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Student Perceptions of Engagement and the Relationship to Student Perceptions of Teacher in the Visual Art Classroom

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This dissertation has been read and approved as fulfilling the partial requirement for the Degree of Doctor of Education in Curriculum and Leadership.

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STUDENTS' PERCEPTIONS OF ENGAGEMENT AND THE RELATIONSHIP TO STUDENTS' PERCEPTIONS OF THE TEACHER IN THE VISUAL ART CLASSROOM

by

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DEDICATION

This work is dedicated to my family who were the very best kind of support! From encouraging words, and reality checks when things weren't going so well, to help with transcription software and SPSS, everyone played a part. I hope I will always be equally supportive of all that they want to do and achieve. And so, a world of thanks to my husband Travis, my son Travis, Jr., my daughter Sarah Kathryn, my son-in-law Chance, my mom Kathy, and my mother-in-law Marjorie; you all mean everything to me. I wish my father were here to be a part of all of this, but I know he is watching, and he is happy and proud. Love you all so much!

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ABSTRACT

Lack of student engagement in high schools is a concerning factor in education; low levels of engagement can lead to student apathy, academic challenges, disruptive behavior, and a higher dropout rate. The purpose of this research was to examine the relationship between high school students' perceptions of engagement and students' perceptions of the teacher in the visual art classroom. The researcher used social constructivism as a lens through which to explore this topic. The theory of constructivism focuses on active exploration and learning about ideas of personal significance, where the teacher plays an essential supportive and guiding role in student learning. The sample for this research was 68 high school students in a large metropolitan school district in Georgia who were enrolled in Comprehensive Art I. The researcher used a survey to collect students' perceptions of their cognitive, emotional, and behavioral engagement in the art classroom as well as perceptions of their teacher. Data from this nonexperimental, cross-sectional, predictive study was analyzed using multiple linear regression where the dependent variable is teacher perception and the independent variables are cognitive, emotional, and behavioral engagement. Key findings include insight on the relationship of student levels of engagement to perceptions of the teacher in the art classroom.
Keywords: cognitive engagement, emotional engagement, behavioral engagement, student perception

Table of Contents

LIST OF TABLES

LIST OF FIGURES

CHAPTER I

INTRODUCTION

Background of the Problem

Increased attention is placed on student engagement today. Engagement in schoolwork involves student interest in the subjects being taught, active participation in the learning process, and motivation to learn. Engaged students tend to be more successful in school and more likely to attend school, as well as less likely to be disruptive and less likely to drop out of school (National Association of Independent Schools, 2017). Creating a classroom culture that is cognitively, emotionally, and behaviorally engaging for students is more likely to lead to student success than a less responsive approach. Greater understanding of factors leading to high levels of student engagement will help educators create optimal climates for learning and, in turn, more successful students.

National surveys of student engagement show that 98% of students report being sometimes bored, and 66% of high school students are bored in class every day; of these, 17% are bored in every class (Yazzie-Mintz, 2010). The High School Survey of Student Engagement (HSSSE) found the top reasons for boredom to be lack of interesting or relevant material, work that is too challenging, work that is not challenging enough, and lack of connection with the teacher (Yazzie-Mintz, 2010). This is significant because student engagement in course work, and school in general, has been shown to be predictive of student success (Maulana, Helms-Lorenz, & Van de Grift, 2015; Scherer, Nilsen, & Jansen, 2016; Zilvinskis, Masseria, & Pike, 2017). Student disengagement in

school has been linked to students dropping out of school (Bridgeland, DiIulio, & Morison, 2006; Cooper, 2014). Reports of the overall number of students not completing high school are as high as 33%; numbers are higher for Hispanic students (42%), African American students (43%), and American Indian students (46%) as compared to 17% and 22% of Asian and Caucasian students respectively (Editorial Projects in Education, 2011).

While some obstacles to engagement are determined at the school, or even the district level, such as large class sizes and curricular approach to courses, much of the lack of student engagement in school can be explained by inconsistent, and sometimes nonexistent, use of effective teaching strategies (Conner & Pope, 2013). Research indicates that a learner centered environment, focus on 21st century skills, challenging work, and development of teacher-student relationships are all beneficial for increasing student engagement (Cooper, 2014; Tyler & Likova, 2012; Vanada, 2016)

Student perception surveys are a useful tool for identifying ways to increase engagement in high school classrooms (Burniske & Meibaum, 2012). A student perception survey that focuses on cognitive, emotional, and behavioral engagement, as well as teacher pedagogy, could help to create a more complete picture of the level of student engagement and students' perceptions of teachers. Student perception surveys could also identify areas of success in current teaching so that teachers are affirmed in those aspects of their practice.

Statement of the Problem

Low levels of student engagement in high school classrooms is a significant problem in education today. (Cooper, 2014). This problem impacts students because low

engagement can lead to boredom, apathy, failure, and high dropout rates. Many possible factors contribute to low student engagement: inadequate teacher training, support for use of engagement strategies, and classroom management skills, among other factors like student-teacher relationships, school size, class size, school climate, student body composition, and instructional activities (Roorda, Jak, Zee, Oort, & Koomen, 2017). Lei, Cui, and Zhou (2018) found a moderate to strong correlation between overall student engagement and academic achievement, as well as between the individual cognitive, emotional, and behavioral aspects of engagement and academic achievement. Chase, Hilliard, Geldhof, Warren, and Lerner revealed a bidirectional relationship between components of engagement and academic achievement (2014). In many studies, student engagement was considered the most important factor affecting student success (e.g. Roorda et al., 2017; Wonglorsaichon, Wongwanich, & Wiratchai, 2014). By looking specifically at the relationship of student cognitive, emotional, and behavioral engagement to students' perception of their teachers in the visual art classroom, this study contributes to the body of knowledge addressing this problem by focusing on an area that has not been specifically addressed in the studies reviewed by the current researcher.

Purpose of the Study

The purpose of this quantitative study was to investigate students' perceptions of engagement and students' perceptions of their teachers for 68 high school art students in Comprehensive Art I classes in a large metropolitan Georgia school district. The dependent variable was students' perceptions of teachers as determined through student responses to a survey of teacher pedagogy, class climate, and teacher-student relationship. The independent variables were defined as cognitive, emotional, and

behavioral engagement scores as determined by student responses to a survey of engagement.

Research Questions and Hypotheses

The research questions for this study include the following:

1. What is the relationship of student cognitive engagement scores in Comprehensive Art I classes to student ratings of the teacher?

2. What is the relationship of student emotional engagement scores in Comprehensive Art I classes to student ratings of the teacher?

3. What is the relationship of student behavioral engagement scores in Comprehensive Art I classes to student ratings of the teacher?

The hypotheses in this study tested the differences between student perceptions of cognitive, emotional, and behavioral engagement and student ratings of their art teacher. Hypotheses will take the following general form:

H_a = There is a relationship between students' perceptions of cognitive engagement and students' perceptions of teachers to a statistically significant degree.

H_0 = There is no relationship between students' perceptions of cognitive engagement and students' perceptions of teachers to a statistically significant degree.

For the additional hypotheses, the term cognitive engagement is replaced with emotional engagement and behavioral engagement in both the alternate and null hypotheses.

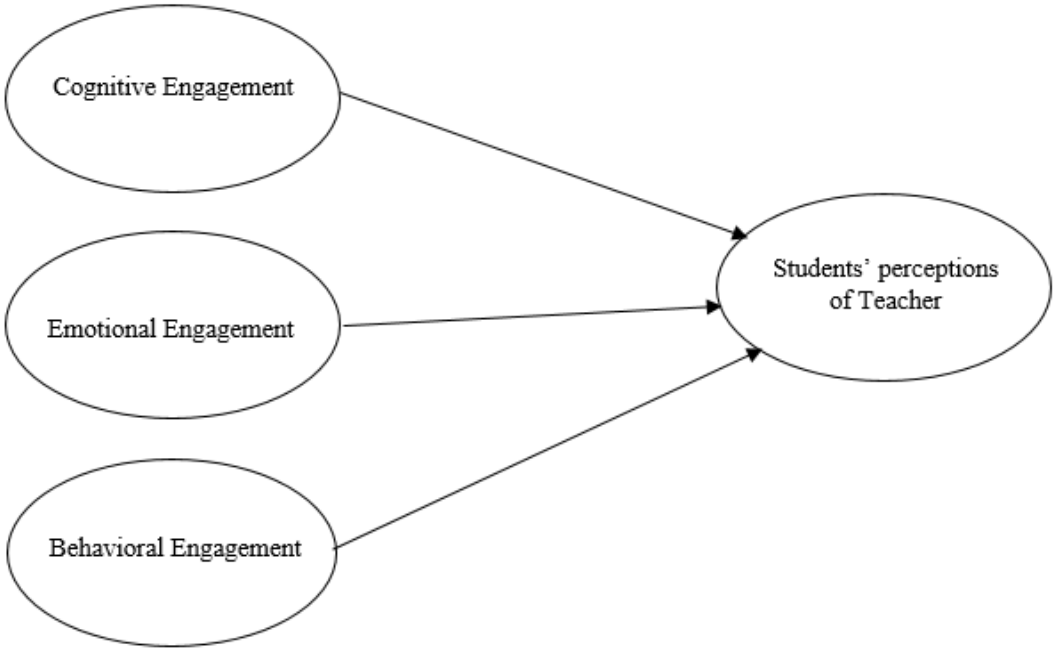

Figure 1. Model of Research Questions

Theoretical Framework

This dissertation employed a theoretical framework of social constructivism, which connects particularly well with art education when the emphasis is on active learning, teacher-student collaboration, construction of meaning, and student agency. Lev Vygotsky is acknowledged as the father of social constructivism, which posits that children learn best in classrooms where there is collaboration and social interaction; In other words, students build knowledge with the help of teachers and peers (Vygotsky, 1962). Viktor Lowenfeld promoted constructivist methods of art education when he moved to America from Austria after World War II (Thompson, 2015). Lowenfeld promoted a child-centered pedagogy that focuses on hands-on, experiential learning in a transactional model where students' past knowledge and experiences help them to construct knowledge with new information and experiences (Thompson, 2015). Lowenfeld recognized that children needed aesthetic sensitivity and that they should

begin to formulate it at an early age, but he thought that children should discover the relationships involved in aesthetics on their own (Lowenfeld, 1947). Lowenfeld's pedagogical leanings place emphasis on the inclusion of a guiding adult in the artistic process: someone to help children move from one level to the next by offering opportunities in the zone of proximal development, a theory developed by Vygotsky (Lowenfeld, 1947). Similarly, Vygotsky saw the educator as a collaborator who assists in construction of meaning with the student (Vygotsky, 1962). Lowenfeld saw the need for guided self-expression with the emphasis on the artistic process and not on the product (Saunders, 1961). Children learn by exploring and creating meaning and knowledge through curiosity in what they encounter; constructivist theory puts the student at the center of the learning process and challenges the traditional relationship of teacher and student (Thompson, 2015). The teacher is no longer the keeper of the knowledge, and children become more than consumers of knowledge.

Methodology Overview

Research Design

This research project used a non-experimental, cross-sectional, predictive, quantitative method for collecting and analyzing data. This method was chosen to measure the relationship between the dependent variable of student perception of teacher and student perceived level of cognitive, emotional, and behavioral engagement as measured on a 5- to 7-point Likert scale (Creswell, 2005). The quantitative data was collected in the form of a student perception survey. The student perception survey was adopted from previously piloted surveys of student engagement from Panorama Education (Gehlbach, 2015).

The data collected through the survey were analyzed using multiple linear regression where cognitive, emotional, and behavioral engagement were the three independent, or predictor, variables, and students' perception of teacher was the dependent, or outcome, variable. Assumptions of the scale of the dependent variable (continuous), and scale of the independent variables (ordinal) were met; tests of data were run to check other assumptions of normality. The regression analysis showed that cognitive, emotional, and behavioral engagement had significant impact on students' perceptions of the teacher, whereas behavioral engagement did not. Use of the three-predictor regression model showed that the three types of engagement explain 71% of the variance in students' perceptions of the teacher. Several demographic variables that have previously been shown to have significance were used as covariates, including age, race, and gender. According to G-Power, statistical power of 0.69 can be achieved with four predictors, an alpha of 0.05, and an effect size of 0.15 with 68 participants.

Role of the Researcher

The researcher communicated with high school art teachers regarding having Comprehensive Art I students participate in the study and asked for their help getting consent forms to parents via email. The researcher provided a written email to parents/guardians outlining the request for student participation in the survey (See Appendix A). Once the parent/guardian gave consent, they were asked to supply their student's name and an email address to receive the survey (See Appendix B). The researcher checked parent responses and sent students the survey link using the email addresses that were provided by parents using Google Forms (See Appendix C). One week after the first consent request, the researcher sent a follow up consent request email

for teachers to send to parents (See Appendix D). One week after students received the initial email with the survey link, the researcher sent a follow up email reminding them to take the survey if they had not already (See Appendix E). Students gave their assent to participate electronically before beginning to answer survey questions (See Appendix F). The researcher had no relationship with the study participants, so no conflict of interest existed in the researcher's request for participation in the study

Study Participants

Potential participants for this study included students in all Comprehensive Art I classes at five high schools in a large suburban metropolitan Atlanta school district of approximately 43,000 students. The researcher sent the link to the survey to those students with parent/guardian consent, and all communication took place electronically. Students who took the survey had the option to submit their name and email address to be in a drawing for a $25 Chick-Fil-A gift card. Institutional Review Board approval was secured through Columbus State University prior to any contact with students (See Appendix G). Permission to conduct the study in the selected schools, granted by the principals and the district research coordinator, was secured following the protocol of the district as outlined on their website (See Appendix H).

Data Collection Procedures

This quantitative study included an electronic survey of student perceptions regarding levels of cognitive, emotional, and behavioral engagement in the classroom and students' perceptions of teachers (See Appendix I). The questions related to each type of engagement, as well as pedagogy, classroom climate, and teacher-student relationship, and were scored on a 5- to 7-point Likert scale. The survey items were adopted from the

series of Panorama Student Surveys (PSS). Each engagement question related to one of the engagement factors in the study, with a minimum of two questions related to each engagement factor. Teacher perception questions were related to pedagogy, classroom climate, and teacher-student relationship, with a minimum of two questions on each area. These Likert scale questions were meant to provide a composite score for each type of engagement and students' perception of the teacher. The researcher collected limited demographic data, including student gender, age, race, and previous art experience, as these descriptors have shown significance in previous engagement studies. The survey was administered in the spring semester of 2020. Students provided assent to participation in the study electronically prior to initiating the survey. The time required to take the survey was estimated to be about 12 minutes. The researcher used multiple linear regression in SPSS-25 to examine the data.

Benefits of Student Perception Surveys

While some question the wisdom of having high school students complete perception surveys, Yonezawa, Jones, and Joselowsky (2009) state that students are "…an excellent source of information and motivation…students are the ones who can quickly and accurately pinpoint the times and places that they are more or less engaged in their education" (p. 193). Maulana and Helms-Lorenz (2016) suggest that student perception surveys are a cost-effective way to study student engagement and to determine what types of professional development might improve instructional practice and ultimately student achievement. Using student surveys of teaching practices captures day-to-day teaching practice as experienced by those most impacted (Fernandez-Garcia, Maulana, Inda-Caro, Helms-Lorenz, & Garcia-Perez, 2019). Student surveys are more

accurate than self- or peer-teaching evaluations, because teachers tend to overrate their behaviors, and observations take place over a small amount of time that prevents them from accurately reflecting all that goes on in the classroom from day-to-day. Maulana et al. (2015) found that, "…student perceptions of teachers' behavior could significantly predict their academic engagement. Results suggest that the better the teaching behavior perceived by students, the higher the academic engagement tends to be" (p. 187).

The use of student perception surveys as a lens to view teaching practice has many benefits: students have daily contact with teachers and so have deeper knowledge of daily practices (Burniske & Meibaum, 2012; Follman, 1992; Worrell & Kuterbach, 2001), secondary students can differentiate between effective and ineffective teachers (Burniske & Meibaum, 2012; Follman, 1992; Worrell & Kuterbach, 2001), and students are not affected by teacher kindness or halo effects any more than other raters (Follman, 1992; Worrell & Kuterbach, 2001). Student surveys are inexpensive, take little time, and can be done anonymously (Burniske & Meibaum, 2012; Maulana, et al., 2015; Worrell & Kuterbach, 2001). When used to measure student level of engagement and address instructional needs, results from student perception surveys can improve the classroom learning climate (Burniske & Meibaum, 2012).

Limitations of Student Perception Surveys

While there are many benefits of using student perception surveys, they are not without limitations. Students have a limited understanding of all that is required for teaching, such as planning and professional responsibilities that take place outside of the classroom; personal traits and student feelings could also affect engagement perceptions (Wang & Degol, 2014; Worrell & Kuterbach, 2001). Any number of external or

classroom factors might impact a teacher's rating, resulting in an ever-present possibility of student rater bias (Burniske & Meibaum, 2012; Duckworth & Yeager, 2015). Another limitation is the instrument used for the survey itself, which, while validated, cannot be assumed to be perfect. Students may perceive questions differently so that they inadvertently are responding to a different type of engagement than was intended (Duckworth & Yeager, 2015).

