in the process of this research will be detailed. Then, data will be presented in relation to the research questions presented at the beginning of the study.

In analyzing the data gathered from the Piers-Harris, the five question student survey, the teacher expectation survey, and the STAR Math and Reading assessments, trends and themes will emerge that will add to the body of research surrounding self-concept, teacher expectations, and academic achievement.

## Description of the Sample

In order to gather data surrounding student self-concept, student perception of teacher expectations, teacher expectations, and STAR Math and Reading assessment scores, the target population for this study was the Suffield Public School district's intermediate grade students. A

convenience sample of the school's 22 total third, fourth, and fifth grade classrooms resulted in eight participating classes- 162 total students and 8 total classroom teachers, a mix of grades three, four, and five.

The Suffield Public School district is a DRG C district in northern Connecticut with a total enrollment of 2,358 students. The classrooms that participated were all located at McAlister Intermediate School, the 3-5 school in the district. All participating classrooms participated on a voluntary basis after the need for research data, and the purpose of the research, was shared at a full-faculty meeting. Participating teachers were interested in the resulting data and discussion surrounding the topics of student self-concept, teacher expectations, student perception of teacher expectations, and academic achievement.

In order to ensure honest and open responses when collecting data, as well as to keep my discussion and analysis bias-free, all teachers and students identities were kept completely anonymous. Therefore, exact description of the sample is impossible. McAlister Intermediate School, however, is very typical of the sample of students in the Suffield Public School district as a whole. Within the district, 85.2% of students are White, 3.4% Asian, 3.9% Black or African-American, and 5.8% Hispanic or Latino. 0.6% of students are English Language Learners, 12.3% are eligible for Free or Reduced Lunch through the state of Connecticut, and 11.3% have an Individualized Education Program (IEP). 50.1% of the district's students are female, and 49.9% are male. Students were selected via their teacher's voluntary participation, and all parents of students in participating classes were given the option to opt their students out of the research. Two students in the participating classes chose to opt out of participating.

## Research Methodology and Data Analysis

This research was conducted using a quantitative, action research approach. Quantitative data was collected through close-ended questions on student and teacher surveys, close-ended questions on the modified Piers-Harris Self Concept Survey, and through standardized reading and mathematics assessment data. For the purposes of this research, survey information and assessment data was gathered from teachers and students at McAlister Intermediate School in Suffield, Connecticut.

In Chapter Three, I discussed my research plan to gather both qualitative and quantitative data to answer my research questions. In planning my research, I came to understand the importance of maintaining anonymity for those participating in the study. The questions being asked of both students and teachers could be viewed as personal and evaluative in nature, and may have lead some to not participate, or to submit dishonest or biased data. As a result, I made the decision to conduct strictly quantitative research, easily gathered in an anonymous fashion. Therefore, no interviews were conducted in tandem with the surveys administered.

In order to analyze, interpret, and discuss the raw data gathered from assessments and surveys administered to both teachers and students, various quantitative data analysis strategies were employed. These are explained in detail below.

### *Piers-Harris Self-Concept Scale*

The Piers-Harris Self-Concept Scale was modified from its original 60-question form down to 16 questions. This modification was made to focus only on academic-themed questions, as that is all that was required for the purposes of my research. This scale was administered through Google Forms. Student participants were asked to respond “Yes” or “No” to basic, close-ended questions surrounding their own feelings of academic self-concept.

**Figure 1**
**Piers-Harris Self-Concept Scale Questions**

| Item Number | Yes or No Statements |
|---|---|
| 1 | I get nervous when the teacher calls on me. |
| 2 | I get worried when we have tests in school. |
| 3 | I am well behaved in school. |
| 4 | I give up easily. |
| 5 | I am good in my schoolwork. |
| 6 | I am slow in finishing my schoolwork. |
| 7 | I am an important member of my class. |
| 8 | I can give a good report in front of the class. |
| 9 | In school I am a dreamer. |
| 10 | I often get into trouble. |
| 11 | I often volunteer in school. |
| 12 | I hate school. |
| 13 | My classmates in school think I have good ideas. |
| 14 | When I grow up, I will be an important person. |
| 15 | I forget what I learn. |
| 16 | I am a good reader. |

For the purposes of this study and its required analysis, positive answers given from students were totaled and compared to overall answers. For example, an answer of "Yes" to "I am good in my schoolwork" would be considered one positive answer, as well as an answer of "No" to "I hate school".

*Five Question Student Survey*

In addition to the Piers-Harris Self-Concept Scale, participating students also completed a five-question survey regarding their perceptions of their teacher's expectations of them as students. While the wording of possible answer selections varied depending on the question, the questions were all given through Google Forms using a Likert-based scale. This survey was adapted from the Collaborative for Academic, Social, and Emotional Learning (CASEL) Panorama surveys regarding Rigorous Expectations in grades 3-5.

**Figure 2**
**Five Question Student Survey Items**

| Item Number | Question |
|---|---|
| 1 | How often does your teacher make you explain your answers? |
| 2 | When you feel like giving up, how likely is it that your teacher will make you keep trying? |
| 3 | How much does your teacher encourage you to do your best? |
| 4 | How often does your teacher take time to make sure that you understand what you're learning? |
| 5 | Overall, how high are your teacher's expectations of you? |

The resulting quantitative data gathered from the five-question students survey was analyzed using SPSS. The data was organized and analyzed on both a whole-sample and individual class basis. For each question, there were five possible answers on a Likert-based scale. Answers were assigned the following point values.

**Figure 3**

**Five Question Student Survey Answers- Assigned Point Values**

| Assigned Point Value | Survey Responses |
|---|---|
| 0 | Almost Never |
| | Not at all likely |
| | Does not encourage me at all |
| | Not high at all |
| 1 | Once in awhile |
| | Slightly likely |
| | Encourages me a little |
| | Slightly high |
| 2 | Sometimes |
| | Somewhat likely |
| | Encourages me some |
| | Somewhat high |
| 3 | Frequently |
| | Quite likely |
| | Encourages me quite a bit |
| | Quite high |
| 4 | Almost always |
| | Extremely likely |
| | Encourages me a tremendous amount |
| | Extremely high |

After assigning these point values to student responses, measures of central tendency were calculated for each participating class, and results were analyzed in comparison to results of the other surveys and assessments.

*Teacher Expectation Survey*

Teachers participating in the study completed an eight-question survey, also adapted from a CASEL Panorama survey used to measure teacher, "perceptions of whether students have the potential to change those factors that are central to their performance in class," (Panorama, 2015). The survey was administered through Google Forms, and participants answered the questions on a Likert-Based scale.

**Figure 4**
**Teacher Expectation Survey Items**

| Item Number | Question |
|---|---|
| 1 | How possible do you think it is for your students to change how much talent they have? |
| 2 | How possible do you think it is for your students to change how much effort they put forth? |
| 3 | How possible do you think it is for your students to change how well they behave in class? |
| 4 | How possible do you think it is for your students to change how much they like the content in your class? |
| 5 | How possible do you think it is for your students to change how easily they give up? |
| 6 | How possible do you think it is for your students to change their intelligence? |
| 7 | How possible is it for teachers to change how well they relate to the most difficult students? |
| 8 | Based on baseline assessments, observations, and information received from your students old teachers, how confident are you that 100% of your students that participate in SBAC testing will receive a "Proficient" score or Higher? |

The resulting quantitative data gathered from the five-question students survey was analyzed using SPSS. The data was organized and analyzed on both a whole-sample and

individual class basis. For each question, there were five possible answers on a Likert-based scale. Answers were assigned the following point values.

**Figure 5**

**Teacher Expectation Survey- Assigned Response Point Values**

| Assigned Point Value | Survey Responses |
|---|---|
| 0 | Not at all possible to change<br>Not at all confident |
| 1 | A little possible to change<br>A little confident |
| 2 | Somewhat possible to change<br>Somewhat confident |
| 3 | Quite possible to change<br>Quiet confident |
| 4 | Completely possible to change<br>Completely confident |

After assigning these point values to student responses, measures of central tendency were calculated for each participating teacher, and results were analyzed in comparison to results of the other surveys and assessments.