Reliability and Validity

Hanover Research (2013) prepared a report on student perception survey reliability and validity for school systems interested in using surveys as part of their teacher evaluation system. They found student perception surveys to be a reliable measure of teacher effectiveness, stating that teachers find the results helpful in identifying areas for personal growth in the development of more effective teaching strategies. Most surveys currently being used are benchmarked against other traditional measures of teaching, such as classroom observations and test scores. Hanover Research reports that, " …a study of nearly 2,000 K-12 students…found that student ratings were significantly more accurate in predicting student achievement than teacher's self-ratings, principal ratings, and principal summative ratings" (Hanover Research, 2013, p. 6).

The validity of student perceptions is dependent on the survey instrument selected. The researcher identified questions that measure effective teacher behaviors in order to attain content validity for the survey and used a review of literature to determine which types of teacher behaviors are effective in engaging students cognitively, emotionally, and behaviorally. The Panorama (2015) survey, which was adopted for use in the current research, is made up of questions that relate directly to cognitive,

emotional, and behavioral engagement, teaching pedagogy, classroom climate, and teacher-student relationships. The surveys were used in two large-scale pilot studies, and measures of reliability, structural validity, from which convergent/discriminant validity were analyzed (Gehlbach, 2015).

Panorama Education reports that the coefficient alpha for every scale is .70 or higher, meaning that the items measure what they are intended to measure when used under similar conditions (Gehlbach, 2015). For these reasons, the survey is deemed valid and reliable.

Delimitations and Limitations

Delimitations of the Study

This study was limited to visual art students in entry level art classes at five participating high schools in one large metropolitan Atlanta school district. While numerous researchers have studied student engagement, most have focused on core academic areas, particular interventions, or specific populations, and achievement (e.g. Fedesco & Natt, 2017; Griffin, Cooper, Metzger, Golden, & White, 2017; Lee, 2014; Yang, Bear, & May, 2018). A study of visual art students provides a different perspective on engagement. This research resulted in the accumulation of data from entry level students in the visual art classroom regarding their cognitive, emotional, and behavioral engagement, their perception of teacher, and their perceived relationship of these two factors. Students acted as participants in this study and provided data through an online perception survey. In-class observations or interviews were not included in the scope of this investigation. The researcher used this survey data to determine the nature of the

relationship between perceived cognitive, emotional, and/or behavioral engagement in the classroom and students' perception of the teacher in art.

Limitations of the Study

There are several potential limitations to this study. While the surveys were anonymous, students may not have been honest out of fear of repercussions. Students may have given higher marks to a more lenient teacher, or a teacher they like, regardless of their level of engagement. Another limitation of this study is that, while some of the questions used to measure the three types of engagement clearly measure only one type of engagement, others may be seen to cross over and measure more than one type.

Other than teacher use of engaging pedagogical strategies, many factors could lead to student success, including student self-efficacy, family support, natural talent, the school climate, overall student involvement, and achievement in school as a whole. High-achieving students may be more engaged because they score well in school, or they may score well because they are engaged in the content (Conner & Pope, 2013). The results of this study inform the level of student engagement and its relationship to students' perceptions of teachers, but are not generalizable to the broader population based on the relatively small number of participants and the fact that all are in the same school system.

Definition of Terms

Behavioral engagement is, "…the extent to which a student exhibits the behaviors expected in a classroom- listening, doing assignments, following directions, participating, and so on" (Cooper, 2014, p. 265). Behavioral engagement is sometimes referred to as social engagement.

Classroom engagement is a multidimensional construct including cognitive, emotional, and behavioral engagement (Wang & Holcombe, 2010).

Cognitive engagement is, "… the extent to which a student applies mental energy, such as by thinking about content, trying to figure out new material, and grappling with mental challenges" (Cooper, 2014, p. 365). Cognitive engagement is sometimes referred to as intellectual or academic engagement.

Emotional engagement is, "…the extent to which a student feels positively about a class, such as enjoying it, feeling comfortable and interested, and wanting to do well" (Cooper, 2014, p. 365). Emotional engagement is also known as affective engagement.

Significance of the Study

Identifying practices that students find engaging could help teachers adjust instruction to better engage students, which could reduce boredom, apathy, failure, and high dropout rates. While much research has been done on student engagement and achievement in core content areas, across broad populations, or entire schools, after examining extensive research, the researcher found no studies of the relationship between student engagement and students' perceptions of teachers in the visual art classroom (e.g. Cooper, 2014; Lee, 2014; Lekwa, Reddy, & Shernoff, 2019; Roordo et al., 2017; Skinner, Marchand, Furrer, & Kinderman, 2008). Research suggests that hands-on learning, interactive instruction, positive relationships, and academic rigor lead to higher levels of engagement and that higher levels of engagement predict higher levels of student success (Alvarez-Bell, Wirtz, & Bian, 2017; Conner & Pope, 2013; Halm, 2015; Scherer et al., 2016). This study contributes to the field of research by providing data about student engagement in an underexplored subject area. The study also provides information that

can be applied practically in the secondary art classroom by looking specifically at students' perceptions of cognitive, emotional, and behavioral engagement in the art classroom and the relationship to students' perceptions of the teacher. Results of the study could guide development, training, and implementation of teacher practices that lead to increased student engagement.

Summary

Student disengagement in the classroom is a problem that contributes to student apathy, boredom, and in some cases, students dropping out of school. Developing a better understanding of the relationship between student levels of engagement and perceptions of the teacher could provide insight on ways to increase student engagement and reduce the negative effects of disengagement. This quantitative study provides data which could add to the current understanding of these relationships and lead to the use of more effective teaching strategies. Analysis of relevant studies shows that teacher practice has significant impact on student engagement, motivation, and success. Results provide insight into the extent to which cognitive, emotional, and behavioral engagement are achieved in the art classroom, and the relationship this has with students' perceptions of teachers.

CHAPTER II

REVIEW OF LITERATURE

Introduction

Educators are strongly concerned about a lack of engagement in school and large numbers of students dropping out of school before graduation. According to Yazzie-Mintz (2010), student engagement declines steeply as students move through school, and two thirds of students report being bored each day, sometimes in every class. Each year, one third to one half of public high school students drop out of school; numbers are highest for disadvantaged and otherwise marginalized students (Editorial Projects in Education, 2011). Most students who drop out of school do not do so because of academic difficulties. Almost half of students who dropped out of school said they did so because classes were not interesting, while 69% said they were not motivated to work hard in school (Bridgeland et al., 2006). Disengagement is a gradual process that frequently leads students to drop out of school; according to Bridgeland et al. (2006), 71% of students report losing interest in school in ninth or tenth grade. Even successful students report pretending to be engaged in class when they are actually unchallenged and bored (Fuller et al., 2018). Fredricks, Blumenfeld, & Paris (2004) found that behavioral disengagement frequently leads to students dropping out of school. Positive relationships between students and teachers can create a protective factor allowing students to better cope with change in the educational environment by making behavioral adjustments that increase the opportunities for academic success (Longobardi, Prino, Marengo, & Settanni, 2016). Altering student tasks to make them more engaging, good

in-class behavior management, and positive relationships with peers and teachers have been shown to be effective in preventing student burnout and dropout (e.g. Bilge, Dost & Cetin, 2014; Cooper, 2014; Fredricks et al., 2004; Wonglorsaichon, et al., 2014; Zilvinskis et al., 2017).

The importance of engagement is noted in much contemporary research. Student engagement in the classroom has multiple benefits, such as better attendance, fewer behavior problems, and increased academic motivation (Trowler, 2010). Teachers promote engagement by providing clear goals, timely feedback, student voice, supportive teacher-student interactions, and hands-on or interactive lessons (Conner & Pope, 2013; Parker, Novak, & Bartell, 2017). Conner and Pope (2013) state:

> Fully engaged students achieve significantly higher GPAs, take significantly more advanced courses, cheat significantly less, and experience significantly less academic worry and significantly fewer internalizing, externalizing, and physical symptoms of stress than students in the other two engagement profiles. Students who are reluctantly engaged cheat the most, report the lowest GPAs, and fare the least well in terms of mental and physical health, though they worry about their grades, school and their prospects of college acceptance significantly less often that the busily engaged students. (p. 143)

Engagement not only impacts students academically. Lewis, Huebner, Malone, and Valois (2011) link student engagement in school to the students' overall wellbeing. Many studies of the relationship between engagement and academic achievement have been performed across multiple courses, grades, and schools, as well as in specific content areas. More exploration in additional content areas and of the relationship

between engagement and other factors could help to develop a more complete understanding of the impact of engagement on student success.

Theoretical Framework

The theoretical framework employed for this dissertation is social constructivism (Vygotsky, 1962). Viktor Lowenfeld is the person most associated with this philosophy in the art classroom. He promoted a child-centered pedagogy that emphasized student learning through active discovery and association to prior knowledge (Lowenfeld, 1947). Like Vygotsky, Lowenfeld placed emphasis on the inclusion of a guiding adult in the artistic process to support students through cooperative learning around the Zone of Proximal Development (Thompson, 2015). When students are involved in the teaching and learning process, they have the opportunity to create opportunities more suited to their personal learning style and tend to be more invested in the goals of learning (Ciric & Jovanovic, 2016).

The theory of social constructivism in art education focuses on active exploration and learning about ideas of personal significance, both elements considered essential to student engagement in the classroom (Thompson, 2015). Anderson and Milbrandt (2004) observe that, "…studio processes that actively engage students in the creative artistic process or creative problem solving are constructivist by nature" (p. 35). Learning in the social constructivist tradition is said to be, "…a largely situation-specific and context-bound activity" (Liu & Matthews, 2005, p. 388). The constructivist theory fits this study of student engagement in the art classroom because the focus is on cognitive engagement in the form of meaningful interaction with the content being learned, emotional engagement in the form of the relationship between student and teacher who work

together to achieve success, and behavioral engagement in that students are expected to, and do, perform the work of exploring and finding the solution to a problem through the making of art.

Historical Overview

The degree of student cognitive, emotional, and behavioral engagement impacts student achievement and well-being positively and negatively in a number of ways (Conner & Pope, 2013). Engaged students are less likely to drop out, engage in risky behavior, abuse drugs and alcohol, and tend to have higher levels of satisfaction with their lives (Archambault, Vandenbossche-Makoma, & Fraser, 2017; Conner & Pope, 2013). Peters & Woolley (2015) list protective factors of student engagement in the areas of control, support, and challenge, and state that, while all are important, the area of control is the most important. Control as an environmental influence means that students feel safe, understand appropriate behavior boundaries, and can regulate their own behavior; disengaged students may experience crime, disorder, and violence in their environment (Peters & Woolley, 2015). Shukla, Konold, and Cornell (2016) found that a positive school environment, high academic expectations, and teacher support of students are significant predictors of cognitive, emotional, and behavioral engagement in schools.

Supported students are engaged and experience adult support and empathy as well as mutual trust and respect; disengaged students are more likely to experience a lack of trust, empathy, and respect from adults (Peters & Wooley, 2015). Peters and Woolley (2015) also state that engaged students are challenged through meaningful involvement in the learning process, high expectations, and the opportunity to solve problems, whereas disengaged students do not have those opportunities. Disengagement can manifest itself

in a number of ways, including withdrawal, inattention, frustration, anxiety, shame, disruptive behavior, and self-blame (Chase et al., 2014; Skinner et al., 2008). Carrabba and Farmer (2018) discuss the differences in student engagement when teachers implement direct instruction versus project-based learning. They found that project-based learning, where students are given authentic and meaningful tasks, was more engaging to students and also increased their motivation to perform at a higher level. In contrast, direct instruction environments are very teacher controlled and were found to be less engaging and less motivating for students. The element of choice in project-based learning gives students the opportunity to design instruction that fits them personally, which has been shown to reduce student apathy about schoolwork and to increase students' desire to succeed (Anderson, 2016).

According to the National Association of Independent Schools (NAIS) report of the results of the HSSSE, 86% of public high school students and 83% of NAIS students reported being often or sometimes bored in class. Other reasons given for lack of engagement in class include the following: not interested in the course content (74% public, 79% NAIS), teaching methods are not engaging (64% public, 68% NAIS), work is not personally relevant (36% public, 38% NAIS), lack of challenge (30% public & NAIS) lack of interaction with peers (31% public, 29% NAIS), lack of interaction with teacher (26% public & NAIS), and work is too hard (26% public, 25% NAIS) (NAIS, 2017). Lack of engagement at the cognitive, emotional, and behavioral levels are indicated in these results; changes in instructional practice and curriculum, and an increased focus on relationship building could alleviate some of the disengagement reported (e.g. Chase, et al., 2014; Cooper, 2014; Lei, et al., 2018; Owolabi, 2018; Roorda,

et al., 2017; Wonglorsaichon, et al., 2014; Zilvinskis et al., 2017). See Table 1 for an overview of major studies involving student engagement.

Factors Influencing Student Engagement

Korobova and Starobin (2015) found that student satisfaction with an educational institution, and student academic success are best predicted by the "…level of academic challenge, student-faculty interaction, enriching educational experiences, supportive campus environment/quality of relationships, and supportive campus environment/ institutional emphasis" (p. 1). These educational practices align well with ideas about cognitive (academic challenge), emotional (student-faculty interaction, supportive campus environment), and behavioral (enriching educational experiences) engagement. Martin and Dowson (2009) believe students are engaged when they feel emotionally connected to the teacher and the course content, and when making work meaningful and relevant to student. They discuss the power of connecting to the *what,* the *who,* and the *how.* The *what* is the connection students and teachers have through the subject being studied and includes meaningful and challenging work in the subject and a variety of tasks. The *who* is the relationship between student and teacher where the teacher actively listens to the student, provides some role in decision making processes, and knows the student well enough to have reasonable expectations for the work. The third connection is *how* instruction is delivered, including modeling engagement on the part of the teacher, providing relevant work, providing clear feedback, and encouraging students to learn from mistakes to reduce fear of failure (Martin & Dowson, 2009). Students who do not feel a connection with the teacher, or are not emotionally engaged, are more likely to disengage and subsequently be less successful in school (Gehlbach et al., 2016). Cooper

(2014) states that students who connect with the teacher, the content, and the instruction are ultimately more engaged and more successful.

In a connected relationship, students don't just learn from the teacher; the teacher learns from students as well and is able to monitor achievement and adjust instruction as necessary. Martin and Dowson (2009) state that positive relationships with others are one of the most important considerations impacting student ability to work effectively in social, emotional, and academic areas. High quality relationships involving modeling, skill-building, communication of expectations, and feedback are essential to student academic motivation, engagement, and achievement. Roorda et al. (2017) found evidence that engagement plays a key role in the link between teacher-student relationships and academic achievement, suggesting that it is important for teachers to understand the impact of these affective relationships and to invest in development of them. A positive relationship between student and teacher can manifest itself as persistence, self-regulation, goal setting, and motivation to achieve at a higher level. Students who feel connected to a teacher are also likely to take on some of that teacher's values and beliefs about the importance of school work (Roorda et al., 2017). Overall, student engagement is enhanced when teachers have high expectations, encourage students to participate, and respect and care for the students in their classroom (Ciric & Jovanovic, 2016).

Engaged students reported high levels of teacher support, which may indicate that such support is especially important for high levels of engagement. Alvarez-Bell et al. (2017) found that, while learning is improved by active participation, positive interactions with teachers and peers in a cooperative environment also provide stronger student engagement. Skinner et al. (2008) found that, "… emotional

disaffection…seemed to exert significant downward pressure on children's effort and persistence and predicted their withdrawal from academic tasks" (p. 777). Likewise, Barber, Buehl, and Beck (2017), "…identified teacher support as a significant predictor of changes in students' behavioral and emotional engagement and disaffection" (p. 752). Unlike other researchers, Strati, Schmidt and Maier (2016) found instrumental, or material, support by teachers a greater predictor of student engagement and achievement than teacher emotional support. However, Yang et al. (2018) found that strong teacher-student relationships have a positive outcome on cognitive, behavioral, and emotional engagement. They also found that the teacher-student relationship is reflected in how the teacher sets up the classroom environment, provides instruction, and creates an overall class climate.

Another factor thought to influence student engagement in the cognitive area is the rigor of the coursework and the degree to which students can relate it to their current or future lives (Conner & Pope, 2013; Yonezawa et al., 2009). Without rigor and relevance, students can easily become disengaged. Yazzie-Mintz (2009) states that almost half of the students who thought about dropping out of school in 2007 and 2008 reported that it was because they did not see the value in the work they were being asked to do; 40% said the work was not relevant to them. Only 48% of respondents on the 2009 HSSSE reported that they were academically challenged in their classes (Yazzie-Mintz, 2010).

The amount of work a student is willing to put into studies is one measure of behavioral engagement. Less than half of the participants in the 2007 - 2009 HSSSE surveys reported putting forth maximum effort in all of their classes (Yazzie-Mintz, 2009,

2010). Clear behavior expectations in conjunction with good practices such as differentiation of instruction, frequent opportunities for active participation in the lesson, and a quick pace to lessons can help students be more behaviorally engaged in their classes (Lekwa et al., 2019).

Jung-Sook Lee (2014) identified the large number of students who are disengaged at school as a significant problem for education and used data from the Program for International Student Assessment (PISA) 2000 test of literacy skills to measure the relationship between student engagement and academic performance. Lee (2014) hypothesized that behavioral and emotional engagement would predict academic performance, and that the effect of emotional engagement on academic achievement would be mediated through behavioral engagement. Participants included 3,268 fifteen-year-old students in the United States. Lee ran multilevel analysis and found a significant correlation between both behavioral and emotional engagement and reading performance, as well as mediation of emotional engagement effect on academic achievement by behavioral engagement. This study reflects the importance of student engagement on achievement, stressing the point that students who feel that they belong and are important within the school make more effort and usually perform better academically. Even so, it is difficult to know if students succeed because they are engaged, or if they are engaged because they are successful.

Conner & Pope (2013) examined levels of engagement and achievement for students at 15 high performing high schools using a multidimensional view of engagement. The study included 6,294 students, 54%of whom were female. Results showed high levels of student stress, cheating, and physical symptoms (anger, depression,

etc.) related to academic pressure. Other results included that more females were fully engaged than males, and that fully engaged students had higher GPAs, fewer physical symptoms of worry about school, and cheated less (Conner & Pope, 2013). Behavioral engagement was reported more frequently than cognitive or emotional engagement, indicating that students were, at some level, going through the motions of learning without any personal investment.

Types of Engagement

Martin and Torres (2016) define student engagement as, "…meaningful student involvement throughout the learning environment" (p. 2). While many researchers use the broad categories of cognitive, emotional, and behavioral engagement, most add their own thoughts about which is most important and how the three aspects might work together in the classroom. Because engagement is usually thought of as a multidimensional construct, students can be engaged, or disengaged, on one or more of the components of cognitive, emotional, and behavioral engagement at any given time. Many researchers look at various aspects of cognitive, emotional, and behavioral engagement as factors affecting overall student engagement, and as predictors of student achievement, although they may refer to the constructs in slightly different terms (e.g. Cooper, 2014; Fatou & Kubiszewski, 2018; Lekwa et al., 2019; Martin & Dowson, 2009).

Cognitive Engagement

Fredricks et al. (2004) state that, "…cognitive engagement draws on the idea of investment; it incorporates thoughtfulness and willingness to exert the effort necessary to comprehend complex ideas and master difficult skills" (p. 60). Similarly, the National

High School Survey of Student Achievement views engagement as a multidimensional construct that includes cognitive, or intellectual, engagement, which is evident through students' intellectual qualities, effort, strategies to learn, and participation during instruction (NAIS, 2017). Other researchers say that students who are cognitively engaged value education, and want to learn because they see the importance of education for success later in life (Chase et al., 2014; Conner & Pope, 2013).

Emotional Engagement

A number of researchers define emotional engagement as a sense of belonging and being a part of an academic institution (e.g., Chase et al., 2014; Griffin, et al., 2017; Lei, et al., 2018). This idea relates closely to the description of emotional engagement provided by Fredricks et al., (2004) in that it "…encompasses positive and negative reactions of teachers, classmates, academics, and school and is presumed to create ties to an institution and influence willingness to do the work" (p. 60). Other researchers state that emotional engagement is much more tied to students' general feelings about learning, and feelings of happiness, sadness, anxiety, boredom, etc. (Li & Lerner, 2013; Martin & Torres, 2016; Roorda, et al., 2017; Skinner et al., 2008; Wonglorsaichon, et al., 2014). According to Conner and Pope (2013), emotional engagement is present when students find the work they are doing to be interesting and enjoyable.

Behavioral Engagement

Many researchers also agree with the description of behavioral engagement given by Fredricks et al., (2004) which states, "Behavioral engagement draws on the idea of participation; it includes involvement in academic and social or extracurricular activities and is considered crucial for achieving positive academic outcomes and preventing

dropping out" (p. 60). While this definition places emphasis on active participation, some researchers define behavioral engagement more in terms of effort, persistence, and working hard (Conner & Pope, 2013; Skinner et al., 2008). Other researchers also include the idea of positive conduct and rule following in the concept of behavioral engagement (e.g. Griffin et al., 2017; Lee, 2014; Martin & Torres, 2016; Wang & Holcombe, 2010; Wonglorsaichon, et al., 2014). Most researchers acknowledge the difficulty in cleanly separating some aspects of cognitive engagement from aspects of behavioral engagement, and for that reason measures for each may overlap in some studies.

Multidimensional View of Engagement

Most of the researchers mentioned above use a multidimensional concept of engagement that includes cognitive, emotional, and behavioral engagement, but some only look at the impact of emotional and behavioral engagement on student achievement (Lee, 2014; Skinner et al., 2008). Regardless, researchers agree that student engagement is important to academic success and that the types of engagement are, "…dynamically interrelated within individuals, and not isolated processes" (Wang & Holcombe, 2010, p. 2). Findings show that students who are fully engaged cognitively, emotionally, and behaviorally are motivated to learn and have significantly higher GPAs (Conner & Pope, 2013) Parker et al. (2017) suggest that engagement means that students need to understand how what they are doing is relevant, have the opportunity to choose tasks that are right for them, and have opportunities that are challenging, but not impossible, to master.

Chase et al. (2014) assessed the relationship between cognitive, emotional, and behavioral engagement and academic success to see if there is a reciprocal relationship.

This study was based on Li and Lerner's (2011) study using older students in a longitudinal model of the 4-H study of Positive Youth Development. The Chase et al. (2014) study included 710 students who participated in the survey for at least two of the three years; 69% of the participants were female and the mean age was 15.7 years old. Researchers used the Behavioral-Emotional-Cognitive School Engagement Scale to measure the three aspects of engagement, and used a self-reported GPA for academic achievement (Chase et al., 2014). Longitudinal confirmatory factor analysis found that engagement and achievement are mutually predictive, but predictions varied by grade. Specifically, behavioral engagement in tenth grade was the best predictor of achievement in twelfth grade, and emotional engagement in tenth grade significantly predicted eleventh grade GPA; additionally, GPA predicted all three types of student engagement (Chase et al., 2014).

A multidimensional definition of engagement that includes cognitive, emotional, and behavioral engagement served as the foundation for Kristy Cooper's investigation of this concept. Cooper's (2014) research involved a mixed methods study of 1,132 students in grades nine through twelve at Riley High School, located in a blue-collar community in Texas. Students responded to surveys that measured 12 teaching practices representing teacher-student connectivity, rigor, and lively teaching, plus five additional questions from the National Center for Student Engagement that measure overall engagement (Cooper, 2014). Multilevel regression analysis linked the teaching practices with levels of engagement. All twelve teaching practices were significantly correlated to student engagement and with each other; the strongest correlation was perception of teacher care, and the weakest was challenging work (Cooper, 2014). While Cooper acknowledged that

these constructs could be viewed separately, she stated that they often relate to each other and should also be viewed more holistically (Cooper, 2014). Results of Cooper's (2014) study indicate that the three types of teaching practices work best when used together, but her study also showed that the teacher-student relationship is seven times more related to engagement than the other two practices.

Table 1

Major Study Concept Analysis Chart

Study	Purpose	Participants	Design/Analysis	Outcome
Jung-Sook Lee, 2014	To test the relationship between emotional and behavioral engagement and academic performance.	3,268 15-year-olds from 121 US schools through PISA study	Multilevel analysis. Main effect model looked at each type of engagement individually and the full model looked at behavioral and emotional engagement together.	Behavioral and emotional engagement predicted reading performance to a significant degree. Behavioral engagement partially mediated the impact of emotional engagement.
Hao Lei, et al., 2018	To test the strength of cognitive, emotional, and behavioral engagement on academic achievement; to determine if gender, cultural values or the type of survey/reporting impacted results.	196,473 participants over 69 studies from 2003 - 2015	Meta-analysis of 69 studies of the impact of student engagement on academic achievement which calculated 1,633 effect sizes.	Moderate to strong correlation between overall engagement, as well as individual cognitive, emotional, and behavioral engagement and academic achievement. Teacher reported results had higher correlation than self-reports. Cultural values (East vs West) impacted correlation with a stronger average effect size in Western individuals. Gender also had a moderating effect: as the number of males increased, the average effect size for overall engagement went down and the opposite was true for females.
Bonggoch Wonglorsaichon, et al., 2014	To analyze the influence of students' school engagement on academic achievement.	2,344 students, 57.1% female and the highest percentage of students were 14 years old (19.3%)	Structural Equation Modeling analysis	There was a direct and significant effect of engagement in school on achievement. Emotional engagement was highest followed by cognitive then behavioral engagement.

(Continues)

Table 1 *(continued)*

Study	Purpose	Participants	Design/Analysis	Outcome
Paul Chase et al., 2014	To assess the relationship between cognitive, emotional, and behavioral engagement and academic success and evaluate any reciprocal relationship.	710 students, 69% female, Grades 10 – 12; data from a 4H Study of Positive Youth Development	Longitudinal Confirmatory Factor Analysis	Components of school engagement and academic achievement are mutually predictive, but predictions varied by grade. There was a bidirectional relationship between cognitive, emotional, and behavioral engagement and GPA.
Yibing Li & Richard Lerner, 2013	To assess the interrelationships of cognitive, emotional and behavioral engagement (viewed as a meta-construct).	1,029 youth, 67.7% female, Grade 9, average age 14.92, from 4H study of Positive Youth Development (longitudinal study of engagement Grades 9-11)	Auto-regressive lagged effects model	Behavioral and emotional engagement are related bidirectionally. Earlier emotional engagement predicted later cognitive and behavioral and earlier behavioral engagement predicted later cognitive and emotional engagement.
Kristy Cooper, 2014	To study how and why engagement varies across classes and students using three types of instruction to test for engagement.	581 classes, 1,132 students in one diverse high school	Case study, factor analyses of surveys and embedded case studies, multilevel regression analysis	All three teaching practices show a positive correlation to engagement. The relationship between emotional engagement is over seven times stronger than between the other types of engagement.
Ellen Skinner et al., 2008	To study behavioral and emotional engagement and student self-perceptions of competence, autonomy, and relatedness.	805 4th – 8th grade students	Descriptive statistics, multiple regression analysis and process models	Emotional engagement significantly impacts behavioral engagement; teacher support and student autonomy also contribute to behavioral engagement.
John Zilvinskis et al., 2017	To explore two versions of the National Survey of Student Engagement and compare evidence of convergence and discrimination.	Institution level data from 2011 and 2013 testing	Canonical correlation analysis	Both tests show that student engagement is related to academic achievement positively and significantly. The revised version of the survey provides more complete information on which specific engagement practices lead to greater engagement and higher achievement.
Wang & Holcombe, 2010	To explore middle school students' perceptions of school environment, engagement, and academic achievement.	1,046 urban, ethnically diverse students	Short term longitudinal research, Structural Equation Modeling	School environment influences student cognitive, affective, and behavioral engagement and academic achievement. School climate can serve as a protective factor against disengagement problems.

(Continues)

Table 1 *(continued)*

Study	Purpose	Participants	Design/Analysis	Outcome
Conner & Pope, 2013	To explore level of engagement for students at high-performing schools as well as related factors such as stress, academic integrity, and mental health.	6,294 students, 54% female, at 15 high-achieving schools	Hierarchical cluster analysis, descriptive and inferential statistics and multiple linear regression	Results showed high levels of student stress, acknowledgement of cheating, and physical symptoms related to academic pressure. Behavioral engagement was reported more often than cognitive and affective engagement. More females than males were fully engaged; fully engaged students had higher GPAs, fewer physical symptoms of worry about school, and cheated less.
Debora Roorda et al., 2017	To analyze student engagement as a mediator between affective student-teacher interactions and student academic achievement.	189 studies (249,198 students) from preschool through high school	Meta-analytic structural equation modeling	Student engagement partially mediated the relationship between both positive and negative relationships and achievement.
Charity Griffin et al., 2017	To explore cognitive, emotional, and behavioral engagement as mediators of the relationship between racial climate and academic achievement.	139 African American students in a southeastern U.S. high school	Process model of school engagement and bootstrap analysis	Behavioral and cognitive engagement mediated perceptions of racial climate and achievement indirectly as well as student perceptions of discrimination and achievement.
Education Week Research Center, 2014	To examine teacher and administrator perspective on student engagement and motivation.	504 K-12 teachers and administrators	Analysis of raw scores, results presented as percent of respondents who responded to each answer	Engagement was determined to be the most important factor for student success; teachers report very low levels of engagement for at-risk students; relevant school work and interactive lessons were thought to be more engaging by most teachers.

Measures of Engagement

Multiple measures have been designed to identify levels of student engagement and possible connections to achievement or other factors. Fredricks et al. (2011) reviewed 21 such instruments used in elementary through high school. Of these, five were multidimensional, involving cognitive, emotional, and behavioral engagement. One of these surveys was the HSSSE, which was developed by the Center for Evaluation and Education Policy (CEEP) at Indiana University. The HSSSE survey measures student

perceptions about the work they do in school, the classroom climate, and the overall school community; student engagement is seen as important for a safe and positive school environment where students are motivated to achieve (Yazzie-Mintz, 2010). While many schools and school systems administer the HSSSE survey, CEEP does not publish the aggregated results. However, the NAIS promotes the use of the survey with their members and publishes the results of both the private and public school data (NAIS, 2017). These reports list some advantages of an engaged student population, including academic motivation, better attendance and behavior, better preparation for college, and lower dropout rates; engagement has also been shown to lessen the effect of disadvantage on marginalized populations (NAIS, 2017).

The HSSSE survey consists of 31 questions measuring cognitive, emotional, and behavioral dimensions of engagement, plus some demographic information. The 2016 survey was taken by 10,545 students in Independent schools from all regions of the United States in the spring of 2016 (NAIS, 2017); data on the number of public high school students who took the test were not readily available, although the results are included in the NAIS report. On cognitive/academic engagement measures, 66% of students said that their classes challenge them and that they work very hard in class. Conversely, 83% said that uninteresting content left them sometimes or frequently bored (NAIS, 2017). On the emotional engagement aspects of the survey, 90% reported wanting to do well in school, and 75% said that their teachers play a motivating factor in their academic pursuits. With regards to behavioral/social engagement, 84% of students reported going to school because of friends, while 55% of students reported teachers influenced their attendance (NAIS, 2017).

Kristy Cooper (2014) used a different survey that measured the constructs of cognitive, emotional, and behavioral engagement at the classroom, as opposed to the school, level. Her survey measured the perceptions of 1,132 students in 581 classrooms in one high school on teacher practices thought to impact student engagement. The practices of academic rigor, connective teaching, and lively teaching are related to cognitive, emotional, and behavioral engagement: The 12 practices were rated by students using a Likert-type scale. Results of Coopers' (2014) study suggest that student engagement is important enough to student achievement to warrant purposeful use of engaging teaching strategies. Cooper also suggests that teaching for engagement should be measured across multiple academic and elective disciplines to see what variation occurs.

An additional measure, the revised (2013) National Survey of Student Engagement, showed that student engagement was positively related to student self-reports of academic and interpersonal gains (Zilvinskis et al., 2017). Zilvinskis et al. (2017) state the following:

> Institutions interested in improving students' academic and interpersonal self-reported learning outcomes would be well advised to focus their efforts on forms of effective teaching practices. Based on the results of the current research, these focused activities can be bolstered by emphasizing higher-order, reflective, and integrative learning and a supportive campus learning environment…educators who wish to improve writing, speaking, and critical thinking skills of their students could engage in pedagogy that emphasizes reflective learning, particularly learning that relates class assignments to problems in society and has students evaluate the merits of their own perspectives. (p. 894)

While the National Survey of Student Engagement is designed for college students, the results show that the same aspects of engagement that impact high school students continue to have importance to college and university students.

Another instrument, the Panorama Student Survey (PSS), was developed by Dr. Hunter Gehlbach, the Harvard Graduate School of Education, and Panorama Education in 2014 (Gehlbach, 2015). The PSS is actually a group of 19 surveys developed to measure student perceptions of teaching and learning in the classroom as well as in the school; surveys can be selected and given together to measure a range of topics including cognitive, emotional, and behavioral engagement in the classroom (Ghelbach, 2015). While Panorama Education does not publish the results of studies that have been done, the website does provide examples of success stories related to use of the surveys. The researcher used seven of the PSS topics to measure student engagement and students' perceptions of the teacher in this study.

A different type of assessment, the Classroom Assessment Scoring System™ (CLASS™) was developed by the Curry Center for Advanced Study of Teaching and Learning at the University of Virginia and is composed of four 15 minute observations conducted by CLASS™ trained observers (Pianta & Hamre, 2009). The CLASS™ conceptual framework lists domains of emotional supports, classroom organization, and instructional supports; the indicators in these domains align with emotional, behavioral, and cognitive engagement respectively. While multiple observations of teachers in their classrooms are a beneficial way to measure aspects of engagement, they can be costly. Student perception surveys could capture much of the same information more efficiently and inexpensively from the point of view of the student stakeholders.

All of these studies and measures indicate that there are practices that result in increased student engagement, which in turn lead to more successful student outcomes. While there is variation from study to study, most look at the broad categories of cognitive, emotional, and behavioral engagement, or a multidimensional view of the three. Some research shows that a combination of cognitive, emotional, and behavioral engagement results in higher levels of student motivation (Conner & Pope, 2013). The current study focused on cognitive, emotional, and behavioral engagement individually and the relationship to students' perceptions of teachers in the visual art classroom.

Support for Use of Student Perception Surveys

Many systems use a value-added measure as part of teacher evaluation programs; value-added refers to student achievement, measured through test scores, thought to be related to instruction and other actions by the teacher, while controlling for other factors that might influence results (edglossary.org). Pianta & Hamre (2009) suggest that the value-added concept in teacher evaluation is an oversimplification of teaching and learning suggesting that good teachers show achievement and bad ones do not; they affirm instead that classrooms and teachers matter. Supporting the use of student perception surveys, Kane and Staiger (2012) found that student surveys correlate significantly to value-added achievement measures, and the Measures of Effective Teaching Project (2010) showed that student surveys are actually more reliable than observation methods. Effective teaching is multidimensional and goes beyond student academic achievement to include teacher's classroom organization and teacher support of students socially, emotionally, and academically (Pianta & Hamre, 2009).