*STAR Reading and Math Assessments*

STAR Reading and Math assessments are computer administered, adaptive, standardized assessments that gauge a student's content knowledge in the specified content areas. Students receive a scaled score for each subject area, calculated based on the difficulty of questions and the number of correct responses. Because the same range is used for all students, scaled scores can be used to compare student performance across grade levels. Using scaled scores, STAR organizes students into four score categories- Level 1, Level 2, Level 3, or Level 4. These levels are aligned with SBAC scoring procedures, and a student's performance on STAR is generally indicative of their performance on the SBAC assessment. According to the STAR/SBAC

correlation, a Level 3 or a Level 4 are considered “Proficient”. A student is assigned to a level based on their scaled score as compared to a cutoff score for each level of expected performance for that point of the school year and grade. For each participating class, levels of performance were calculated and analyzed via SPSS.

The data obtained via the methods described above is presented in the following pages of Chapter Four, organized by each of the research questions for this study:

1. How does the way an elementary-school student responds to academic questions on the Piers-Harris Self-Concept Scale relate to their academic achievement, as assessed by standardized assessment?
2. How do a teacher’s expectations of a student relate to the student’s academic self-concept and their perceptions of their teacher’s expectations?

## Presentation of Data and Results of Analysis

### Research Question 1: How does the way an elementary-school student responds to academic questions on the Piers-Harris Self-Concept Scale relate to their academic achievement, as assessed by standardized assessment?

#### *Quantitative Results*

Table 6 presents the percentage of responses from the 162 participating students in grades three, four and five on the modified Piers-Harris Self-Concept Scale.

**Figure 6**
**Piers-Harris Self-Concept Scale Responses: All Participants (162 students)**

| Question | Yes | No |
|---|---|---|
| I get nervous when the teacher calls on me. | 42 (26.3%) | 118 (73.8%) |
| I get worried when we have tests in school. | 83 (52.2%) | 76 (47.8%) |
| I am well behaved in school. | 153 (95.6%) | 7 (4.4%) |
| I give up easily. | 19 (11.7%) | 143 (88.3%) |
| I am good in my schoolwork. | 150 (93.2%) | 11 (6.8%) |
| I am slow in finishing my schoolwork. | 64 (39.8%) | 97 (60.2%) |
| I am an important member of my class. | 127 (78.9%) | 34 (21.1%) |
| I can give a good report in front of the class. | 123 (75.9%) | 39 (24.1%) |
| In school I am a dreamer. | 63 (39.1%) | 98 (60.9%) |
| I often get into trouble. | 13 (8%) | 149 (92%) |
| I often volunteer in school. | 110 (69.2%) | 49 (30.8%) |
| I hate school. | 17 (10.6%) | 144 (89.4%) |
| My classmates in school think I have good ideas. | 132 (83%) | 27 (17%) |
| When I grow up, I will be an important person. | 139 (86.3%) | 22 (13.7%) |
| I forget what I learn. | 37 (22.8%) | 125 (77.2%) |
| I am a good reader. | 145 (89.5%) | 17 (10.5%) |

These school-wide responses can be used as a lense through which to view the data when it is disaggregated into eight individual classes, as viewed in tables 7 through 14.

**Figure 7**
**Piers-Harris Self-Concept Scale & STAR Data: Class A (22 Students)**

| Piers-Harris Self-Concept Scale Questions | Yes | No |
|---|---|---|
| I get nervous when the teacher calls on me. | 1 (4.8%) | 21 (95.2%) |
| I get worried when we have tests in school. | 9 (42.8%) | 13 (52.2%) |
| I am well behaved in school. | 22 (100%) | 0 (0%) |
| I give up easily. | 0 (0%) | 22 (100%) |
| I am good in my schoolwork. | 22 (100%) | 0 (0%) |
| I am slow in finishing my schoolwork. | 13 (52.2%) | 9 (42.8%) |
| I am an important member of my class. | 19 (85.7%) | 3 (14.3%) |
| I can give a good report in front of the class. | 20 (90.5%) | 2 (9.5%) |
| In school I am a dreamer. | 5 (23.8%) | 17 (76.2%) |
| I often get into trouble. | 0 (0%) | 22 (100%) |
| I often volunteer in school. | 19 (85.7%) | 3 (14.3%) |
| I hate school. | 2 (9.5%) | 20 (90.5%) |
| My classmates in school think I have good ideas. | 19 (85.7%) | 3 (14.3%) |
| When I grow up, I will be an important person. | 20 (90.5%) | 2 (9.5%) |
| I forget what I learn. | 3 (14.3%) | 19 (85.7%) |
| I am a good reader. | 20 (90.5%) | 2 (9.5%) |

| STAR Assessment | Level 1 | Level 2 | Level 3 | Level 4 |
|---|---|---|---|---|
| Mathematics | 23% | 36% | 36% | 5% |
| Reading | 9% | 14% | 59% | 18% |

In Class A, 352 answers were given in all on the Piers-Harris scale, and 304 of them were associated with positive academic self-concept- a total of 86.36% of answers given in the class. In the same class, 77% of students were considered “Proficient” in Reading, and 41% were considered “Proficient” in Mathematics.

**Figure 8**
**Piers-Harris Self-Concept Scale & STAR Data: Class B (23 Students)**

| Piers-Harris Self-Concept Scale Responses | **YES** | **NO** |
|---|---|---|
| I get nervous when the teacher calls on me. | 5 (20.7%) | 18 (70.3%) |
| I get worried when we have tests in school. | 10 (44.8%) | 13 (56.1%) |
| I am well behaved in school. | 21 (93.1%) | 2 (6.8%) |
| I give up easily. | 3 (10.3%) | 20 (89.7%) |
| I am good in my schoolwork. | 21 (93.1%) | 2 (6.8%) |
| I am slow in finishing my schoolwork. | 4 (17.2%) | 19 (82.7%) |
| I am an important member of my class. | 17 (75.9%) | 6 (24.1%) |
| I can give a good report in front of the class. | 20 (86.2%) | 3 (13.8%) |
| In school I am a dreamer. | 8 (34.4%) | 15 (65.6%) |
| I often get into trouble. | 2 (6.8%) | 21 (93.1%) |
| I often volunteer in school. | 15 (65.6%) | 8 (34.4%) |
| I hate school. | 1 (3.4%) | 22 (96.5%) |
| My classmates in school think I have good ideas. | 18 (79.9%) | 5 (20.1%) |
| When I grow up, I will be an important person. | 17 (75.9%) | 6 (24.1%) |
| I forget what I learn. | 7 (27.5%) | 16 (72.4%) |
| I am a good reader. | 20 (86.2%) | 3 (13.7%) |

| STAR Assessment | Level 1 | Level 2 | Level 3 | Level 4 |
|---|---|---|---|---|
| Mathematics | 22% | 61% | 13% | 0% |
| Reading | 9% | 14% | 55% | 23% |

In Class B, 368 answers were given in all on the Piers-Harris scale, and 293 of them were associated with positive academic self-concept- a total of 79.62% of answers given in the class. In the same class, 78% of students were considered “Proficient” in Reading, and 13% were considered “Proficient” in Mathematics.

**Figure 9**
**Piers-Harris Self-Concept Scale & STAR Data: Class C (10 Students)**

| Piers-Harris Self-Concept Scale Responses | YES | NO |
|---|---|---|
| I get nervous when the teacher calls on me. | 0 (0%) | 10 (100%) |
| I get worried when we have tests in school. | 6 (60%) | 4 (40%) |
| I am well behaved in school. | 9 (90%) | 1 (10%) |
| I give up easily. | 1 (10%) | 9 (90%) |
| I am good in my schoolwork. | 10 (100%) | 0 (0%) |
| I am slow in finishing my schoolwork. | 5 (50%) | 5 (50%) |
| I am an important member of my class. | 9 (90%) | 1 (10%) |
| I can give a good report in front of the class. | 7 (70%) | 3 (30%) |
| In school I am a dreamer. | 7 (70%) | 3 (30%) |
| I often get into trouble. | 1 (10%) | 9 (90%) |
| I often volunteer in school. | 7 (70%) | 3 (30%) |
| I hate school. | 1 (10%) | 9 (90%) |
| My classmates in school think I have good ideas. | 8 (80%) | 2 (20%) |
| When I grow up, I will be an important person. | 10 (100%) | 0 (0%) |
| I forget what I learn. | 3 (30%) | 7 (70%) |
| I am a good reader. | 9 (90%) | 1 (10%) |

| STAR Assessment | Level 1 | Level 2 | Level 3 | Level 4 |
|---|---|---|---|---|
| Mathematics | 18% | 45% | 18% | 18% |
| Reading | 14% | 9% | 36% | 40% |

In Class C, 160 answers were given in all on the Piers-Harris scale, and 125 of them were associated with positive academic self-concept- a total of 78.13% of answers given in the class. In the same class, 76% of students were considered “Proficient” in Reading, and 36% were considered “Proficient” in Mathematics.