Egalite and Kisida (2018) note that many theories of effective teaching examine students' perceptions of teachers, as well as assessments of classroom climate and self-reports of academic engagement. Student perception surveys have emerged as a factor in teacher evaluation that can be used to determine advancement, professional development, and compensation among other things. "As of September 2013, 35 states and the District of Columbia Public Schools require that student achievement is a significant, or the most significant factor in teacher evaluations" (Doherty & Jacobs, 2013, p. 1). This finding shows a large increase from only four states in 2009 (Doherty & Jacobs, 2013). Valid, high-quality measures are essential in this high-stakes environment. Benefits of the inclusion of student surveys are that students have direct contact with teachers daily and can help identify what is working and what is not, student surveys are much less expensive than observations, and student surveys have been shown to be valid and reliable measures of teacher effectiveness (Balch, 2016). On the other hand, inclusion of student surveys for high-stakes purposes such as contract renewal, advancement, or teaching placement understandably makes teachers uneasy, and can lead to a lack of support for their use. Balch (2016) suggests that providing feedback to teachers that is easily understood and eliminating invalid responses that teachers feel may be provided by disgruntled students might increase teacher support for student survey use. Student perception surveys offer a unique view of teachers, classroom organization, and instructional methods from the persons most affected. Results of the surveys can help to inform the use of a variety of teaching strategies such as more active learning and a learner-centered approach to classroom space use, which have been shown to improve

student engagement and achievement (Adedokun, Hanke, Parker, & Burgess, 2017; Kuhn & Rundle-Thiele, 2009).

Instructional Practice

In a traditional classroom setting, lecture-style direct instruction is often used. While this is an efficient way to teach, placing facts in a context to which students can relate increases and deepens learning (Tyler & Likova, 2012). Students are frequently taught to execute tasks and find the single correct answer as opposed to asking questions and searching for multiple answers that could foster creativity, motivation, and innovation, practices which lead to increased student engagement (Land, 2013; Lekwa et al., 2019). Carrabba and Farmer (2018) discussed the differences in student engagement when teachers implemented direct instruction versus project-based learning. They found that project-based learning where students are given authentic and meaningful tasks was more engaging to students and also increased their motivation to perform at a higher level. In contrast direct instruction environments are very teacher controlled and were found to be less engaging and less motivating for students. The element of choice in project-based learning gives students the opportunity to design instruction that fits them personally which has been shown to reduce student apathy about schoolwork and to increase students desire to succeed (Anderson, 2016).

The National Survey of Engaging Students for Success (2014) included questions that asked teachers about strategies to increase engagement. Teachers listed the following strategies as important to promoting engagement and motivation: school work that is relevant to real life, including fine arts instruction and courses, and programs to connect students to careers and business (Zilvinskis et al., 2015). Teachers also listed

interactive/hands-on activities, personal relationships with students, making curriculum relevant, use of feedback, praise and incentives (Zilvinskis et al., 2015). Maulana and Helms-Lorenz (2016) cite these observable teaching behaviors that are thought to positively impact teaching: "…creating a safe and stimulating learning climate, exhibiting efficient classroom management, displaying clear instructions, activating learning, employing adaptive teaching, and implementing teaching and learning strategies" (p. 338). These behaviors align with creating cognitively, emotionally, and behaviorally engaging instructional environments which lead to increased student learning.

Traditional teaching most frequently addresses content areas in isolation and is focused on the accumulation of facts; teaching the whole child allows students to construct their own knowledge and is more equitable in helping all students reach their potential (Vanada, 2016). Today, students can easily find factual answers to many questions using technology, but that is not what the workforce of the future requires. Industry focus has shifted to students with 21st century skills of creativity, collaboration, communication, and critical thinking (Hartle, Pinciotti, & Gorton, 2015).

Tyler and Likova (2012) explain that the experiential nature of inspiration creates motivation. The authors advocate giving students the opportunity to become active participants in the making of knowledge as a form of inspiration, instead of allowing them to be purely passive recipients of factual information (Tyler & Likova, 2012). According to Vanada (2016), teaching students in more learner-centered environments and using more open-ended, project based lessons focused on big ideas leads to more connected and deeper learning for students. A balanced learning environment should

employ inquiry (creative thinking skills), self-directed learning (practical thinking skills), and connection-making (critical thinking skills; Vanada, 2016). As the open-ended and student-centered problems that Vanada (2016) suggests allow students to make mistakes and learn from their experiences, the use of these strategies may involve a challenging transition for many teachers who have to learn how to give students more choice. This is supported by the results of the 2016 HSSSE survey which reports that students found projects and lessons involving technology, group projects, art activities, drama activities, and role play the most engaging classroom activities (NAIS, 2017). Active participation in learning inspires students to explore, ask questions and think deeply about topics. The best teachers understand the need for deep thinking, but in the highly scheduled educational setting, students may find achieving inspiration difficult.

Much of the current shift in learning to more collaborative and cooperative methods focuses on relatedness as students share goals, resources, and rewards as they work together to achieve success (Martin & Dowson, 2009). Yonezawa et al. (2009) propose that student engagement and learning go beyond cognitive, emotional, and behavioral factors and will only increase when students' voice and identity in the educational setting are taken into account. With collaborative learning, there is a need to work together, communicate, and discuss that is not usually seen in the traditional classroom. Students who are working on a project that is engaging and relevant to them tend to stick with the work and manage their own goals and learning (Tyler & Likova, 2012). Experiential learning deepens content learning by going beyond memorization, and students understand how this learning is different; this awareness can also lead to transfer of knowledge between disciplines (Ghanbari, 2015).

Educator Perspective on Student Engagement and Motivation

The National Survey of Engaging Students for Success (Education Week Research Center, 2014) presents insights into educators' perspectives on student engagement and motivation. The survey was produced by Education Week Research Center, and over 500 teachers and school level administrators from a wide range of grades levels, experience, and school settings completed it. Many of the findings are relevant to this study of student engagement and motivation in the classroom. Eighty-seven percent of respondents said student engagement and motivation are very important for student achievement, and 82% said that teaching quality is very important. Some key indicators of student engagement according to teachers are excitement about learning, a high level of effort on school work, persistence in school work, and attendance (Education Week Research Center, 2014). Ninety-nine percent of teachers surveyed agree that student engagement and motivation contribute to positive behavior and discipline.

Attitudes and beliefs that teachers feel are important to student motivation and engagement include the belief that they can be successful in school and the belief that they can get help at school; 98% of teachers said engaging and motivating students was part of their job, but only 71% said they have resources to use when students are not engaged and motivated (Education Week Research Center, 2014). While 94% of respondents thought that they were good at motivating and engaging students, only 70% thought other teachers were, and only 47% of preservice teachers thought their training prepared them to engage and motivate students (Education Week Research Center, 2014). Sixty-nine percent of respondents thought that lack of engagement and motivation is a problem at their school, and 54% said there is too little attention on it. The greatest

teacher-perceived challenges to engagement included lack of parent support, student apathy, lack of intrinsic motivation, inadequate resources, and time (Education Week Research Center, 2014). These results of teacher attitudes and beliefs indicate that, while teachers believe student engagement to be very important, many feel ill equipped to provide engaging instruction.

Summary

While much research has been performed on student engagement and achievement and how these relate to instructional practice, none has investigated specifically the relationship between student engagement levels and students' perceptions of teachers in the art classroom. Since the art room is usually a hands-on place of active learning, this research could have implications for other content areas as well when debating the benefit of greater inclusion of experiential learning activities. Looking at student perceptions of cognitive, emotional and behavioral engagement and how, or if, this engagement is related to students' perception of teachers is important to understanding how students best learn and what instructional strategies teachers can implement to increase engagement. It seems that ultimately students must feel a connection with the teacher, the content, and the instruction being provided in order to be engaged in the class and motivated to learn. How and to what degree this occurs in different courses is worth further study.

CHAPTER III

METHODOLOGY

Introduction

Low levels of student engagement in high school classrooms is a significant problem in schools, which can lead to boredom, apathy, failure and high numbers of students dropping out of school (Bridgeland et al., 2006). The purpose of this study is to investigate students' level of engagement in the visual art classroom and the relationship to students' perception of the teacher in a Comprehensive Visual Art I course. Chapter III explores the research design, the role of the researcher, the participants, the instrument, data collection, and data analysis.

Research Design

This investigation of the relationship between student engagement and student perceptions of teacher was conducted using a nonexperimental, cross-sectional, predictive research design (Creswell, 2005). The research questions for this study are:

1. What is the relationship of student cognitive engagement scores in Comprehensive Art I classes to student ratings of the teacher?

2. What is the relationship of student emotional engagement scores in Comprehensive Art I classes to student ratings of the teacher?

3. What is the relationship of student behavioral engagement scores in Comprehensive Art I classes to student ratings of the teacher?

The hypotheses in this study test the differences between student perceptions of cognitive, emotional, and behavioral engagement, and student ratings of their art teacher. Hypotheses will take the following general form:

H_a = There is a relationship between students' perceptions of cognitive engagement and students' perceptions of teachers to a statistically significant degree.

H_0 = There is no relationship between students' perceptions of cognitive engagement and students' perceptions of teachers to a statistically significant degree.

For the additional hypotheses, the term cognitive engagement is replaced with emotional engagement and behavioral engagement in both the alternate and null hypotheses. The dependent variable (DV) is students' perceptions of the teacher, and the independent variables (IV) are cognitive, emotional, and behavioral engagement.

This research design fits the investigation because the data was collected at one point in time and shows the relationship cognitive, emotional, and/or behavioral engagement have to student ratings of the teacher. This study viewed the relationship among variables as opposed to attempting to show strict causality. As Johnson and Christensen (2017) state, explanatory experimental research is the strongest method for establishing a causal relationship; however, predictive, nonexperimental research is more beneficial in this study where variables cannot be manipulated. Quantitative methods, such as those used for this study, can provide valid representations of student perceptions (Carini, Kuh, & Klein, 2006). Demographic data collected on student perception surveys

allowed the researcher to look for patterns in responses that may elucidate differences in student opinions and attitudes due to those demographic variables.

Role of the Researcher

The researcher had a professional relationship with the art instructors, having taught and worked with them as the fine arts professional learning specialist; however, the researcher was neither a supervisor nor evaluator of any of the instructors. No relationship existed between the potential study participants and the researcher, barring the unlikely possibility that one of the researcher's former elementary students was then taking the Comprehensive Art course: unlikely due to the researcher having left the elementary level nine years ago at the time of the study. The researcher facilitated communication with the high school art teachers about involvement of Comprehensive Visual Art I students from the 2019-2020 school year by email and provided information about the survey students were asked to take to teachers electronically as well.

Participants

The research was performed in a large metropolitan Atlanta school district of approximately 43,000 students in Georgia. This population is approximately 55% African American (54% of sample), 25% Caucasian (34% of sample), 11% Hispanic (3% of sample), 5% multiracial (7% of sample), 3% Asian (2% of sample), and 1% other (not rated). The student population can also be described as 49% economically disadvantaged, 2% English Language Learners, 13% students with disabilities, and 13% gifted students. The school system is the eighth largest of 180 school districts in the state of Georgia and contains 28 elementary schools, 11 middle schools, and 11 high schools. The most recent graduation rate for the county is 85.3%, compared to the state average of 79.2%; the

average ACT composite score is 19.9, compared to the state average of 21.1; and the average SAT verbal/math/writing score is 1371, compared to the state average of 1459. Use of the district and the high schools was a matter of convenience, because this is where the researcher worked at the time of the study.

Table 2

District Demographics Compared to Participating Schools

	Black	Hispanic	Hawaiian or Pacific Islander	White	Two or more races	% Econ Disad-vantaged
District	55%	11%	3%	25%	5%	49%
School A	22%	5%	1%	70%	2%	26%
School B	32%	5%	3%	57%	3%	21%
School C	56%	9%	2%	29%	4%	40%
School D	71%	10%	4%	11%	4%	51%
School E	58%	9%	-	31%	2%	57%

Study participants included students from Comprehensive Visual Art I classes in five high schools in the selected school district. Due to the variation in class sizes and number of sections offered, the potential sample was approximately 280 students. All high school students have the opportunity to take Comprehensive Visual Art, so students in the class could range from 14 to 19 years of age. The level of diversity varies from school to school; however, the average of the reported student ethnicities for the five schools involved mirrors that of the district as a whole more closely than any one school. Table 2 presents selected demographics of the participating schools and those of the district as a whole.

This population was selected for convenience due to proximity to the researcher and familiarity of the researcher with the schools, administration, and content of the course. The Comprehensive Visual Art I course was selected for the study because the structure of the course dictates that the content is the same across all schools; the variation comes in how teachers present the content. Inclusion in the study required that the participant be currently enrolled in the Comprehensive Art I course at one of the participating high school in the selected district. There were no other requirements for inclusion in the study. Participation was entirely voluntary and participants had to have parental permission to participate on file. *G*Power 3* (Faul, Erdfelder, Lang, & Buchner, 2007) indicated that 85 participants were needed for an effect size of .15, $\alpha = .05$, and a power of .80 with four predictor variables. The researcher aimed for a minimum of 100 participants, but was only able to secure 68 complete responses. Thus, the achieved power, calculated through post hoc analysis, with an *effect size* of .15, $\alpha = .05$, 68 participants, and four predictor variables, was .69.

Students were identified by Comprehensive Visual Art I teachers at each participating school. Teachers sent an email crafted by the researcher to parents requesting consent for students to take the survey (See Appendix A). If consent was given, student email addresses were provided by the parent (See Appendix B). At this point, the researcher contacted students by email with the link to the survey including student assent (See Appendices C and F). Two follow up emails were sent to parents, and students were sent two reminders to complete the survey once they received the initial link (See Appendices D and E). Because schools were operating remotely due to a global pandemic (COVID-19), the setting for the taking of the survey was up to each individual;

no students were in school, but as a 1:1 school district, all students had been provided access to a device that could be used to take the survey.

Instrumentation

For this study, a survey was used to measure levels of students' cognitive, emotional, and behavioral engagement and students' perceptions of teachers. The selected survey included portions of the PSS developed by researchers at the Harvard Graduate School of Education (Gehlbach, 2015). The portions selected were those directly related to cognitive, emotional, and behavioral engagement, and student perceptions of the teacher at the classroom level; surveys related to the overall school were not used. Dr. Hunter Gehlbach, Director of Research at Panorama Education, coordinated development of the PSS instruments, including piloting and review of the measures and establishment of the reliability and validity of the scales used. The goal of the survey's development was to produce a free, valid, and reliable survey of student perceptions of teaching and learning. PSS was released in August of 2014. Gehlbach and Brinkworth (2011) developed a six step process to create the PSS that consisted of a review of literature, interviews and focus groups, synthesis of indicators, item creation, expert review, and cognitive pre-testing and interviewing (Gehlbach, 2015). After the team completed these steps and revised items as needed, large-scale pilot tests were conducted.

Table 3

Survey Item Construct Measured, Item Numbers, and Alignment with Research Questions

Construct Measured	Item Numbers	Research Question
Cognitive Engagement	14, 15, 16, 17, 18, 25, 27	1
Emotional Engagement	19, 20, 21, 22, 23, 24	2
Behavioral Engagement	9, 10, 11, 12, 13, 26, 28	3
Teacher Perception	29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47	1,2,3

Note. Cognitive, emotional, and behavioral engagement survey questions, and teacher perception questions are from Panorama Student Surveys (PSS, 2015).

The complete survey spans 19 topics with five to nine questions included in each topic. This study used seven of the 19 survey topics, selected because they relate directly to students' perceptions of cognitive, emotional, and behavioral engagement in the classroom and students' perceptions of the teacher. Four of the topics were used to determine student levels of cognitive, emotional, and behavioral engagement; these four survey topics are Grit, Classroom Engagement, Classroom Belonging, and Classroom Rigor These four surveys total 20 questions, seven related to cognitive engagement, six related to emotional engagement, and seven related to behavioral engagement. An additional three topics were used to measure students' perceptions of the teacher. These total 20 questions and the topics are Pedagogical Effectiveness, Classroom Climate, and Teacher-Student Relationship. Table 3 shows the alignment of survey questions to constructs tested as well as to the research questions. Limited demographic data was also

included on the survey including questions about gender, race/ethnicity, age, and previous art experience in the form of a formal art course (See Appendix I for paper copy of the survey).

Reliability and Validity

Survey items were formulated using best design practices determined through the extensive review of literature conducted by the developers (Gehlbach, 2015). These practices include framing items as questions rather than statements and giving an adequate number of response options with verbal, as opposed to numerical, labels (Dillman, Smythe, & Christian, 2014). The surveys were piloted with two large districts, one in the southeastern United States, and one in the Southwest, and measures of reliability, structural validity, and convergent/discriminant validity were analyzed (Gehlbach, 2015). Panorama Education reports that the coefficient alpha for every scale is .70 or higher, meaning that the items measure what they are intended to measure when used under similar conditions (Gehlbach, 2015). Cronbach's alpha is used as a measure of internal consistency to show how closely items are related as a group (Cronbach, 1951). In social science research, a coefficient of .70 or higher is thought adequate. As these surveys are used by different researchers for different purposes, the data is analyzed to indicate if the scales measure various items as intended, which continues to increase scale validity.

Convergent/discriminant validity evidence for the survey of Pedagogical Effectiveness was gathered by researchers at Panorama Education. Researchers attempted to correlate student survey responses to other, similar scales such as the Measures of Effective Teaching (MET) study and two scales from the Consortium on Chicago School

Research (CCSR) (Gehlbach, 2015). The scores for the Panorama survey and the items from the other three surveys measuring similar elements were found to correlate as anticipated. Confirmatory factor analysis was used successfully to ensure that each item measures a single construct (Gehlbach, 2015). Multiple administrator observations of classrooms in a small Catholic high school were averaged so that each teacher had one score, and this score was compared to averaged survey scores; this comparison also showed high correlation, r=.80 (Gehlbach, 2015).

Measures of Cognitive, Emotional, and Behavioral Engagement in the PSS

This nonexperimental, cross-sectional, predictive study included an electronic survey of student perceptions about levels of cognitive, emotional, and behavioral engagement in the classroom and student perceptions of their teacher (see Appendix I for paper copy of the survey). The questions related to each type of engagement and were scored on a 5- to 7-point Likert scale. The survey items were adopted from the suite of Panorama Education's PSS (Gehlbach, 2015). Seven of the 19 scales were used; four related to cognitive, emotional, and behavioral engagement, and three related to student perception of their teacher. Panorama offers their surveys for use in research at no cost. Each section of the survey has a minimum of five questions. Limited demographic data was also collected through the survey. The survey consists of a total of 48 questions and should have taken students 10 to 12 minutes to complete. The seven scales used in this research are briefly described below, and a sample question from the PSS is given for each. Table 3 shows the item numbers in the current survey and the construct each one measures.

Classroom rigorous expectations. The *Classroom Rigorous Expectations* questions included on the survey relate to cognitive engagement, which includes student willingness to work hard, investment in learning, and expectations of the teacher (Fredricks et al., 2004; Roorda et al., 2017). A sample question in this scale is as follows: How much does the teacher encourage you to do your best? (PSS, 2015)

Classroom belonging. The *Classroom Belonging* questions on the survey relate to emotional engagement, which involves student level of interest, acceptance and feelings about school, peers and teachers, and sense of belonging (Griffin et al., 2017; Skinner et al., 2008). These five questions measure student sense of belonging and connectedness to other members of the class and to the teacher. An example is as follows: Overall, how much do you feel like you belong in the class? (PSS, 2015)

Grit. The *Grit* survey was used in this study as a measure of behavioral engagement, which involves concentrating in class, making effort, being involved in learning, and persisting in learning (Lee, 2014; Skinner et al., 2008). The five questions in this section deal with staying focused, being goal oriented, and trying again in the face of difficulty. One sample question is as follows: When you are working on a project that matters a lot to you, how focused can you stay when there are a lot of distractions? (PSS, 2015)

Classroom engagement. This study used the *Classroom Engagement* survey as additional measures of cognitive, emotional, and behavioral engagement in the classroom. The survey includes two cognitive, two behavioral, and one emotional engagement questions about focus, participation, and excitement about the class. A

sample question from this scale is as follows: How often do you get so focused on class activities that you lose track of time? (PSS, 2015)

Measure of Student Perceptions of Teacher Pedagogical effectiveness. The *Pedagogical Effectiveness* section of the survey asks questions directly related to how the teacher instructs and interacts with the student in class. They also address how much students feel like they learn from the way the teacher instructs. A sample question is as follows: How interesting does this teacher make what you are learning in class? (PSS, 2015)

Classroom climate. The *Classroom Climate* part of the survey relates to both the physical space of the classroom and the overall atmosphere. Classroom climate also measures students' perceptions of the excitement level of the teacher about teaching the class and social interactions with peers. A question regarding classroom climate is as follows: How often does your teacher seem to be excited to be teaching your class? (PSS, 2015)

Classroom teacher-student relationship. The *Classroom Teacher-Student Relationship* portion of the survey assesses the level of respect and sincere concern the teacher has for students. These questions are designed to measure students' perceptions of how much a teacher cares about them personally. A question about students' perceptions of this relationship is as follows: How excited would you be to have this teacher again? (PSS, 2015)

Data Collection

Because the study involved human subjects, IRB approval was required and was applied for through Columbus State University once the study proposal was approved

(See Appendix G). The study, comprised of a short, anonymous, online survey, presented minimal to no risk to students. Even so, there may have been some student perceived risk of repercussions from the teacher because of answers students give on the survey. Students were reassured that the teacher would not see any actual surveys, only aggregate data once the study was completed and the names of students who would have completed the course at that point. Approval from the school district in which the study took place was also required and received prior to contacting teachers, parents, or students (See Appendix H).

Once all approvals were given, the researcher contacted the art teachers at the five participating high schools to discuss procedures for the study and answer any questions. Once all questions were answered, the researcher sent the teachers an email to forward to parents/guardians of Comprehensive Visual Art I students containing a link to a Google Forms Informed Consent Form for parents/guardians to complete electronically (See Appendices A and B). Parent/guardian consent was collected on the Principal Investigator's password protected Google Drive. Account information, including log-in and password information, was not shared with any other individual. Consent responses included parent name, student name, and student email for the study invitation. This information was stored on the Principal Investigator's Google Drive in an Excel spreadsheet through the one month of data collection plus one additional month, after which all responses and the spreadsheet were deleted. Once parent/guardian permission was given, the researcher emailed each student an invitation to participate in the study with a link to the student assent form and the survey (See Appendices C and F).

The student engagement survey was administered electronically via Qualtrics. As such, it was up to each participant to choose a setting to take the survey. Students who consented to participate did so through a link to a Qualtrics survey. Qualtrics uses Transport Layer Security (TLS) encryption for all transmitted data. This is also known as HTTPS and is the level of security found on banking sites and others where individuals enter private information. The Qualtrics survey termination was set to *anonymize response*. This setting prevents Qualtrics from collecting any identifiable information such as contact information and IP addresses. Qualtrics retains a backup data set for 90 days and then deletes the data. To prevent unauthorized access to the data, the researcher kept the data on a password secured computer for the duration of the project, which only the researcher could access. The data will be permanently deleted from the researcher's Qualtrics and SPSS files 6 months after publication of the dissertation.

The survey should have taken participants about 10 to 12 minutes to complete and should have been completed in one sitting. The survey instrument was open for 30 days from the time it was initially sent to participants via emailed invitation. After this, the survey was disabled so that no further submissions were possible. If desired, students could have elected to be entered into a drawing for a $25 Chick-Fil-A gift card at the end of the survey. Answering yes to the entry took the student to second survey where they entered a name and email contact to be considered for the drawing. The winning student was notified by email, and arrangements were made to deliver the gift card to the student. This completed the students' participation in the study.

Follow up recruitment took place by sending teachers a reminder email to forward to parents one week after the initial consent email was sent (See Appendix D). Weekly

reminders to complete the study were sent to students with parental consent by the Principal Investigator beginning one week after the initial email to students (See Appendix E). The reminder student email was sent weekly for four weeks in an attempt to reach the desired number of participants. The parent reminder email was sent one additional time one week prior to the closing of the survey.

Data Analysis

The researcher conducted simultaneous regression analysis to answer the research questions. Regression analysis is useful in predictive research and when independent variables cannot be manipulated as it reveals the relative effects of the different variables (Keith, 2006). The criterion, or dependent, variable for this study is students' perception of the teacher. The predictor, or independent, variables are measures of cognitive, emotional, and behavioral engagement as well as demographic covariates. The regression equation is as follows:

$$Y' = b_1 COG_i + b_2 EMO_i + b_3 BEH_i + b_4 COV_i + a + e_i$$

Where Y' is the dependent variable representing students' perception of the teacher. The dependent variable Y' will be measured using the Panorama scales related to teacher perception: these include Pedagogical Effectiveness, Classroom Climate, and Teacher-Student Relationships. COG_i, EMO_i, and BEH_i are independent variables represented as composite engagement scores gathered from student answers to all questions related to each form of engagement for student *i* (predictor variables), *a* is sample intercept, and e_i is the error of student *i*. COV_i also represents an independent variable and is a vector of demographics that could include age, gender, race, or previous art experience. The independent variable *COG*, or cognitive engagement, was measured

using two questions from the PSS scale and five questions from the Panorama Classroom Rigorous Expectations Scale. *EMO*, or emotional engagement, was measured using five questions from the Panorama scale of Classroom Belonging, and one from the scale of Classroom Engagement. Lastly, the independent variable BEH, or behavioral engagement, was measured using five questions from the Panorama scale of Grit and two from the scale measuring Classroom Engagement. The complete survey contains 19 total questions measuring student perceptions of the teacher, seven measuring cognitive engagement, seven measuring behavioral engagement, six measuring emotional engagement, and five demographic questions.

The researcher completed analysis of the data through SPSS-25. Simultaneous regression analysis allowed for determination of the overall variance explained by the model and also showed the individual correlation of each variable providing a predictive effect for each independent variable on the dependent variable. Tests for normality were run prior to further analysis. A calculation to determine the required total sample size was run using *G*Power 3* (Faul, Erdfelder, Land, & Buchner, 2007). *Post hoc G*Power* analysis for a fixed model linear multiple regression using R^2 deviation from zero showed that, with an effect size of .15, $\alpha = .05$, a sample size of 68, and four tested predictors, a power of .69 was achieved. Figure 2 shows the *X*-*Y* plot for the range of values determined.

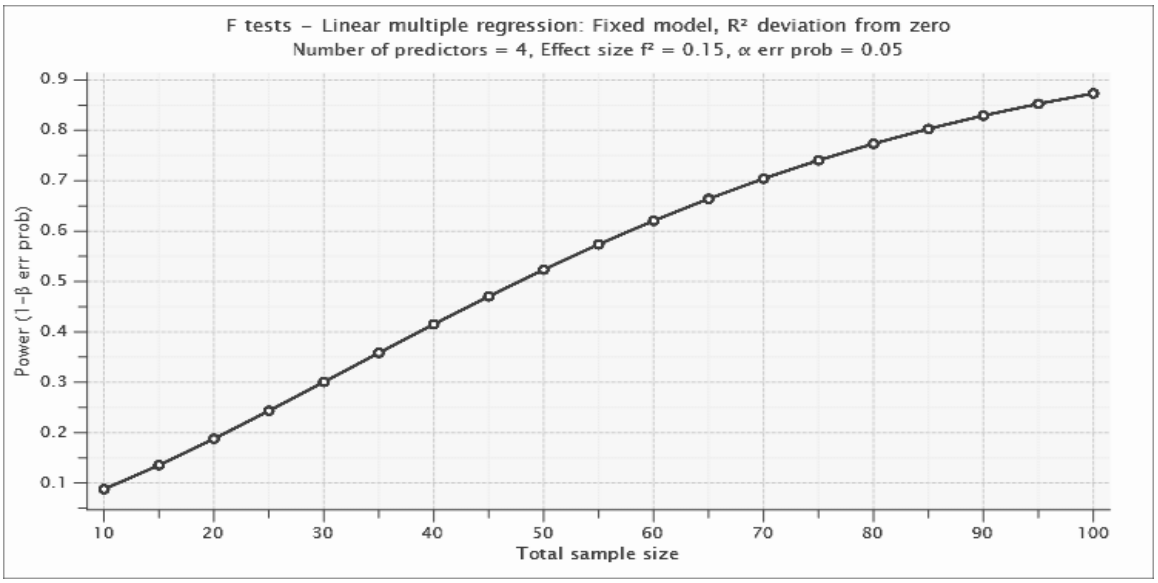

Figure 2. G Power Plot for Range of Values Determined *F* tests – Linear multiple regression: Fixed model, R^2 deviation from zero. Number of predictors = 4, Effect size f^2 = 0.15, α err prob = 0.05.

Results of the regression show the correlation between the dependent variable of students' perception of teacher and the three independent variables of students' perceptions of cognitive, emotional, and behavioral engagement (Keith, 2006). The model summary output shows cumulative R^2, standard error of the estimate for each of the four regression models, and *F* change; these statistics allow the researcher to determine which relationships are statistically significant. Linear regression assesses if one or more independent variables explain the dependent variable and has five major assumptions. Tests were run to ensure the follow assumptions are met: linearity, multivariate normality, multicollinearity (little or none), independence of observations, and homogeneity of variance. The coefficient's output shows the significance level for each of the independent variables, the confidence interval for each, and the variance inflation factor *(VIF)* value used to determine multicollinearity between the independent variables.

Covariates

Covariates included in the data analysis are age, gender, and race/ethnicity. Gender was explored because some studies show that girls are generally more engaged than boys (Skinner et al., 2008). There is also evidence of differences in student motivation and engagement based on race, suggesting this is a variable worth analyzing (Shernoff & Schmidt, 2007). Finally, Yazzie-Mintz (2010) observes that student engagement lessens as students progress through school, making age a possible factor influencing the level of engagement as well. Previous art experience in the form of having taken a formal art class was also used as a covariate since prior instruction may indicate a greater interest and/or inclination.

Summary

Collection of data through a student survey of cognitive, emotional, and behavioral engagement, as well as students' perceptions of the teacher, and regression analysis of this data allowed the researcher to determine the strength of relationships between the various types of engagement, covariates, and student perceptions of the teacher. Exploration of prior research suggests that there is a relationship between student engagement and student success. This study provides data and analysis to substantiate the possibility of a predictive relationship between students' perceptions of engagement and students' perceptions of the teacher in the visual art classroom, where such research has not previously been done. Demographic data provides a look at the possible relationship gender, age, and race/ethnicity have with engagement and teacher perception as well. Results of data collection and analysis are explored in Chapter IV.

CHAPTER IV

RESULTS

Introduction

This chapter contains the results of the quantitative study conducted to investigate students' perceptions of their art teacher and to answer the following research questions:

1. What is the relationship of student cognitive engagement scores in Comprehensive Art I classes to student ratings of the teacher?

2. What is the relationship of student emotional engagement scores in Comprehensive Art I classes to student ratings of the teacher?

3. What is the relationship of student behavioral engagement scores in Comprehensive Art I classes to student ratings of the teacher?

Chapter IV includes participant demographic information, response rate, and other information about data collection. The findings for this multiple linear regression will be discussed including results, testing assumptions, descriptive summary of data, and inferential statistics based on data analysis and model. Analysis includes interpretation of the results as they relate to the hypotheses.

Participants

Participants for this study included 68 Comprehensive Art I students from five high schools in a large county in Metropolitan Atlanta. Of the 68 participants, 53 (77.9%) were female and 15 (22.1%) were male. Students reported race/ethnicity as 54.4% African American, 2.9% Hispanic or Latino, 1.5% Native Hawaiian or other Pacific

Islander, 33.8% Caucasian, and 7.4% two or more races/ethnicities. Birth year indicated that students ranged from 14 to 19 years of age, with the largest numbers of students born in 2002 (26.5%) and 2004 (25.0%). Over half of the participants indicated that they had previous formal art instruction prior to taking Comprehensive Visual Art I. See Table 4 for participant demographic summary.

Table 4

Participant Demographics

Characteristic	*n*	Percent
Gender		
Male	15	22.1
Female	53	77.9
Birth Year		
2001	9	13.2
2002	18	26.5
2003	12	17.6
2004	17	25.0
2005	12	17.6
Race		
African-American	37	54.4
Hispanic/Latino	2	2.9
Pacific Islander	1	1.5
White	23	33.8
2 or more races	5	7.4
Previous Art Experience		
Yes	38	55.9
No	30	44.1

All Comprehensive Art I students in the five selected high schools were invited to participate in the study through an email to parents asking for consent on April 27 (See Appendix A). A follow up email was sent to parents one week later on May 4 and two weeks later on May 11 (See Appendix D). The link to the electronic survey and student consent form link was sent to students on a rolling basis beginning April 28 as email

addresses were provided by parents (See Appendices C and F). Reminder emails were sent to students weekly for three weeks (See Appendix E). The survey was closed 30 days after initial contact, on May 27; the last recorded student response was on May 22, which was the official last day of school. While 82 students began the survey, only 68 completed all parts of the survey; the 14 incomplete responses were deleted from the data, as only complete surveys provide the data needed to analyze the relationship between the dependent variable and all independent variables.

Findings

The survey used for this study consisted of Likert-scale questions, which are considered different than Likert-type questions. Statistically, Likert-type questions are thought to be an ordinal measure because they show a lesser or greater relationship, but give no indication of how much less or more (Boone, & Boone, 2012). On the other hand, Likert-scale questions are actually a series of four or more Likert-type questions meant to measure a single construct (Boone & Boone, 2012). For data analysis, Likert-scale scores are used to create a composite score for each group of questions (Joshi, Kale, Chandel, & Pal, 2015). Likert-scale questions were used in the current study to provide a measure of students' cognitive, emotional, and behavioral engagement, as well as students' perception of the teacher.

Prior to data analysis, all raw data scores for teacher perception, cognitive, emotional, and behavioral engagement were converted to *z* scores. Composite scores for the dependent and independent variables were then created. Scores were converted to *z* scores because several of the questions in the survey were measured on a 7-point Likert scale as opposed to a 5-point scale. The use of *z* scores allowed the researcher to

transform the raw scores to a standardized form which could then be compared across all variables assuming the score distribution is normal (Jaccard & Becker, 2010). Comparing scores from different scales was possible because *z* scores only present scores in terms of the number of standard deviations above or below the mean; transforming data to *z* scores preserved the original distribution of the raw scores and did not mathematically change the data (Lomax & Hahs-Vaughn, 2012). Composite scores were appropriate for this study because questions were intended to be used in groups, and reliability and validity data for the PSS were previously calculated for groups of questions. A multiple linear regression was conducted to determine the relationship between students' perception of their teacher (DV) and cognitive, emotional, and behavioral engagement (IVs) in the art classroom. Composite scores of Teacher Perception (TP) had a standard deviation of .76 (*z* scores all have a mean of .000). Cognitive engagement (COG), Emotional engagement (EMO), and Behavioral engagement (BEH) had standard deviations of .72, .74, and .64 respectively.