**Figure 10**
**Piers-Harris Self-Concept Scale & STAR Data: Class D (21 Students)**

| Piers-Harris Self-Concept Scale Responses | **YES** | **NO** |
|---|---|---|
| I get nervous when the teacher calls on me. | 7 (34.8%) | 14 (65.2%) |
| I get worried when we have tests in school. | 11 (52.2%) | 10 (47.8%) |
| I am well behaved in school. | 19 (91.3%) | 2 (8.6%) |
| I give up easily. | 2 (8.6%) | 19 (91.3%) |
| I am good in my schoolwork. | 17 (82.6%) | 4 (17.3%) |
| I am slow in finishing my schoolwork. | 12 (56.5%) | 9 (43.4%) |
| I am an important member of my class. | 14 (65.2%) | 7 (34.8%) |
| I can give a good report in front of the class. | 13 (60.9%) | 8 (39.1%) |
| In school I am a dreamer. | 6 (26.1%) | 15 (73.9%) |
| I often get into trouble. | 2 (8.6%) | 19 (91.3%) |
| I often volunteer in school. | 17 (82.6%) | 4 (17.4%) |
| I hate school. | 2 (8.6%) | 19 (91.3%) |
| My classmates in school think I have good ideas. | 14 (65.2%) | 7 (34.8%) |
| When I grow up, I will be an important person. | 16 (78.3%) | 5 (21.7%) |
| I forget what I learn. | 7 (34.8%) | 14 (65.2%) |
| I am a good reader. | 17 (82.6%) | 4 (17.4%) |

| STAR Assessment | Level 1 | Level 2 | Level 3 | Level 4 |
|---|---|---|---|---|
| Mathematics | 26% | 52% | 4% | 17% |
| Reading | 13% | 13% | 57% | 17% |

In Class D, 336 answers were given in all on the Piers-Harris scale, and 246 of them were associated with positive academic self-concept- a total of 73.21% of answers given in the class. In the same class, 74% of students were considered “Proficient” in Reading, and 21% were considered “Proficient” in Mathematics.

**Figure 11**
**Piers-Harris Self-Concept Scale & STAR Data: Class E (17 Students)**

| Piers-Harris Self-Concept Scale Responses | **YES** | **NO** |
|---|---|---|
| I get nervous when the teacher calls on me. | 7 (42.9%) | 10 (57.1%) |
| I get worried when we have tests in school. | 9 (52.3%) | 8 (47.7%) |
| I am well behaved in school. | 17 (100%) | 0 (0%) |
| I give up easily. | 1 (4.8%) | 16 (95.2%) |
| I am good in my schoolwork. | 14 (85.7%) | 3 (14.3%) |
| I am slow in finishing my schoolwork. | 7 (42.9%) | 10 (57.1%) |
| I am an important member of my class. | 11 (66.6%) | 6 (33.3%) |
| I can give a good report in front of the class. | 13 (76.2%) | 4 (23.8%) |
| In school I am a dreamer. | 10 (57.1%) | 7 (42.9%) |
| I often get into trouble. | 1 (4.7%) | 16 (95.3%) |
| I often volunteer in school. | 8 (47.6%) | 9 (52.3%) |
| I hate school. | 4 (19%) | 13 (81%) |
| My classmates in school think I have good ideas. | 15 (90.5%) | 2 (9.5%) |
| When I grow up, I will be an important person. | 15 (90.5%) | 2 (9.5%) |
| I forget what I learn. | 4 (23.8%) | 13 (76.2%) |
| I am a good reader. | 15 (90.5%) | 2 (9.5%) |

| STAR Assessment | Level 1 | Level 2 | Level 3 | Level 4 |
|---|---|---|---|---|
| Mathematics | 14% | 50% | 18% | 18% |
| Reading | 14% | 18% | 18% | 50% |

In Class E, 272 answers were given in all on the Piers-Harris scale, and 201 of them were associated with positive academic self-concept- a total of 73.9% of answers given in the class. In the same class, 68% of students were considered “Proficient” in Reading, and 36% were considered “Proficient” in Mathematics.

**Figure 12**
**Piers-Harris Self-Concept Scale & STAR Data: Class F (22 Students)**

| Piers-Harris Self-Concept Scale Responses | **YES** | **NO** |
|---|---|---|
| I get nervous when the teacher calls on me. | 8 (36.8%) | 14 (63.2%) |
| I get worried when we have tests in school. | 16 (73.6%) | 6 (26.3%) |
| I am well behaved in school. | 20 (94.7%) | 2 (5.3%) |
| I give up easily. | 6 (26.3%) | 16 (73.6%) |
| I am good in my schoolwork. | 20 (94.7%) | 2 (5.3%) |
| I am slow in finishing my schoolwork. | 8 (36.8%) | 14 (63.2%) |
| I am an important member of my class. | 16 (73.6%) | 6 (26.3%) |
| I can give a good report in front of the class. | 16 (73.6%) | 6 (26.3%) |
| In school I am a dreamer. | 3 (10.5%) | 19 (89.5%) |
| I often get into trouble. | 2 (5.3%) | 20 (94.7%) |
| I often volunteer in school. | 20 (94.7%) | 2 (5.3%) |
| I hate school. | 3 (10.5%) | 19 (89.5%) |
| My classmates in school think I have good ideas. | 18 (84.3%) | 4 (15.7%) |
| When I grow up, I will be an important person. | 20 (94.7%) | 2 (5.3%) |
| I forget what I learn. | 6 (26.3%) | 16 (73.6%) |
| I am a good reader. | 18 (84.3%) | 4 (15.7%) |

| STAR Assessment | Level 1 | Level 2 | Level 3 | Level 4 |
|---|---|---|---|---|
| Reading | 14% | 23% | 27% | 36% |
| Math | 5% | 32% | 50% | 14% |

In Class F, 352 answers were given in all on the Piers-Harris scale, and 272 of them were associated with positive academic self-concept- a total of 77.27% of answers given in the class. In the same class, 63% of students were considered “Proficient” in Reading, and 64% were considered “Proficient” in Mathematics.

**Figure 13**
**Piers-Harris Self-Concept Scale & STAR Data: Class G (20 Students)**

| Piers-Harris Self-Concept Scale Responses | **YES** | **NO** |
|---|---|---|
| I get nervous when the teacher calls on me. | 6 (30%) | 14 (70%) |
| I get worried when we have tests in school. | 7 (35%) | 13 (65%) |
| I am well behaved in school. | 18 (90%) | 2 (10%) |
| I give up easily. | 3 (15%) | 17 (85%) |
| I am good in my schoolwork. | 18 (90%) | 2 (10%) |
| I am slow in finishing my schoolwork. | 5 (25%) | 15 (75%) |
| I am an important member of my class. | 18 (90%) | 2 (10%) |
| I can give a good report in front of the class. | 13 (65%) | 7 (35%) |
| In school I am a dreamer. | 12 (60%) | 8 (40%) |
| I often get into trouble. | 3 (15%) | 17 (85%) |
| I often volunteer in school. | 11 (55%) | 9 (45%) |
| I hate school. | 4 (20%) | 16 (80%) |
| My classmates in school think I have good ideas. | 17 (85%) | 3 (15%) |
| When I grow up, I will be an important person. | 18 (90%) | 2 (10%) |
| I forget what I learn. | 2 (10%) | 18 (90%) |
| I am a good reader. | 20 (100%) | 0 (0%) |

| STAR Assessment | Level 1 | Level 2 | Level 3 | Level 4 |
|---|---|---|---|---|
| Reading | 0% | 21% | 37% | 42% |
| Math | 0% | 32% | 47% | 21% |

In Class G, 320 answers were given in all on the Piers-Harris scale, and 251 of them were associated with positive academic self-concept- a total of 78.44% of answers given in the class. In the same class, 79% of students were considered “Proficient” in Reading, and 68% were considered “Proficient” in Mathematics.