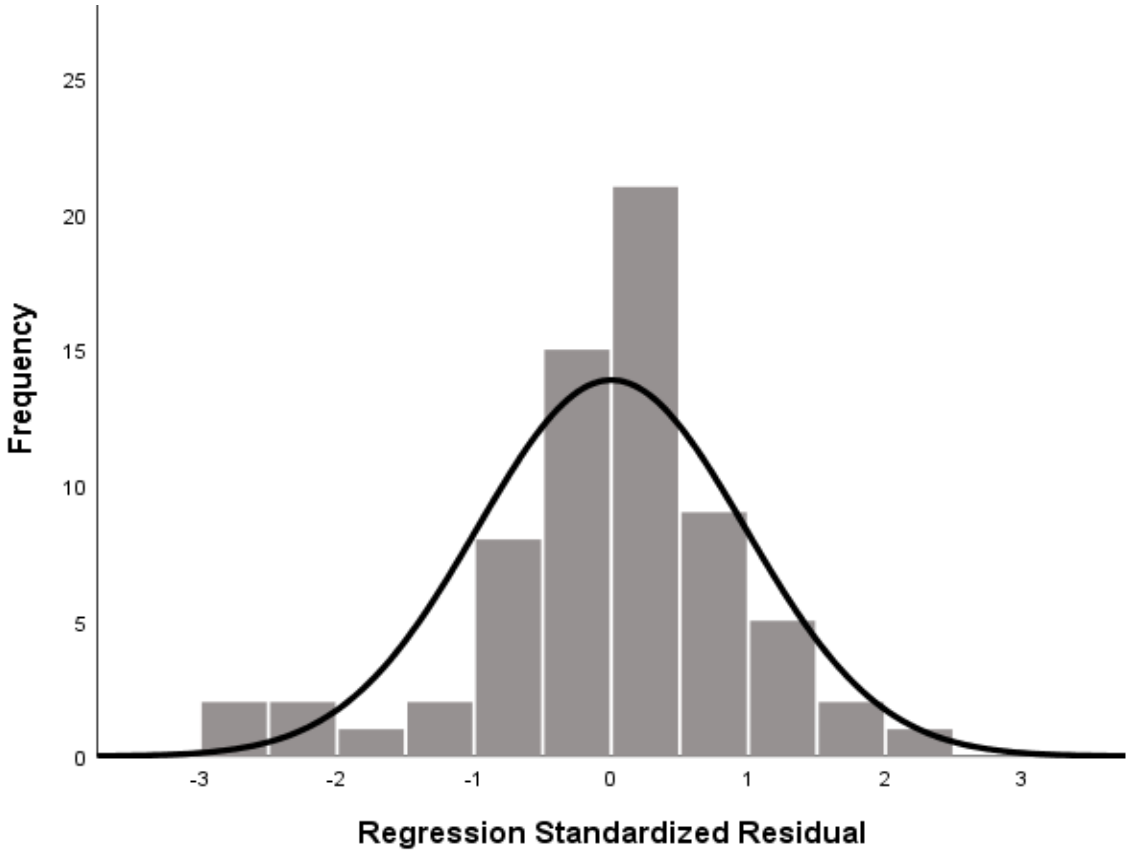

Figure 3. Teacher perception composite histogram *Note.* Mean = 4.86, *SD* = .977, *N*=68.

Assumptions

Testing of assumptions was performed prior to running the multiple linear regression. The assumption of multicollinearity was met through examination of tolerance and variance inflation factors (COG Scores, Tolerance = .492, *VIF* = 2.03; EMO Scores, Tolerance = .505, *VIF* = 1.978; BEH Scores, Tolerance = .461, *VIF* = 2.170). Examination of the Durbin-Watson statistic, P-P plots, and scatterplots showed that assumptions of independence of observations, linearity, and homoscedasticity were met (*D-W* value = 2.02). A histogram of standardized residuals shows that the data contained approximately normally distributed errors, as did the *P-P* plot of standardized residuals, on which points were close to, if not on, the normality line. The scatterplot of

standardized predicted values indicates that the data met the assumptions of homogeneity of variance and linearity. An analysis of standard residuals was carried out, which showed that the data contained no outliers (Standard Residual Minimum = -2.976, Standard Residual Maximum = 2.450). The data also met the assumption of non-zero variances (TP scores, variance = .579; COG scores, variance = .517; EMO scores, variance = .555; BEH scores, variance = .407).

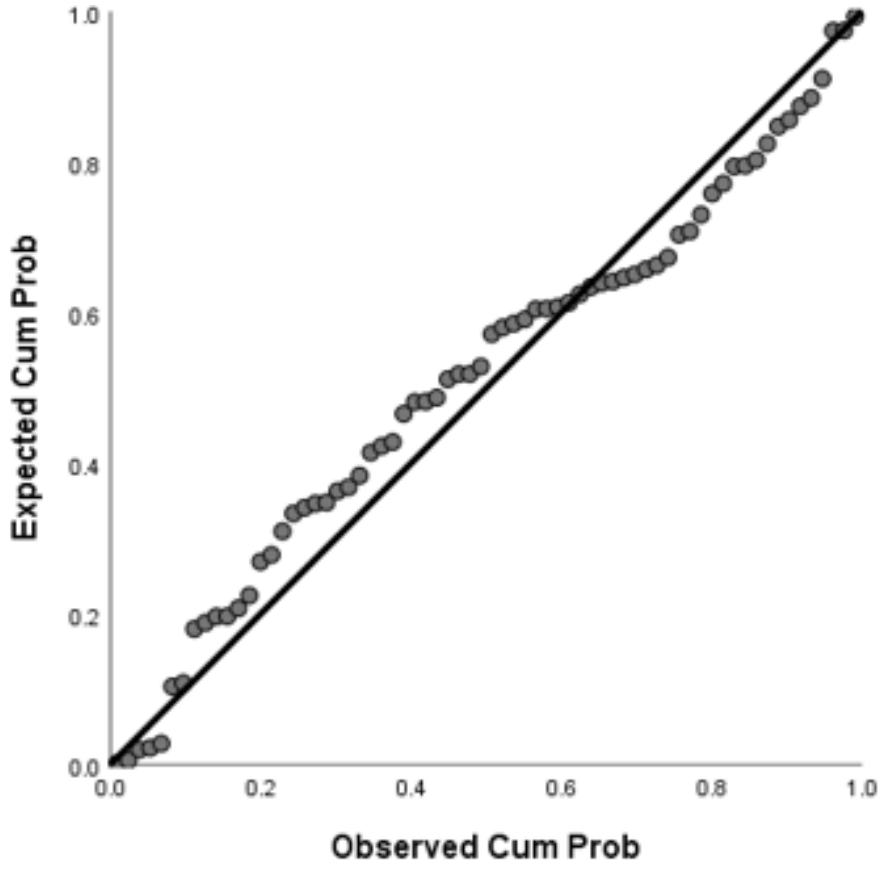

Figure 4. Normal *P-P* plot of regression standardized residual for teacher perception composite

Data Analysis

Multiple linear regression analysis was used as a model for all research questions for predicting students' perceptions of the teacher from cognitive, emotional, and behavioral engagement scores collected through an electronic survey. Table 4 shows basic descriptive statistics and regression coefficients. The analysis shows that cognitive engagement had a significant impact on student perception of the teacher (β= .64, $t(64) = 6.91$, $p < .01$). Emotional engagement also showed significant impact on student perception of the teacher (β= .29, $t(64) = 3.19$, $p = .002$). Behavioral engagement, on the other hand, did not show significant impact on student perceptions of the teacher in the presence of the other predictors (β= -.008, $t(64) = -.083$, $p = .934$, not significant). Measures in scale points mean that for every 1-point increase in cognitive, emotional, or behavioral engagement scores, teacher perception scores increase by .644, .293, and -.008 respectively. Use of the three-predictor regression model showed that cognitive, emotional, and behavioral engagement explain a significant amount of the variance in students' perceptions of their teacher ($F(3,64) = 56.62$, $p<.05$, $R^2 = .726$, $R^2_{Adjusted} = .713$). A calculation for total sample size needed was run using *G*Power 3* (Faul, Erdfelder, Land, & Buchner, 2007). *Post hoc G*Power 3* analysis for a fixed model linear multiple regression using R^2 deviation from zero showed that, with an effect size of .15, $\alpha = .05$, a sample size of 68, and four tested predictors, a power of .69 was achieved.

Additional analysis using gender, race, age, and previous art experience as covariates was conducted. Gender was thought to be a possible factor as well, since the majority of the respondents were female, and some literature suggests that female students tend to be more engaged overall. Race was included because previous studies

have shown significant differences in engagement scores based on race, and age was included because some studies have shown that student engagement in school decreases as students progress through high school. It was thought that previous art experience might make students more inclined to be engaged in art class and might also give a more positive perception of the teacher, so this was analyzed as a covariate as well. The additional multiple regression analyses indicted that neither gender, race, age, nor previous art experience were significant predictors of students' perceptions of the teacher and did not significantly improve the model.

Table 5

Student Perception of Teacher Related to Cognitive, Emotional, and Behavioral Engagement Scores (N = 68).

	Zero-Order r						
Variable	BEH	EMO	COG	TP	β	*SE*	*b*
COG				.822	.681**	.099	.644
EMO			.626	.691	.299**	.094	.293
BEH		.656	.668	.614	-.010	.115	-.008
					Intercept = 2.26		
Mean	.000	.000	.000	.000			
SD	.638	.745	.719	.761	R^2 = .726		

Note. * The mean and *SD* reflect that this is a composite of the *z* scores, hence the means are .000

**$p < .01$

Interpretation

Multiple linear regression was used as a model for all three research questions. Analysis indicates that the null hypothesis, there is no relationship between students' perceptions of cognitive engagement and students' perceptions of teachers to a statistically significant degree, should be rejected as a significant relationship is indicated ($b = .644$, $p < .01$). The second null hypothesis, there is no relationship between students' perceptions of emotional engagement and students' perceptions of teachers to a

statistically significant degree, should also be rejected as a significant relationship is indicated (b = .293, p = .002). The final null hypothesis, there is no relationship between students' perceptions of behavioral engagement and students' perceptions of teachers to a statistically significant degree, should be accepted. Analysis of data indicated no significant relationship between perception of behavioral engagement and perception of the teacher (b = -.008, p = .934).

Summary

In summary, the data suggest that both cognitive and emotional engagement are significant predictors of students' perceptions of their teachers. Of the two, cognitive engagement appears to be the strongest predictor. Behavioral engagement, on the other hand, is not a significant predictor of students' perceptions of their teachers, at least in the presence of the other predictors. Gender, race, age, and previous art experience were not found to be significant predictors of students' perception of the teacher in this sample. Chapter V will provide a summary of the study, discussion of the analysis of the findings, limitations of the study, recommendations for future research, and implications for educational practice.

CHAPTER IV

DISCUSSION

Summary of the Study

The motivation for this study was the lack of engagement found in high school classrooms that often leads to student apathy, low levels of success, and high dropout rates (Bridgeland et al., 2006). The purpose of the quantitative study was to examine the relationship between students' perceptions of cognitive, emotional, and behavioral engagement in the art room and their perceptions of the teacher. While many studies have examined the relationship between student engagement and student levels of achievement, classroom climate, teaching practice, and other variables, the researcher did not find examples of such research related specifically to teaching and learning in the art classroom. As an art teacher for over 30 years, the researcher had a unique interest in the relationship between student engagement and teacher perception.

The researcher used a non-experimental, cross-sectional, predictive quantitative method to measure the relationship between the dependent variable of students' perceptions of the teacher and the independent variables of students' perceptions of their level of cognitive, emotional, and behavioral engagement in the art classroom. There were 68 participants in this study from five high schools in a large metropolitan Atlanta school district. These students took a 48-question survey that included questions on their perceived level of cognitive, emotional, and behavioral engagement in the art classroom, as well as their perceptions of their teacher. Multiple linear regression analysis was used as a model for predicting this relationship. Analysis showed that both cognitive

and emotional engagement had a significant impact on students' perceptions of the teacher, while behavioral engagement did not. This model provided an adjusted multiple R^2 = .713, which indicates that 71% of the variability in the dependent variable is accounted for by the three independent variables combined. Tested covariates including gender, race, age, and previous art instruction did not prove significant in this study.

Analysis of the Findings

The findings of this study are similar in many ways to those in previous studies that show student cognitive, emotional, and behavioral engagement to be an important factor for student academic achievement; however, the present study highlights the significance of the relationship between student engagement and students' perception of the teacher in the visual art classroom. While many high school classrooms operate in a fairly similar manner, the art classroom is usually run more like a studio, where many artists work in the same space while working individually. The hands-on nature of the content, and the collaborative and reflective nature of the artistic process, seem to naturally promote higher levels of engagement than might be found in a traditional academic classroom. Analysis of the current study indicates that cognitive engagement is the most significant predictor of students' perceptions of the teacher (β= .64, $t(64) = 6.91$, $p < .01$). Emotional engagement is also shown to be a significant predictor (β= .29, $t(64) = 3.19$, $p = .002$). In this study, however, behavioral engagement did not have a significant impact on students' perceptions of the teacher (β= -.008, $t(64) = -.083$, $p = .934$).

While cognitive, emotional, and behavioral engagement were highly correlated with each other, only cognitive and emotional engagement were significant predictors of

students' perceptions of the teacher in this study. Many previous studies used measures such as positive conduct, attending class, and time on task to determine levels of behavioral engagement (Cooper, 2014; Griffin, 2017; Lee, 2014; Li & Lerner, 2013). Survey questions used in the measure for the present study were more related to the student's ability to focus amidst distractions, persist to achieve goals in the face of difficulty, and their level of interest in the class. These questions related to behavioral engagement are more complex and related to students' thoughts and actions in class as opposed to simply attending class and meeting simple behavioral expectations. Students may have perceived these questions as more introspective and having less to do with their perceptions of the teacher. While much of the literature reviewed for this study focused on behavioral engagement in a different manner and showed larger relationships between behavioral engagement and achievement, Skinner et al. (2008) viewed behavioral engagement more similarly to the current study as effort, persistence, action, and involvement. Their study found a significant relationship between emotional and behavioral engagement, the only two included in their investigation, finding that a supportive classroom climate (emotionally engaging) fosters more positive student behavior. There may have been a similar relationship between emotional and behavioral engagement in the current study.

Study in Context of Theoretical Framework

Contextualizing this study in the theoretical framework of social constructivism gave the researcher a lens for viewing cognitive engagement as meaningful engagement with the content, emotional engagement as a strong student-teacher relationship, and behavioral engagement in that students are expected to work through academic problems

and find solutions. The NAIS report of student surveys of engagement (2017) found that active forms of learning were most engaging for students. Examples of this type of learning and the percentage of public school students' responding that they were *very much* engaged include class discussions and debates (28%), projects using technology (25%), group projects (27%), and art and drama activities (23%). Students reported lower levels of being *very much* engaged with the following activities: research projects (13%), writing projects (13%), and teacher lectures (8%). Teachers create a classroom culture of learning by using engaging educational strategies that make students more likely to participate in class, complete assignments, and lead to greater academic success later (NAIS, 2017).

The researcher has 20 years of experience teaching at the high school level, as well as five years of experience observing in the classrooms of the teachers involved in this study. These experiences and observations show that the high school art room is a space for student self-expression and creativity. The artistic process pushes students to think critically from the beginning to the end of each assignment. Assignments are, more often than not, open ended so that students can choose meaningful topics for their artistic consideration. Students brainstorm ideas for their work related to the broad category provided by the teacher and then explore and develop their ideas until one of them begins to take shape for a work of art. Teachers tend to allow students the space to explore by creating an ongoing feedback loop on a daily basis as they move around the room and converse with students. This is helpful in the next step of the artistic process where students revise and refine their ideas and work to achieve the most successful artwork. In keeping with constructivist practice, the high school art teacher acts as a guide, gently

helping students understand when to push further and when to pull back or edit. When a student considers a work of art complete, some type of presentation of the artwork is often held, a critique may be provided, and student reflection on the piece as well as the process would be directed. Sometimes this results in further changes to the art, or even the creation of an entirely different piece of art. The art student, other students in the class, and the teacher engage in substantial shared learning. This style of teaching and learning was integral to the current study, and the researcher believes it is a large part of why students report high levels of cognitive and emotional engagement related to their perception of their teacher in the art classroom.

Cognitive Engagement in the Current Study

Cognitive engagement in this study was indicated by the level of student focus in class, high expectations on the part of the teacher, and how interesting the material and presentation is to the student. In the present study, cognitive engagement was the strongest predictor of students' perceptions of the teacher. Students who are given meaningful involvement with the learning process, including the opportunity to direct some of their own learning, high teacher expectations, and the opportunity to solve problems, tend to be more cognitively engaged (Peters & Woolley, 2015). Cognitive engagement involves the shared connection students and teachers have with the subject being studied and the rigor associated with challenging work (Martin & Dowson, 2009). While many of the studies reviewed indicated a relationship between all three types of engagement and the dependent variable, none of them showed the high level of cognitive engagement that the present study does, and none of them directly measured the relationship with students' perception of the teacher.

In the current study, the main factors contributing positively to students' perception of the teacher were teacher knowledge of the content and excitement to teach, clear and interesting presentation of material, and personal attention to student learning coupled with frequent feedback. The art classroom is unique in that most art teachers, especially at the high school level, are also practicing artists and can frequently be seen working on their own art in the classroom. Oftentimes, the teacher will work on the same type of art as the students, modeling artistic practice and providing inspiration. This also serves as a way for the teacher to give students time and space to work while allowing the teacher to observe students to identify those in need of help (Hetland, Winner, Veenema, & Sheridan, 2013). Because, for the most part, students *choose* to take art as opposed to being placed in the class, teacher and student share a common interest and the teacher constantly models appropriate artistic behaviors that students may imitate. Teacher excitement about the content and the ability to present that content to students clearly while giving them flexibility in demonstrating mastery is probably naturally more engaging than a traditional lecture-style course. Consistent day-to-day one on one interaction between student and teacher is another hallmark of the visual art classroom that could help to keep students cognitively engaged. Based on the findings of other studies, cognitive engagement frequently leads to higher levels of student achievement and/or success (e.g. Lei et al., 2018; Wang & Holcombe, 2019; Zilvinskis, 2017). Results of the current study indicate that students' cognitive engagement is a significant predictor of students' perceptions of the teacher in the visual art classroom.

Emotional Engagement in the Current Study

Emotional engagement also showed a significant correlation to students' perception of the teacher in the current study. To engage in coursework, students need to feel an emotional connection to the teacher and the way he/she teaches, as well as to the content (Cooper, 2014). Part of the student-teacher relationship is also reflected in the overall climate of the class, and the environment itself (Yang et al., 2018). Emotional engagement can be related to a student's feelings of belonging, which help to tie students to a school and increase their willingness to work to be successful. Feelings of happiness, sadness, and boredom can also be interpreted as aspects of emotional engagement. Conner and Pope (2013) state that students who find the work they are doing to be interesting and enjoyable are emotionally engaged.

Emotional engagement has proven significant in several previous studies. Wonglorsaichon et al. (2014) found that emotional engagement had the most significant effect on school engagement, followed by cognitive, and finally behavioral engagement. In contrast, the present study found cognitive engagement the most significant predictor of students' perceptions of the teacher, followed by emotional engagement. In a study only analyzing the relationship between behavioral and emotional engagement, Skinner et al. (2008) found that emotional engagement significantly impacts behavioral engagement and student self-sufficiency. Kristy Cooper (2014) found that the relationship between teacher-student emotional engagement and overall engagement is more than seven times stronger than the relationship between other teaching practices and engagement. While the current study found the largest relationship between cognitive engagement and students' perception of the teacher, emotional engagement also showed a significant relationship.

Emotional engagement and students' perceptions of the teacher in the Comprehensive Visual Art classroom were measured in the current study through feelings of belonging and excitement in the class, as well as how connected students felt to their peers and the teacher in the class. Choosing to take an art class in high school is intentional for most students, and, in this researcher's experience, students are generally excited to get to the class and begin working. Through the years, many students have expressed to the researcher that their art class is the only reason they come to school and is a retreat for them when other aspects of school are stressful or not going well. This idea of the art room as a place of refuge supports the idea that students have an emotional engagement/attachment to the class and to the teacher. The art classroom benefits from assignments that are authentic and allow for a high level of student choice; these factors may increase levels of emotional engagement in course content. Daily teacher-student interaction regarding the work they are doing in the class is vital to student growth and success in art and usually leads to close teacher-student relationships. Because each student's art is unique, conversations are more personal than they might be in core academic classrooms. Looking at emotional engagement as it relates to students' perceptions of the teacher, as opposed to students' grades, is unique, and the significance of emotional engagement on students' perception of the teacher suggests that all teachers should devote time and energy to development of a caring school environment that could motivate students to work hard to achieve.

Behavioral Engagement in the Current Study

According to Connell, Spender, and Aber (1994), the lack of behavioral engagement is a greater predictor of students dropping out of school than cognitive or

emotional engagement. The importance of behavioral engagement is indicated in several other recent studies. Jung-Sook Lee (2014) found a significant correlation between both behavioral and emotional engagement and reading performance. He also found that there was mediation of emotional engagement effect on academic achievement by behavioral engagement. Li and Lerner (2013) also found a significant relationship between behavioral and emotional engagement; additional findings suggested that earlier emotional engagement predicted later cognitive and behavioral engagement, and earlier behavioral engagement predicted later cognitive and emotional engagement (Li & Lerner, 2013).

Contrary to these studies, behavioral engagement was not found to be significant with regard to students' perceptions of the teacher in the presence of the other indicators in the current study. This is similar to the finding by Skinner et al. (2008) that behavioral engagement did not have a reciprocal relationship with emotional engagement, in that simply focusing on student behavioral engagement without providing emotionally engaging activities will not make students actively participate in classroom learning in meaningful ways. Measures of behavioral engagement in the current study included student perseverance in the face of distractions, interest in the class, and overall eagerness to participate. Most high school classrooms have similar, and in some schools exactly the same, rules and norms for classroom behavior, which usually relate to staying seated, raising a hand to speak, etc. The art classroom operates differently. There are still rules similar to those in other classrooms, but there are also procedures. Students are taught artistic, studio related behaviors. For example, very few art teachers *call roll;* students are taught to come in, get their work out, gather their materials, and get busy. No time is

wasted waiting on everyone to get seated and quiet for group instructions on a day to day basis. Generally, about 10 minutes into class, the teacher will stop the class to go over anything that would apply to the entire class after which they would allow students to continue working while checking on students individually. In the researcher's experience, students are engaged in their projects because they have had some voice and choice in the design, which keeps them on task and striving to meet their goals.

While behavioral engagement was not found to be a significant predictor of students' perceptions of the teacher in the current study, this may be related to the nature of the questions included in the measure or the less restrictive overall environment of the art classroom. A larger sample, or a less female heavy sample, might also produce different results. Using a different set of questions, ones more related to traditional ideas of classroom behavior, to measure behavioral engagement might produce a very different outcome as well.

Summary of the Findings

Several studies showed a significant relationship between all three types of engagement and the dependent variable being studied. For example, Paul Chase et al. (2014) found a bidirectional relationship between all three types of engagement and student grade point average. Similarly, Kristy Cooper's (2014) research showed a positive correlation to engagement for all three of the teaching practices she tested, which align with cognitive, emotional, and behavioral engagement. Results of the current study showed that emotional engagement, while a significant predictor of students' perceptions of the teacher, was less significant than cognitive engagement. Overall, the results of the current study are similar to some of the previous studies. Dissimilarity could be due in

part to the fact that this study did not involve a student achievement metric. The relatively low and predominantly female participation may have also had an impact on the results that do not show significant impact of behavioral engagement as many of the other studies do. As discussed earlier, differences in the construct of behavioral engagement from study to study could account for some variance between studies. Given the different approach to measuring the impact of student engagement on perception of the teacher, the current study makes important contributions to scholarly research related to student engagement. Finding significant relationships between cognitive and emotional engagement and students' perception of the teacher indicates the importance of the teacher in facilitating student engagement and provides reason for this to be a focus for teachers.

Limitations of the Study

While this study showed some significant results, the generalizability of these results is limited by a variety of factors. One factor is that students do not understand all of the nuances of teaching, which include multiple factors from inside and outside of the classroom, so their perceptions may have been overly simplistic (Wang & Degol, 2014). Student personality and emotional state may also have impacted the way they responded to survey items (Worrell & Kuterbach, 2001). Related to this idea is the fact that there are many factors which influence the way students feel about teachers, and some of these may create rater bias and may have affected the way they answered questions. While the survey was anonymous, students may still have been concerned about how their survey answers might impact them personally and might have not been completely honest, or may have been influenced by social demands. Additionally, the instrument itself, while

validated, is not perfect and questions designed to measure a particular aspect of engagement or perception of the teacher may have been interpreted differently by various students (Duckworth & Yeager, 2015).

There are also other limitations to this particular study. The number of participants was low and predominantly female; a post hoc *G*Power 3* calculation resulted in a power of .69 for a fixed model linear multiple regression using R^2 deviation from zero with an *effect size* of .15, $\alpha = .05$, and four tested predictors. A power of .80 would have been achievable with 85 participants. As stated earlier, the five high schools had approximately 280 Comprehensive Art I students. Because the method for acquiring parental consent changed due to COVID-19, paper copies were not given to each student, which would have ensured each student equal opportunity to take part in the survey. Teachers contacted parents using the email addresses on file in the schools' databases, but not all students had parent emails on file, some had multiple parent emails, and not all emails on file were valid. There is also a possibility that many of the parents do not check email frequently, or at all. For these reasons, it is impossible to say how many parents actually received the email invitation for their student to participate. Since students could not be contacted without parental permission, it was not possible to work around this situation.

The fact that data collection took place during a worldwide pandemic had other impacts on data collection. Students who were asked to participate were completing coursework entirely online, and parental consent granted varied considerably between schools. Additionally, students were given the option of taking the grade they had in the course as of March 13, 2020 as their final grade. For this reason, many students were no

longer logging in to complete work, so even if they had parent permission and received an invitation to take the survey, they may not have checked their email and seen it. While 82 students began the survey, only 68 completed it. This might also have been related to the fact that many of them were not required to complete any further school work at this point in the year. The additional 14 responses would have increased the power, and may have impacted the results of the study.

The nonexperimental nature of this study limits the ability of the researcher to make causal inferences, preventing a clear indication of the direction of the relationship. A better understanding of the direction of the relationship between all types of engagement and students' perception of the teacher could result in policies and/or practices that might increase both. Finally, there are multiple other factors affecting the way students feel, act, and interact in the classroom. Self-efficacy, family support, peer relationships, previous achievement, and overall involvement in activities at school as a whole are just a few of the factors that create variability in how students respond to questions about engagement and perception of the teacher.

Recommendations for Further Research

The current study showed the relationship between cognitive, emotional, and behavioral engagement and students' perceptions of the teacher, but is not generalizable due to the low sample size and the fact that all participants were in the same district (Creswell, 2005). Further research should be undertaken with larger sample sizes and across whole districts, or possibly multiple districts, to get a broader sense of the impact of student engagement. Data collection techniques and analysis that would lead to the determination of a causal or bidirectional relationship could be enlightening as well

(Chase et al., 2014; Li & Lerner, 2013). The expansion of this research to include additional performance based fine arts courses and career based courses would add to the body of knowledge on engagement as a whole and make for richer comparisons with the traditional core academic courses.

While this study did not focus on teaching practice, additional whole school studies such as Kristy Cooper's (2014) study of teaching practices and engagement could add much to our understanding of how students perceive teachers and what types of behaviors increase student engagement in different classes. This could lead to changes in pedagogy, practice, and policy. Studies of student engagement, teaching practice, and achievement, which have been done only in core academic areas, should be conducted with more elective courses so that the results can be compared and connections made between which practices have the largest impact on student engagement and learning (Wang & Holcombe, 2010; Wonglorsaichon et al., 2014). Many of the reviewed studies analyzed engagement as it relates to student academic achievement (i.e. Lee, 2014; Lei et al., 2018; Roorda et al., 2017). Adding the level of student achievement to a study similar to the current one could provide additional insight on the impact cognitive, emotional, and behavioral engagement have on student learning. The inclusion of factors outside of school that might positively or negatively impact student engagement would also be worth considering in future research (Li & Lerner, 2013). While the majority of the studies utilized a quantitative approach, Cooper's (2014) mixed method study using embedded case studies provided important anecdotal evidence of behaviors and interactions from classrooms, which might also be beneficial in a study such as the current one. Using teacher reports of the level of student engagement, parent

observations, or administrator observations of teachers could contribute to a more robust view of teaching and learning.

Implications of the Study

Student engagement in their classes and in school as a whole has been shown through multiple studies to impact student achievement. Li and Lerner (2013) found that "the extent to which students are involved in, attached and committed to the academic and social activities in school plays a prominent role in preventing academic failure, promoting competence, and influencing a wide range of adolescent outcomes" (p. 20). Findings of the current study indicate that cognitive and emotional engagement have a significant effect on students' perceptions of the teacher. Previous studies, coupled with the current one, indicate a need to raise teachers' awareness of their role in stimulating student engagement. School policy makers should acknowledge the significant cognitive, emotional, and behavioral connection of students to the school and classroom environment, the teacher, and the content. Concerted efforts to promote heightened student engagement and initiatives to train teachers in ways to support and encourage engagement could lead to better student outcomes.

The current study showed that students who are cognitively and emotionally engaged have a more positive perception of their teacher. Most researchers agree that cognitive engagement is related to students' investment in learning and their willingness to do the work involved to achieve the desired results. In the current survey, cognitive engagement survey questions centered on student focus in class, thoughts about class work outside of class, how much the teacher holds high expectations, how much the teacher encourages students to keep trying, and if the teacher takes the time to make sure

students understand the material presented. Cognitive engagement had the most significant correlation to students' perception of the teacher in the present study, which indicates that teacher behaviors that promote cognitive engagement should be encouraged.

In many areas, teacher evaluations are increasingly including a student perception survey component, which is factored into the teacher's overall score along with administrator observations and indicators of the level of student learning achieved (Burniske & Meibaum, 2012). These perception surveys can impact a teacher's job, placement on a professional growth plan, and in some cases, compensation. Ideally, student perception surveys would provide teachers with feedback about their teaching practices that establishes their stage in teaching development and also helps them to determine which practices they need to work on next (Van der Lans, Van de Grift, Van Veen, 2015). Van der Lans et al. (2015) developed such a survey, which considers, "…six broad domains of teaching acts that can be observed within classrooms: creating a safe learning environment, efficient classroom management, quality of instruction, student activation, teaching learning strategies, and differentiation" (p. 19). Aligning these domains with the areas of cognitive, emotional, and behavioral engagement could help teachers implement best practices, which might cause students to perceive them more positively.

Making tasks more relevant and engaging to students, good behavior management skills on the part of the teacher, and a safe and welcoming classroom environment are all important for student engagement (e.g. Bilge et al., 2014; Cooper, 2014; Zilvinskis, et al., 2017) Other practices which promote engagement include clear goals and timely

feedback, authentic and interactive lessons, student voice and choice, and good student-teacher rapport (Conner & Pope, 2013; Parker et al., 2017). Good teacher-student rapport must extend to the level that teachers know students well enough to monitor individual progress and make adjustments when needed. Teachers need to understand the importance of caring relationships with students and to invest the time and energy in building those relationships, as students sometimes begin to emulate the beliefs and values of the teacher (Roorda et al., 2017)

Raising the level of student engagement requires that teachers understand how to engage students in the classroom. More observations of master teachers while students study to become teachers, along with modeling engaging teaching practices during student teaching, would be a good place to start to train new teachers. For teachers already in the classroom, the formation of Professional Learning Communities (PLCs) that focus on use of teaching strategies that raise levels of student cognitive, emotional, and behavioral engagement would be helpful. Networking among successful, veteran teachers in the same content area as teachers who are struggling, or peer mentoring, could also be very helpful to some teachers. This research has presented some ideas that might seem simple on the surface, but creating an engaging classroom environment does not come naturally to every teacher and cannot be perfected overnight. Luckily, students who see teachers attempting to connect to them and make learning more relevant and interesting tend to appreciate even the smallest of efforts.

Conclusion

This study shows that cognitive and emotional engagement have significant impacts on students' perceptions of the teacher in the visual art classroom. While

behavioral engagement was not a significant predictor in this study, earlier studies give reason to believe that it could be. The lack of student engagement in school is a problem that leads to higher drop-out rates at worst and students faking engagement in school for compliance sake at best. Today's youth are the adults of the future and educating them so that they become caring, flexible, collaborative problem solvers should be of the utmost importance to today's educators and society as a whole. Teachers need to replace rote learning of disconnected facts with authentic engagement in lessons that span multiple content areas and engage students with material to which they can relate. When that happens, students and teachers become partners and collaborators in learning.

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APPENDICES

Appendix A
Email for Teachers to Forward to Parents

Good afternoon, Below you will find the parent recruitment letter for my research study on Students' Perceptions of Engagement and the Relationship to Students' Perceptions of the Teacher in the Visual Art Classroom. If you could please send this to the parent email(s) for all of your Comprehensive Visual Art I students at your earliest convenience, I would greatly appreciate it.
If you have any questions, don't hesitate to contact me.
Sincerely,
Kirby Meng

Subject: Student Participation in Visual Art Engagement Survey – Consent Needed

Dear Parent or Guardian,

Your child is being asked to participate in a research study conducted by Kirby Meng, student, in the College of Education and Health Professions at Columbus State University. Dr. Anna Hart is the supervising faculty member.

The study will investigate student engagement in the Art classroom and the relationship to students' perceptions of the teacher. The study is important because, results could help to identify excellent instruction, areas for improvement, and to provide guidance for expanded use of engaging teaching strategies. The survey is anonymous and will have no impact on any student's grade in the Comprehensive Visual Art I course; results will not be shared with instructors until after the end of the school year and will be coded so that the participating schools will not be identified.