**Figure 14**
**Piers-Harris Self-Concept Scale & STAR Data: Class Z (16 Students)**

| Piers-Harris Self-Concept Scale Responses | **YES** | **NO** |
|---|---|---|
| I get nervous when the teacher calls on me. | 5 (31.6%) | 11 (68.4%) |
| I get worried when we have tests in school. | 10 (63.1%) | 6 (36.8%) |
| I am well behaved in school. | 15 (94.7%) | 1 (5.2%) |
| I give up easily. | 4 (21.1%) | 12 (78.9%) |
| I am good in my schoolwork. | 16 (100%) | 0 (0%) |
| I am slow in finishing my schoolwork. | 7 (47.4%) | 9 (52.6%) |
| I am an important member of my class. | 14 (87.5%) | 2 (12.5%) |
| I can give a good report in front of the class. | 13 (78.9%) | 3 (21.1%) |
| In school I am a dreamer. | 7 (47.3%) | 9 (52.6%) |
| I often get into trouble. | 3 (15.7%) | 13 (84.2%) |
| I often volunteer in school. | 7 (47.4%) | 9 (52.6%) |
| I hate school. | 1 (5.2%) | 15 (89.5%) |
| My classmates in school think I have good ideas. | 15 (89.5%) | 1 (5.2%) |
| When I grow up, I will be an important person. | 13 (84.3%) | 3 (15.7%) |
| I forget what I learn. | 4 (21.1%) | 12 (78.9%) |
| I am a good reader. | 15 (94.7%) | 1 (5.2%) |

| STAR Assessment | Level 1 | Level 2 | Level 3 | Level 4 |
|---|---|---|---|---|
| Reading | 19% | 0% | 19% | 63% |
| Math | 6% | 50% | 25% | 19% |

In Class Z, 256 answers were given in all on the Piers-Harris scale, and 195 of them were associated with positive academic self-concept- a total of 76.17% of answers given in the class. In the same class, 82% of students were considered “Proficient” in Reading, and 44% were considered “Proficient” in Mathematics.

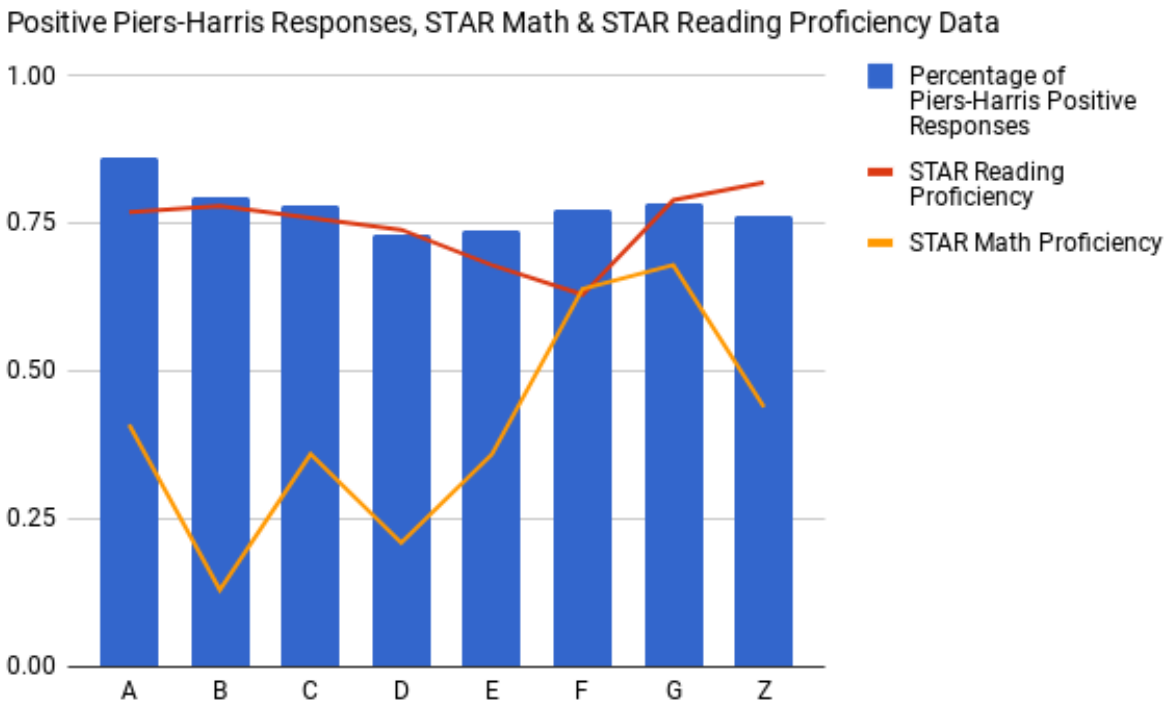
All data regarding percentage of positive Piers-Harris responses, STAR Math proficiency, and STAR Reading proficiency can be found in Table 15 below.

**Figure 15**
**Positive Piers-Harris Responses, STAR Math & STAR Reading Proficiency Data**

| Class | Percentage of Positive Piers-Harris Responses | STAR Reading Proficiency | STAR Math Proficiency |
|---|---|---|---|
| A | 86.36 | 77% | 41% |
| B | 79.62 | 78% | 13% |
| C | 78.13 | 76% | 36% |
| D | 73.21 | 74% | 21% |
| E | 73.90 | 68% | 36% |
| F | 77.27 | 63% | 64% |
| G | 78.44 | 79% | 68% |
| Z | 76.17 | 82% | 44% |

Data from this table can also be found in the graph below.

**Figure 16**




In analyzing data gathered from student responses to the Piers-Harris Self-Concept Scale, as well as proficiency data from the STAR Mathematics and STAR Reading standardized assessments, there appears to be a relationship between a student's self-concept and their

academic achievement. Generally speaking, it seems that when a student has a higher sense of self-concept, than they perform higher academically.

**Research Question Two: How do a teacher's expectations of a student relate to the student's academic self-concept and their perceptions of their teacher's expectations?**

***Quantitative Results***

Figure 17 presents the percentage of responses from the 162 participating students in grades three, four and five on the five-question student survey measuring student perception of teacher expectations. The data can also be found in Figure 18..

**Figure 17**
**5-Question Student Survey: All Participants (162 students)**

| Item Number | Almost Never | Once in a while | Sometimes | Frequently | Almost always |
|---|---|---|---|---|---|
| 1 | 8 (5%) | 19 (11.9%) | 44 (27.6%) | 43 (27%) | 44 (27.6%) |
| 2 | 4 (2.5%) | 4 (2.5%) | 13 (8.1%) | 60 (37.7%) | 73 (45.9%) |
| 3 | 1 (0.6%) | 1 (0.6%) | 8 (5%) | 59 (37.1%) | 87 (54.7%) |
| 4 | 2 (1.2%) | 6 (3.7%) | 13 (8.1%) | 59 (37.1%) | 77 (48.4%) |
| | Not high at all | Slightly high | Somewhat high | Quite high | Extremely high |
| 5 | 2 (1.2%) | 7 (4.4%) | 32 (20.1%) | 80 (50.3%) | 38 (23.8%) |

**Figure 18**

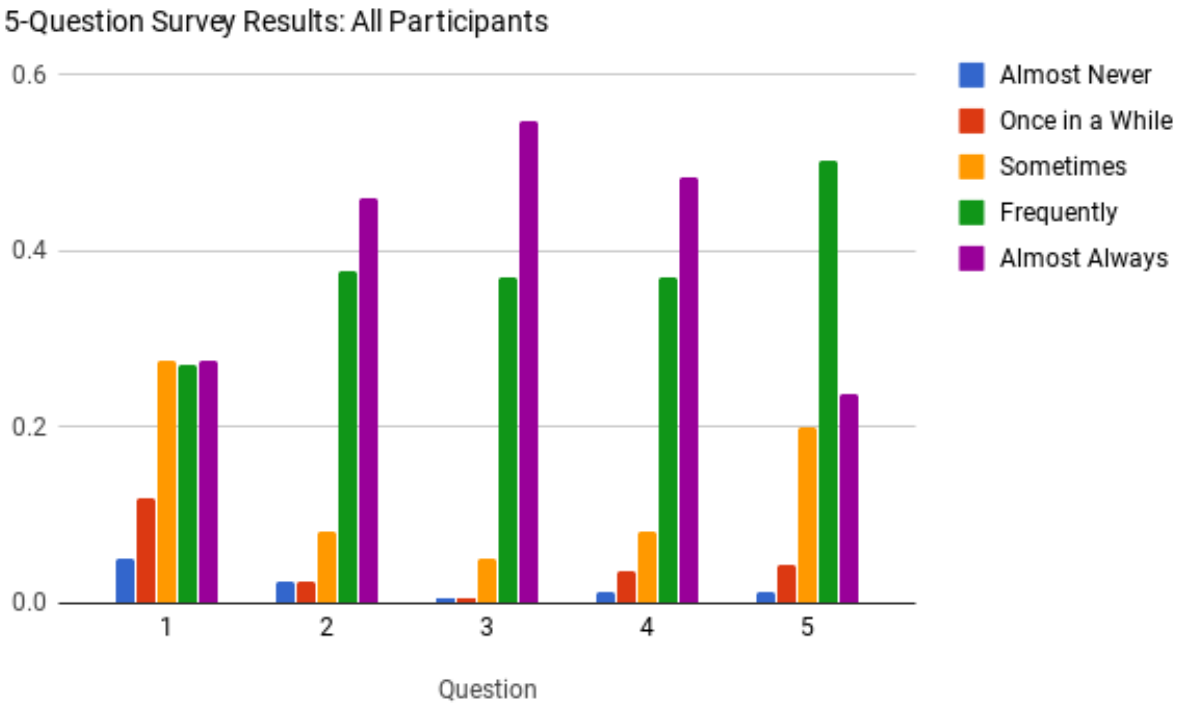


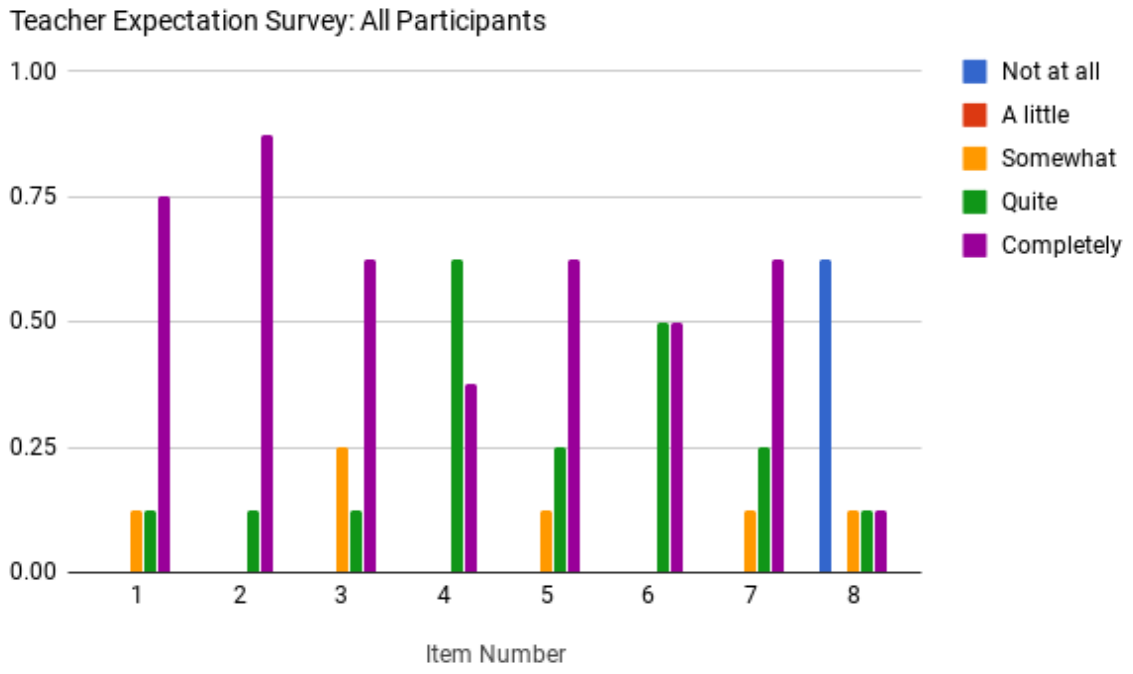

FIgure 19 below details the data gathered from the teacher expectation survey, administered to all eight classroom teachers that participated in the study. The data may also be found in Figure 20.

**Figure 19**

**Teacher Expectation Survey: All Participants (8 Teachers)**

| Item Number | Not at all possible to change | A little possible to change | Somewhat possible to change | Quite possible to change | Completely possible to change |
|---|---|---|---|---|---|
| 1 | 0 (0%) | 0 (0%) | 1 (12.5%) | 1 (12.5%) | 6 (75%) |
| 2 | 0 (0%) | 0 (0%) | 0 (0%) | 1 (12.5%) | 7 (87.5%) |
| 3 | 0 (0%) | 0 (0%) | 2 (25%) | 1 (12.5%) | 5 (62.5%) |
| 4 | 0 (0%) | 0 (0%) | 0 (0%) | 5 (62.5%) | 3 (37.5%) |
| 5 | 0 (0%) | 0 (0%) | 1 (12.5%) | 2 (25%) | 5 (62.5%) |
| 6 | 0 (0%) | 0 (0%) | 0 (0%) | 4 (50%) | 4 (50%) |
| 7 | 0 (0%) | 0 (0%) | 1 (12.5%) | 2 (25%) | 5 (62.5%) |
| | Not at all confident | A little confident | Somewhat confident | Quite confident | Completely confident |
| 8 | 5 (62.5%) | 0 (0%) | 1 (12.5%) | 1 (12.5%) | 1 (12.5%) |

**Figure 20**




In order to allow for easy analysis and interpretation of the teacher expectation and five-question student survey based on a student's perceived teacher expectations, responses were

coded (detailed in Figures 3 and 5). After being coded, average responses for each question were calculated for all five questions on the five-question student survey for each class, as well as an average "teacher expectation rating", calculated by finding an average of all eight questions regarding a teacher's expectations held for their students. This data can be found in Figure 21.

**Figure 21**
**Average Ratings: 5-Question Student Survey and Teacher Expectation Survey**

| Class | Question 1 | Question 2 | Question 3 | Question 4 | Question 5 | Average Teacher Rating |
|---|---|---|---|---|---|---|
| A | 1.7 | 2.4 | 2.4 | 2.8 | 2.4 | 3.3 |
| B | 2.6 | 3.2 | 3.1 | 3 | 2.6 | 2.6 |
| C | 3.9 | 3.6 | 3.7 | 3.7 | 2.6 | 3.2 |
| D | 2.3 | 2.8 | 3.5 | 3.3 | 2.6 | 3.3 |
| E | 2.4 | 3.1 | 3.7 | 3.2 | 3 | 3.6 |
| F | 2.4 | 3.7 | 3.6 | 3.3 | 3.2 | 3.1 |
| G | 2.1 | 3.2 | 3.6 | 3.4 | 3.4 | 3.3 |
| Z | 3.6 | 3.2 | 3.6 | 3.5 | 3.4 | 3.2 |

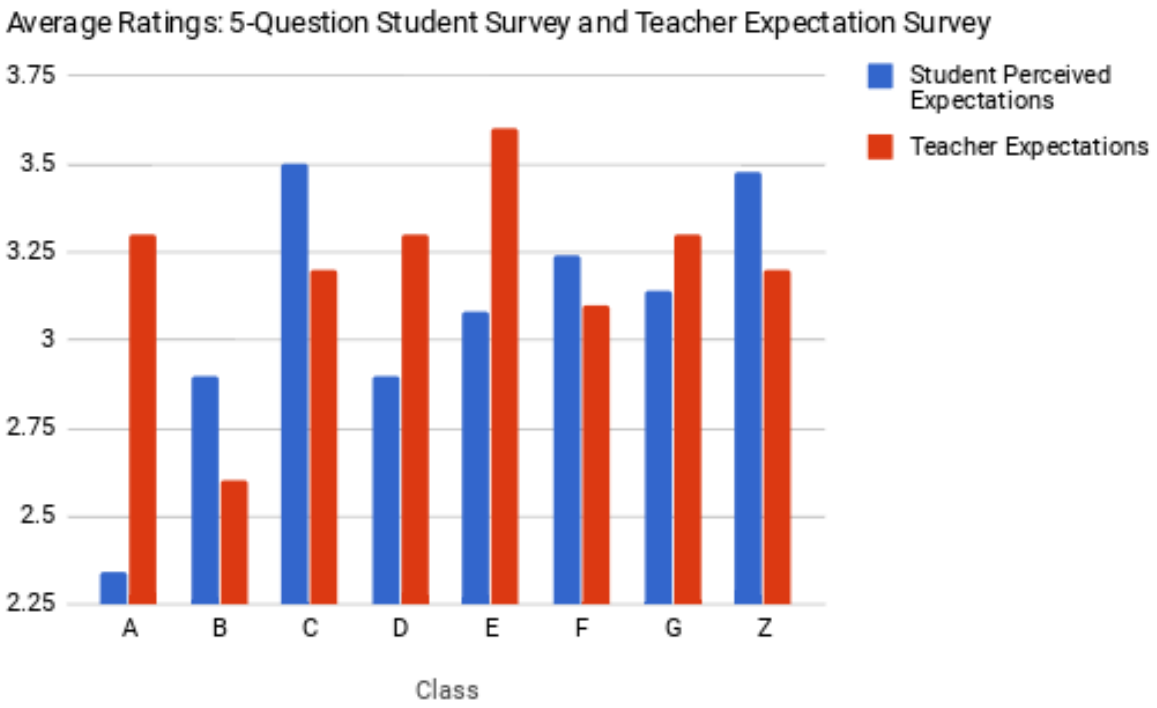
Figure 22 shows an average rating for all five student survey questions after being coded, as well as the average teacher rating for each class. That data can also be found as a chart in Figure 23.

**Figure 22**

**Average Ratings: 5-Question Student Survey and Teacher Expectation Survey**

| Class | Average Student Perceived Expectation | Teacher Expectation | Difference |
|---|---|---|---|
| A | 2.34 | 3.3 | 0.96 |
| B | 2.90 | 2.6 | 0.30 |
| C | 3.50 | 3.2 | 0.30 |
| D | 2.90 | 3.3 | 0.40 |
| E | 3.08 | 3.6 | 0.52 |
| F | 3.24 | 3.1 | 0.14 |
| G | 3.14 | 3.3 | 0.16 |
| Z | 3.48 | 3.2 | 0.28 |

**Figure 23**




In analyzing the data in Figures 22 and 23, some disparities are found in regard to teacher expectation and a student's perceptions of their teacher's expectations of them. In 50% of the eight classrooms, students perceived lower expectations than the expectations that their teachers expressed holding for their students. In the other 50% of classrooms, students perceived their teachers as holding higher expectations of them than teachers reported. Across the board, it seems that students and teachers do not hold matching perceptions of expectations in the classroom.

Also explored in this research question was the relationship between a student's academic self-concept and expectations that a teacher holds for a student. For the purposes of answering this question, the average student perception score, as found in Figure 22, will be used, as well as the average teacher expectation score, also found in Figure 22. Additionally, information for

each item response on the Piers-Harris Self-Concept Scale will also be used, as found in Figures 7 through 14.

First, the eight classrooms were put into two groups according to who perceives classroom expectations to be higher- the classroom teacher or the students. Classes in which the students perceive the expectations to be higher than the teacher does include classes B, C, F, and Z. Classes in which the teacher perceives expectations to be higher than the students do include classes A, D, E, and G. It is worth noting that, as a group, when the teacher's expectations are higher than the students perceive them to be, students report forgetting less of what they learn. Additionally, when the student perceives expectations to be higher than the teacher reports, students tend to worry more about taking tests, and report being better at their schoolwork. Possible explanations for these phenomena are included in Chapter 5. These examples are illustrated in Figure 24.

**Figure 24**

**Differences in Classrooms with Perceived Differences in Expectations**

| Group Percentage | Average Percentage of Students Reporting Forgetting What they Learn | Average Percentage of Students Reporting Worrying about Tests | Average of Students Reporting Being Good at Schoolwork |
|---|---|---|---|
| Teacher Perceived Higher Expectations (A, D, E, G) | 20.7% | 45.6% | 89.6% |
| Student Perceived Higher Expectations (B, C, F, Z) | 26.2% | 60.4% | 96.7% |

Not discussed in the original research plan, or included in the original research questions that served as a basis for this research, was the relationship between one question in particular on the Piers-Harris and other data points gathered during this research. The item reads as follows:

7: I am an important member of my class.

Below, the Piers-Harris item is analyzed for relationships with other pieces of data gathered from both students and teachers.

*Item 7: I am an important member of my class.*

The students in class D had the lowest percentage of students believing that they were important members of their class. In Class D, 65.2% of students answered "Yes", meaning 34.8% of students do not feel themselves to be important members of the class.In Class D, it was found that students reported that they perceive that their teachers have lower expectations for them than the teacher has reported having.

The class with the highest rates of student "Yes" responses to this Piers-Harris item- Class C- had an average of a 78.13% positive response rating to their overall Piers-Harris survey, indicating that 78.13% of students have an overall high self-concept. In Class D, there was an average positive Piers-Harris rating of 73.21%, a difference of 4.92% less than Class C.

In Class C, where students had some of the highest positive response rates to this Piers-Harris item, students reported an average of a 3.6 out of a total 5 point rating to the survey question, "When you feel like giving up, how likely is it that your teacher will make you keep trying?" In Class D, students reported an average of a 2.8 of a possible 5 rating- a difference of 0.8.

Finally, in Class D, 21% of students scored "Proficient" or higher on their STAR Math assessment, and 74% scored "Proficient" or higher on their STAR Reading assessment. In Class

C, 36% of students scored “Proficient” or higher in Math, and 76% scored “Proficient” or higher in Reading- a difference of 15% in Math and 2% in reading, with Class C scoring higher in both areas. A summary of all of this data can be found in Figure 25.

**Figure 25**

**Classes C and D: Comparison**

| Class | C | D |
|---|---|---|
| %: Important Members of Their Class | 90% | 65.2% |
| Student Perceived Expectations | 3.5 | 2.9 |
| Teacher Reported Expectations | 3.2 | 3.3 |
| %: Overall Positive Piers-Harris Rating | 78.13% | 73.21% |
| %: Teacher Makes Me Keep Trying | 3.6 | 2.8 |
| %: Math Proficient | 36% | 21% |
| %: Reading Proficient | 76% | 74% |

In Figure 26 below, the above data from Figure 25 is presented in terms of percentages. In Figure 27, it is presented in terms of averages calculated on the basis of a 5 point Likert scale.

**Figure 26**

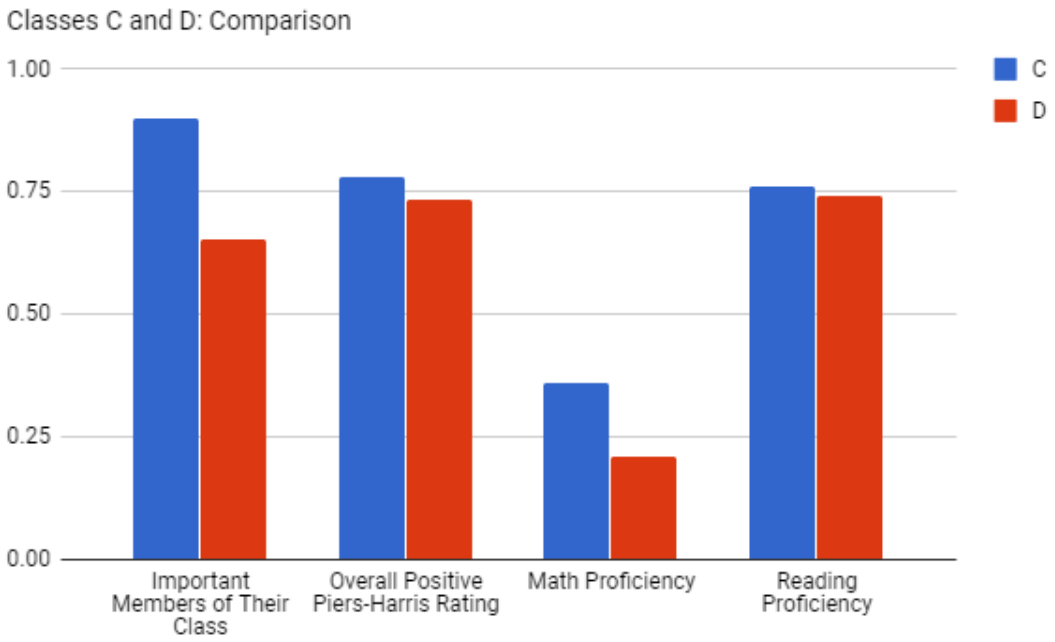
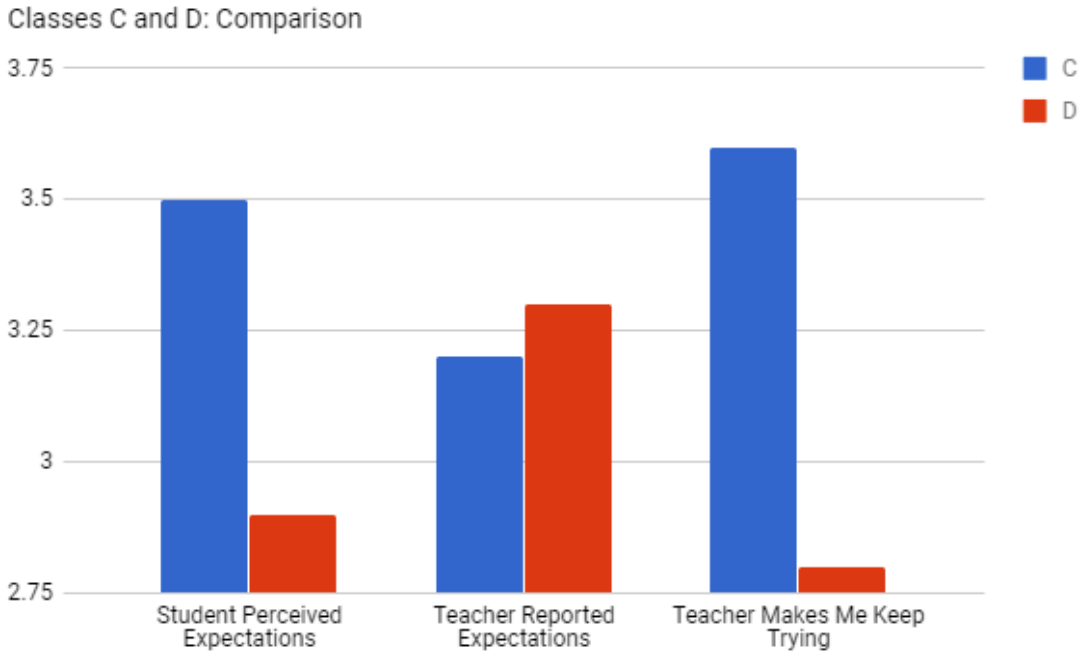



**Figure 27**



## Summary

The quantitative data collected for the purposes of this research study resulted in four major implications regarding the relationship between academic self-concept, academic achievement, and teacher expectation.

When the results from the Piers-Harris Self-Concept Scale were analyzed in comparison to the STAR Math and STAR Reading standardized assessment results, it was found that, generally, when a student has a higher sense of self-concept, they also perform higher academically. Due to the maintenance of anonymity, qualitative data regarding academic achievement was not gathered, but there is an indication that student self-concept has an impact on academic achievement on assessments.

The data suggests that there is a disparity between the perception of classroom expectations at McAlister Intermediate School. In 50% of studied classes, it was found that students perceived their teachers as holding higher expectations of them than the teacher reported. In the opposite 50% of classes, it was found that teachers reported holding higher expectations for their students than students perceived. The largest gap between average rating of teacher reported expectation and student perceived expectations is 0.96, while the smallest gap is 0.14. This indicates there there are a wide range of mismatches in communicated and perceived expectations, both academically and social-emotionally, within the school.

It was also found that when the teacher reported having higher academic and social-emotional expectations of their students than their students perceived, their students reported lower rates of forgetting what they have learned and worrying about tests than their counterparts. They also reported lower rates of feeling that they were good at their schoolwork. Conversely, when the student reported perceiving higher expectations from their teacher than actually

reported by the teacher, students reported higher rates of forgetting what they learn, worrying about tests, and feeling that they are good at their schoolwork. Through the data collected, it is apparent that there is a relationship between these variables.

Finally, the data revealed that when a group of students reports an overall lower percentage of students feeling that they are important members of their class, the class is more likely to perceive lower expectations from their teacher, report overall lower ratings of academic self-concept, report overall ratings of their teachers encouraging them to keep trying when they get stuck, and perform lower on math and reading assessments. This suggests that when a student feels that they are an important member of a class, and feels that their teacher encourages them when they get stuck, they are more likely to have a higher sense of academic self-concept and perform higher on academic assessments. These observed findings will be discussed with more detail in Chapter 5.

# Chapter Five: Implications and Conclusion

## Summary

This study was driven by my interest in meeting the social and emotional needs of students in a classroom setting, as well as the academic, and how teacher expectations and a student's sense of self-concept play into academic achievement. As a career-long elementary school teacher, I have observed that students seem to be their most academically productive when they feel comfortable, safe, and challenged appropriately by their teacher. This led me to explore research into how students develop a sense of self-concept, how one's sense of academic self-concept impacts their academic achievement and classroom performance, and how teacher expectations and communication impact that academic self-concept. After my literature review, I determined that there were gaps in previous research regarding the relationship between these three factors, and as a result, my own research questions were developed regarding this relationship. The purpose of this study was to contribute to the existing body of literature surrounding self-concept, academic achievement, and teacher expectation, as well as to start a dialogue among educators surrounding the implementation of these findings in their own educational institutions. In order to gain an understanding of the overall self-concept of students, academic achievement, and teacher expectations at McAlister Intermediate School, quantitative data was collected and analyzed through surveys and standardized assessment. The data that I collected was consistent with the literature review research in that students with a higher sense of self-concept performed higher academically, that when a student reports themselves to be an important member of the class, they perform higher academically and report higher senses of academic self-concept, and that students in classes where their teachers hold high expectations perform higher academically and report higher senses of self-concept.

Additionally, it was found that when teachers report having higher academic and social-emotional expectations of their students than their students perceived, their students reported worrying less about assessments and higher rates of not feeling good about their schoolwork than their counterparts. Conversely, when a student reported perceiving higher expectations from their teacher than actually reported by their teacher, students reported higher rates of worrying about tests and feeling positively about their schoolwork. Furthermore, a disparity between student-perceived expectations held by teachers and teacher-reported expectations is clear at McAlister Intermediate School, with the smallest gap rating being 0.14 and the largest being 0.96, after quantification of survey results.

Overall, the data gathered through my research provided many discussion points and areas for growth to focus on in the future at McAlister, as well as similar schools. In Chapter Five, I will discuss the limitations of the study, including areas that I was unable to study, as well as potential flaws in the data collection and analysis. Additionally, I will address implications for practice by providing topics for focus in educational institutions and possible professional development. To finish the chapter, I will discuss suggestions for future research in this area that would benefit all educational professionals and contribute to the existing body of research.

## Limitations

In this study, the limited sample size and the lack of qualitative data may have affected the information gathered through research.

For the purposes of my study, I was able to work with eight teachers and their classrooms of students, totaling 162 children. While I am not able to know exactly which classrooms were represented in the study, due to anonymity, there are only grades 3-5 represented, due to the population of the school. The data may have been more complete, and yielded more useful

information, if a wider range of grades, teachers, and students were able to complete the survey. Surveying teachers and students from this wider range would have produced further perspectives and data to analyze and learn from.

The questions that were asked in both the student and teacher surveys for this study were fairly sensitive. As a result, I wanted to ensure anonymity for all involved parties. To do this, I had a trusted coworker serve as a communication point for those willing to participate. Willing teachers contacted my co worker, who then provided them with survey information and access points. She also gave each teacher a letter (ie., Classroom A, Classroom B, etc.) to label all surveys. As a result, I was unable to link classroom data to classroom teachers. I did this in order for teachers to feel comfortable honestly reporting, and so there was no fear of judgement or evaluation. However, as a result, I was unable to gather qualitative data regarding self-concept, teacher expectation, and academic achievement. Ideally, I would have been able to interview both teachers and a sample of students, to gain a deeper insight into the quantitative data collected. I would have also been able to do classroom observations, to get a deeper sense of teacher expectation, as well as review a broader range of student work to gather more diverse information regarding academic achievement. Participating in these qualitative data collection methods would have allowed this study to represent broader and more comprehensive perspectives regarding academic self-concept, academic achievement, and teacher expectations.

## Implications for Practice

When the results from the Piers-Harris Self-Concept Scale were analyzed in comparison to the STAR Math and STAR Reading data collected for the purposes of this study, it was found that, generally, when a student has a higher sense of self-concept, they also perform higher academically. Data regarding this relationship can be found in Figures 15 and 16 in Chapter

Four. Class A, the class with the highest percentage of positive Piers-Harris responses, also had the fourth highest Math and Reading scores (out of a total of 8). Class D, the class with the lowest percentage of positive Piers-Harris responses, had the sixth highest Math and Reading scores (out of a total of 8). While there are other mitigating factors in this relationship outside of the Piers-Harris Self-Concept scale and initial STAR Math and Reading assessments, this relationship should be taken into account, as it is consistent with existing research and literature surrounding self-concept and academic achievement.

With all factors considered, it is apparent that the way a student feels about themselves academically has an impact on the way that they perform academically. As a result, educators at all levels need to take into account that building a student's self-concept is just as important within the classroom as helping a student improve academically. In a broad sense, this means that students need to feel welcomed, important, comfortable, and safe in their classroom. In order to create a classroom environment where students feel this way, there are many practices that a teacher may engage in. Responsive Classroom is an evidence-based approach that emphasizes social and emotional growth as being just as important as academic growth through the following six guiding principles:

1. Teaching social and emotional skills is as important as teaching academic content.
2. How we teach is as important as what we teach.
3. Great cognitive growth occurs through social interaction.
4. What we know and believe about our students- individually, culturally, developmentally- informs our expectations, reactions, and attitudes about those students.
5. How we work together as adults to create a safe, joyful and inclusive school environment is as important as our individual contribution or competence.

6. Partnering with families- knowing them and valuing their contributions- is as important as knowing the children we teach ("Principles and Practices").

By implementing strategies like intentional language, logical consequences, interactive learning, morning meeting, quiet time, energizers, and closing circle, teachers are able to work with students to become socially and emotionally competent, as well as build skills like cooperation, assertiveness, responsibility, empathy, self-control, perseverance, and academic mindset. A three-year longitudinal study done by the University of Virginia's Curry School of Education found that the use of Responsive Classroom was associated with higher academic achievement, improved teacher-student interaction, and higher quality instruction ("What the Research Says"). The implementation of the Responsive Classroom model, or similar models that train teachers in how to emphasize social and emotional learning in the classroom, would yield a likely increase in student academic self-concept. At McAlister Intermediate School, all teachers have participated in at least one four-day training in implementing the Responsive Classroom model in their own classroom, with some having attended more training. As this is the first year of full implementation of the model schoolwide, there is not yet data regarding its success. I do expect, however, to see a significant increase in student survey data regarding their positive feelings of belonging, welcoming, and importance within the classroom, as well as a correlated increase in academic achievement.

While the Responsive Classroom is a successful and proven model to increase social and emotional awareness within the classroom, it is not the only model. If teachers grow to be more aware of their students social and emotional needs, their academics will also improve. Strategies like classroom meetings, small-group lunches with the teacher, and other attempts to learn about your students as individuals will help foster relationships, make students feel welcome and

accepted, and create a classroom environment where students feel that they belong and are ready to make academic growth.

In the data gathered at McAlister Intermediate School, there was a disparity found between the perception of classroom expectations on the part of students and teachers. In 50% of the studied classes, it was found that students perceived their teachers as holding higher expectations of them than the teacher reported. In the opposite 50% of classes, it was found that teachers reported holding higher expectations for their students than their students perceived. The largest gap between the average rating of teacher reported expectation and student perceived expectations was 0.96, while the smallest gap was 0.14. This indicates that there is a wide range of mismatches in communicated and perceived expectations, both academically and social-emotionally, within the school. This survey data, gathered through CASEL-adapted assessments administered to both students and teachers, also found that where there were differences in perceived expectations, there were also large differences in students forgetting what they have learned, worrying about tests, and feeling like they do well on their schoolwork.

When the teacher felt that they held higher expectations than their students perceived, as was the case in classrooms A, D, E and G, only 20.7% of students reported forgetting what they learned, as opposed to 26.2% in classes B, C, F and Z. Therefore, when a teacher reports having high expectations for their students success, students are less likely to report forgetting what they learn in school. As a result, it can be interpreted that when a teacher feels that their students are able to succeed at high levels, they are more likely to make learning engaging and relevant, and therefore, students are forgetting less of the information presented. Conversely, when a teacher has lower levels of expectation for their students, they are less likely to make learning as engaging and relevant as their counterparts, and thusly, their students report forgetting more of

that information. As a result of this finding, it is apparent that when a teacher holds high expectations, they are more likely to dig in and find ways to make learning relevant for students. Similarly, when teachers report having lower expectations for their students than their counterparts, 60.4% of their students reported worrying about tests, as opposed to 45.6%. It can be interpreted that when teachers report having lower overall expectations for students success, their students worry more frequently about performing on assessments. One possible explanation that can be made as a result is that when a teacher's low expectations for students are communicated nonverbally through body language and subliminal communication, and therefore more stress is placed on students to "prove the teacher wrong" and achieve highly on their assessments. Additionally, it is possible that these teachers are not sufficiently preparing students for assessments, as they don't believe that students will meet or exceed expectations anyway.

Another important finding in regard to teacher and student perceived expectations was the contrast between expectation rating and the percentage of students reporting that they are important members of their classroom. In Classroom C, where students had some of the highest positive responses to this Piers-Harris item, students also perceived that their teachers had high expectations for them as students, teachers reported holding high expectations for their students, students had higher overall Piers-Harris reported self-concept scores, and higher reported ratings of teachers that make them keep trying when they are stuck. In Classroom D, which had the lowest percentage of children reporting that they were important members of their class, students reported perceiving lower expectations from their teacher, having lower overall self-concept scores, and lower reported ratings of teachers that make them keep trying when they were stuck. Additionally, Classroom D had 15% less students scoring proficient on the STAR Math assessment, and 2% less students scoring proficient on the STAR Reading assessment. In

considering this data, a conclusion can be drawn that when a student feels that they are an important member of their class, they are more likely to have a higher overall self-concept and perform higher academically. Additionally, it can be deduced that there is a relationship between student perceived expectations, rates at which teachers encourage kids to keep trying when they get stuck, and academic achievement. All of these factors can be tied back to a student feeling important within their classroom. When a student feels that they are being held to high expectations, that they will be encouraged to persevere when they get stuck, and that they are safe in taking that risk, they feel comfortable and valued as an individual and as a student. Building a classroom environment that supports students socially, emotionally, and academically, like in Classroom C, will most likely result in students achieving higher academically, as supported by the data gathered at McAlister Intermediate School.

Overall, the data collected at McAlister indicates that when a group of students reports having a higher sense of academic self-concept, they also achieve higher academically. Furthermore, when a group of students perceive the expectations to be higher than reported by the teacher, students tend to worry more about taking tests than their counterparts, and when a teacher holds high expectations for their students, their students report themselves as being less likely to forget what they have learned. Furthermore, when a student reports themselves as being an important member of a classroom, they are more likely to have a higher level of academic self-concept and achieve higher academically. This speaks to the tremendous need for teachers to build classroom environments that foster social and emotional growth, as well as academic growth. I believe that by creating, adapting, and implementing measures of academic self-concept and social-emotional well-being in classrooms, and allowing teachers to analyze that data, this task would become one that is quick, accessible, and provides valuable data that

teachers can use to create this kind of environment. This data could be used alongside academic data to inform instruction, plan engaging lessons, and communicate with administration and parents about a student's progress within the classroom.

Additional findings include the disparity between teacher and student perceived expectations at McAlister Intermediate School, as well as the high percentage of students reporting that they forget what they learn. Within this particular school, it is my recommendation that professional development and learning takes place surrounding these two areas, so the faculty can grow professionally in communicating and maintaining clear and appropriate expectations to their students, as well as in how to plan lessons that are engaging, relevant, and real-world applicable, as to be less forgetful.

## Suggestions for Future Research

Existing research shows that there is a relationship between academic achievement, student self-concept, and teacher expectations. My own research runs consistent with this existing body of research, and provided some insight into how all three factors work together in a classroom environment. Because my own sample size was limited to grades 3-5, however, it would be beneficial for this research to be replicated on a larger scale, with grades spanning K-12 in a more diverse setting.

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