If you grant consent for your student to participate in this research study, please click on the link to the Google Form below and provide your name, the student name, and a student email to receive the survey. The contact information provided will only be used for the purpose of sending the survey link and will be destroyed once the data collection phase has ended. The survey will take about 10 minutes to complete. At the end of the survey, students may elect to be entered into a drawing for a $25 Chick Fil-A gift card by supplying their name and contact information.
Link to Google Form Informed Consent form: https://forms.gle/HgfJckygZCNit7mj7

If you have additional questions about this research, or the survey, please contact Kirby Meng at Meng_Kirby@columbusstate.edu . Please do not contact the school or the teacher about participation in this survey.

Thank you for your help by allowing your student to provide this much needed feedback. Please feel free to reach out with questions.
Sincerely,
Kirby Meng
Kirby Meng

Appendix B
Parent/Guardian Informed Consent Form

You are being asked to participate in a research project conducted by Kirby Meng, a student in the College of Education and Health Professionals at Columbus State University. Dr. Anna Hart is the supervising faculty member.

I. Purpose:

The purpose of this project is to gather and analyze students' perceptions of engagement in the visual art classroom and the possible relationship to students' perceptions of the teacher.

II. Procedures:

This project involves Comprehensive Art I students taking a 48 question anonymous survey about levels of engagement in the art classroom as well as about students' perceptions of teachers. Once parental consent is obtained via Google Form online survey, the electronic survey link will be sent to students via email. Student assent will be given electronically at the beginning of the survey. The survey will take approximately 10 minutes to complete. All data collected is anonymous and will not be shared with the teacher or anyone other than the Principal Investigator. Data collected will not be used for future research projects.

III. Possible Risks or Discomforts:

This project poses minimal risk to students with no greater chance of harm than experienced in day to day activities.

IV. Potential Benefits:

This project could provide evidence of a relationship between student perception of the teacher and student engagement in the art classroom which may be useful in improving future learning experiences for students and teachers.

V. Costs and Compensation:

There is no cost to participate in this project. If desired, students may elect to supply their name and email address at the end of the survey to be entered into a drawing for a $25 Chick Fil-A gift card.

VI. Confidentiality:

The data for this project will be kept on the researcher's password secured computer for the duration of this dissertation research. All files data files, as well as records of student names and emails, will be deleted from the computer and all associated programs six months after publication of the dissertation. Kirby Meng (PI) will be the only individual allowed to access the raw data collected during the course of this study, from initial collection to final destruction of data. All data is anonymous.

VII. Withdrawal:

Your participation in this research study is voluntary. You may withdraw from the study at any time, and your withdrawal will not involve penalty or loss of benefits.

For additional information about this research project, you may contact the Principal Investigator, Kirby Meng at 404-273-7277 or Meng_Kirby@columbusstate.edu. If you have questions about your rights as a research participant, you may contact Columbus State University Institutional Review Board at irb@columbusstate.edu.

I have read this informed consent form. If I had any questions, they have been answered. By selecting the "I Agree" option on the Google Form online survey and entering parent/guardian name, student name, and student email address, I agree to allow my student to participate in this research project. Participants 18 year of age or older may sign for themselves.

◯ I Agree

_____ _____

Parent/Guardian Name Date

_____ _____

Student Name Date

_____

Email of student who will be participating in the survey

Please retain a copy of this form for your personal records.

Appendix C
Student Email Invitation to Participate

Subject: Visual Art Engagement Survey – Win a $25 Chick-Fil-A gift card

Hello,

You are receiving this email because your parent or guardian gave permission for you to take part in a research study I am conducting. I am writing to request your participation in an online survey of Comprehensive Visual Art I students about your experiences in the art classroom.

The purpose of this study is to explore what types of teaching and learning methods most engage you in the art room. Your responses may give us a better idea of what art teachers already do that is working, and also identify areas for improvement.

Your participation is strictly voluntary and anonymous. Results will not be shared with teachers until the dissertation is published, and school names will not be included in the report. You will not be asked for any personally identifying information other than the school you attend, the grade you are in, your gender, age, and race/ethnicity. Additionally, the survey instrument will not give the researcher access to your IP or email address.

The survey will take approximately 10 minutes to complete. Once you have completed the survey, please do not access the survey instrument again unless specifically invited to do so in a subsequent email invitation. At the end of the survey you may choose to submit your email to be entered into a drawing to win a $25 Chick-Fil-A gift card. The winner will be contacted after the survey has closed. This survey will remain active for 30 days, after which time no further responses will be accepted.

To participate, please click on the following link:

http://columbusstate.qualtrics.com/jfe/form/SV_ewGYU5vdHdByKlT

For additional information about this research project, you may contact the Principal Investigator, Kirby Meng, via email at Meng_Kirby@columbusstate.edu. If you have questions about your rights as a research participant, you may contact the Columbus State University Institutional Review Board at irb@columbusstate.edu.

Thank you in advance for providing this important feedback.

Sincerely,

Kirby Meng
Fine Arts Professional Learning Specialist
Henry County Schools
Doctoral Student
Columbus State University, Columbus, GA

Appendix D
Follow up email for Teachers to Forward to Parents

Hello, Below you will find a follow up email the parent recruitment letter for my research study on Students' Perceptions of Engagement and the Relationship to Students' Perceptions of the Teacher in the Visual Art Classroom. If you could please send this to the parent email(s) for all of your Comprehensive Visual Art I students at your earliest convenience, I would greatly appreciate it.
If you have any questions, don't hesitate to contact me.
Sincerely,
Kirby Meng

Subject: Reminder - Student Participation in Visual Art Engagement Survey – Consent Needed
Dear Parent or Guardian,

This is a friendly reminder that your student has been asked to participate in a study of student engagement and perceptions of the teacher in the art classroom. If you have not already responded and consented to your student's participation in the research study conducted by Kirby Meng, please click on the Google Form link below to do so now.

The study will investigate student engagement in the Art classroom and the relationship to students' perceptions of the teacher. The study is important because, results could help to identify excellent instruction, areas for improvement, and to provide guidance for expanded use of engaging teaching strategies. The survey is anonymous and will have no impact on any student's grade in the Comprehensive Visual Art I course; results will not be shared with instructors until after the end of the school year and will be coded so that the participating schools will not be identified.

If you grant consent for your student to participate in this research study, please click on the link to the Google Form below and provide your name, the student name, and a student email to receive the survey. The contact information provided will only be used for the purpose of sending the survey link and will be destroyed once the data collection phase has ended. The survey will take about 10 minutes to complete. At the end of the survey, students may elect to be entered into a drawing for a $25 Chick Fil-A gift card by supplying their name and contact information.
Link to Google Form Informed Consent form: https://forms.gle/HgfJckygZCNit7mj7

If you have additional questions about this research, or the survey, please contact Kirby Meng at Meng_Kirby@columbusstate.edu . Please do not contact the school or the teacher about participation in this survey.

Thank you for your help by allowing your student to provide this much needed feedback. Please feel free to reach out with questions.
Sincerely,
Kirby Meng
Kirby Meng

Appendix E
Student email Invitation to Participate Reminder

Subject: Reminder: Visual Art Engagement Survey – Win a $25 Chick-Fil-A gift card

Dear student,

Last week, you received an email inviting you to participate in a study exploring student engagement in the visual art classroom. You are being contacted because you are a Comprehensive Visual Art I student and your parent or guardian has already consented to your participation in the study.

If you have already taken the survey, thank you very much! If you have not already participated in the survey, I encourage you to do so.

Participants will take a 10-minute survey about their experiences in the art room. There is no cost to participate, and participation is completely voluntary.

At the end of the survey you may choose to submit your email to be entered into a drawing to win a $25 Chick-Fil-A gift card.

Follow this link to the Survey:

http://columbusstate.qualtrics.com/jfe/form/SV_ewGYU5vdHdByKlT

Or copy and paste the URL into your internet browser.

Thank you for your time. This research will help to improve our knowledge about student engagement in the art classroom. If you have questions, please contact the principal investigator, Kirby Meng at Meng_Kirby@columbusstate.edu

Thank you,

Kirby Meng
Fine Arts Professional Learning Specialist
Henry County Schools
Doctoral Student
Columbus State University, Columbus, GA

Appendix F
Student Informed Consent Form

You are being asked to participate in a research project conducted by Kirby Meng, student in the College of Education and Health Professionals at Columbus State University. Dr. Anna Hart is the supervising faculty member. Participation is completely voluntary. If you decide to participate now, you can always change your mind later. There are no negative consequences whatever you decide.

I. Purpose:

The purpose of this project is to see if how students feel about their level of engagement in the art room relates to thoughts about their art teacher.

II. Procedures:

Once parental consent is obtained via a Google Form online survey, the electronic survey link will be sent to students via email. Students must agree to participate by selecting the "I Agree" button before the survey will open to the student. The survey will take approximately 10 minutes to complete. All data collected is anonymous and will not be shared with the teacher or anyone except Mrs. Meng.

III. Possible Risks or Discomforts:

This project poses minimal risk to students with no greater chance of harm than experienced in day to day activities.

IV. Potential Benefits:

This project could provide information about the level of engagement that students feel in the art classroom and how students view some teacher practices. This could be useful in improving future learning experiences for students and teachers.

V. Costs and Compensation:

There is no cost to participate in this project. If desired, students may elect to supply their name and email address at the end of the survey to be entered into a drawing for a $25 Chick Fil-A gift card.

VI. Confidentiality:

The data for this project will be kept on the researcher's password secured computer. All data files, as well as records of student names and emails, will be deleted from the computer and all associated programs six months after publication of the dissertation. Kirby Meng (PI) will be the only individual allowed to access the raw data collected during the course of this study, from initial collection to final destruction of data. All data is anonymous and no identifying personal information will be collected. Data will not be used or shared for future studies.

VII. Withdrawal:

Your participation in this research study is voluntary. You may withdraw from the study at any time, and your withdrawal will not involve penalty or loss of benefits.

For additional information about this research project, you may contact the Principal Investigator, Kirby Meng at 404-273-7277 or Meng_Kirby@columbusstate.edu. If you have questions about your rights as a research participant, you may contact Columbus State University Institutional Review Board at irb@columbusstate.edu.

I have read this informed consent form. If I had any questions, they have been answered. By selecting the "I Agree" option in the survey link, I agree to participate in the study.

◯ I Agree

Appendix G
CSU IRB Approval Letter

Protocol 20-070 Expedited Approval

CSU IRB <irb@columbusstate.edu> Thu, Apr 23, 9:19 AM

to me, Anna, CSU, Institutional

Institutional Review Board

Columbus State University

Date: 04/23/2020

Protocol Number: 20-070

Protocol Title: Student Perceptions of Engagement and the Relationship to Teacher Perceptions in the Visual Art Classroom

Principal Investigator: Kirby Meng

Co-Principal Investigator: Anna Hart

Dear Kirby Meng:
Representatives of the Columbus State University Institutional Review Board have reviewed your research proposal identified above. It has been determined that the research project poses minimal risk to subjects and qualifies for expedited review under 45 CFR 46.110. Approval is granted for the research project.

Please note any changes to the protocol must be submitted in writing to the IRB before implementing the change(s). Any adverse events, unexpected problems, and/or incidents that involve risks to participants and/or others must be reported to the Institutional Review Board at irb@columbusstate.edu or (706) 507-8634.
If you have further questions, please feel free to contact the IRB.

Sincerely,
Manasa Mamidi, Graduate Assistant
Institutional Review Board
Columbus State University

Appendix H
Henry County Research Approval Letter

Henry County Schools | Learning & Performance

Better together.

March 2, 2020

Kirby Meng
3365 Lost Valley Drive
Jonesboro, GA 30236
Re: Research Request

Dear ***Ms. Meng***:

Your application to conduct research in our school system as part of your ***doctoral*** requirements from ***Columbus State University*** has been reviewed. It is the Department's understanding that you plan to examine, ***Students' Perceptions of Engagment and the Relationship to Students' Perceptions in the Visual Art Classroom.*** Consideration was given to the description of your research project, proposed data collection procedures, instruments, and research timeline. Your research application meets the requirements of Henry County Board of Education policy KEBA, Solicitation of Information. **Therefore, your application to conduct research in Henry County Schools (HCS) as described in your proposal has been approved subject to the conditions outlined below.**

- Research may not interfere with students' instructional day, standard curriculum, and educational services.
- Research may not interfere with HCS employee work duties and responsibilities. If the researcher is a HCS employee, research cannot be conducted during your normal working hours. Any alteration to a HCS researcher's work schedule needs to be communicated in writing and approved by your supervisor, including you submitting any necessary leave to complete your research.
- The researcher must assume responsibility in conducting all aspects of the study including, but not limited to, recruitment, consent forms, and data collection.
- Participation in this study is completely voluntary. Employees, parents, and students who do not wish to participate have a right to refuse or withdraw consent. Principals may decline the opportunity for their schools to participate in the study at any time.
- Any student, staff, school, or district information should be used solely for completion of your research study. To preserve the privacy of students and employees, information collected must remain completely confidential. Pseudonyms for students, employees, schools, and this school district must be used in all reporting.
- All data collected must be used solely for the purpose articulated in your research application.
- If modifications or changes to your research procedures or instruments (as outlined in your application) become necessary during the research project, changes must be submitted in writing to the Facilitator of Research and Grants, Alison Norsworthy at alison.norsworthy@henry.k12.ga.us prior to implementation.

Henry County Schools | Learning & Performance

- After completing your research, you must submit a report to us detailing your findings and conclusions. Prior to publication, you must submit a copy of the finalized report to alison.norsworthy@henry.k12.ga.us.

- After publication or completion of the research project, you must delete all data collected or received as result of this application.

Your application to conduct research in Henry County Schools as described in your proposal has been approved by the Principal at:

- Eagles Landing High School
- Hampton High School
- Ola High School
- Union Grove High School
- Woodland High School

I hope your research project goes well and the information you obtain will be beneficial to you and the students of Henry County Schools.

Sincerely,

Dr. Emily Klein
Director, Performance Analytics and Research

Appendix I
Paper Copy of Engagement Survey

Student Engagement Survey

Q1 Study of Student's Perceptions of Engagement and Student's Perceptions of the Teacher

I am interested in understanding student engagement and student perceptions of their teacher in the Comprehensive Visual Art I classroom. You will be presented with information relevant to student engagement and teacher perception and asked to answer some questions about it. Please be assured that your responses will be anonymous and will be kept completely confidential. The study should take you around 10 minutes to complete.
Your participation in this research is voluntary. You have the right to withdraw at any point during the study, for any reason. If you would like to contact the Principal Investigator in the study to discuss this research, please e-mail Kirby Meng at Meng_Kirby@columbusstate.edu
To view and/or print a copy of the full Informed Consent Form, you may visit the following link: https://docs.google.com/document/d/1jh4leXtKP4AhaB1NhQQ-mOspgP4QLyd_oYGE69DaQaA/edit#
By clicking "I Agree", you acknowledge that your participation in the study is voluntary, you have parental permission to participate, and that you are aware that you may choose to terminate your participation in the study at any time and for any reason. If you choose to participate, please take the time and care to provide honest feedback.

Please note that this survey will be best displayed on a laptop or desktop computer. Some features may be less compatible for use on a mobile device.

- ○ I Agree (1)
- ○ I do not Agree (2)

Q2 School Name

- ○ Eagle's Landing High School (1)
- ○ Hampton High School (2)
- ○ Ola High School (3)
- ○ Union Grove High School (4)
- ○ Woodland High School (5)

Q3 Period

- ○ 1 (1)
- ○ 2 (2)
- ○ 3 (3)
- ○ 4 (4)
- ○ 5 (5)
- ○ 6 (6)
- ○ 7 (7)

Q4 What is your gender?

- ○ Male (1)
- ○ Female (2)

Q5 What is your race or ethnicity?

- ○ American Indian or Alaska Native (1)
- ○ Asian (2)
- ○ Black or African American (3)
- ○ Hispanic or Latino (4)
- ○ Native Hawaiian or Other Pacific Islander (5)
- ○ White (6)
- ○ Two or more races/ethnicities (7)

Q6 In which year were you born?

- 2000 (1)
- 2001 (2)
- 2002 (3)
- 2003 (4)
- 2004 (5)
- 2005 (6)

Q7 Do you have previous formal art instruction prior to taking Comprehensive Visual Art I?

- Yes (1)
- No (2)

Q8 Please mark the one most accurate descriptor for each question.

Q9 How often do you stay focused on the same goal for several months at a time?

- ○ Almost never (1)
- ○ Once in a while (2)
- ○ Sometimes (3)
- ○ Frequently (4)
- ○ Almost Always (5)

Q10 If you fail to reach an important goal, how likely are you to try again?

- ○ Not at all likely (1)
- ○ Slightly likely (2)
- ○ Somewhat likely (3)
- ○ Quite likely (4)
- ○ Extremely likely (5)

Q11 When you are working on a project that matters a lot to you, how focused can you stay when there are lots of distractions?

- ○ Not at all focused (1)
- ○ Slightly focused (2)
- ○ Somewhat focused (3)
- ○ Quite focused (4)
- ○ Extremely focused (5)

Q12 If you have a problem while working towards an important goal, how well can you keep working?

- ○ Not well at all (1)
- ○ Slightly well (2)
- ○ Somewhat well (3)
- ○ Quite well (4)
- ○ Extremely well (5)

Q13 Some people pursue some of their goals for a long time, and others change their goals frequently. Over the next several years, how likely are you to continue to pursue one of your current goals?

- Not at all likely (1)
- Slightly likely (2)
- Somewhat likely (3)
- Quite likely (4)
- Extremely likely (5)

Q14 How often does this teacher make you explain your answers?

- Almost never (1)
- Once in a while (2)
- Sometimes (3)
- Frequently (4)
- Almost Always (5)

Q15 When you feel like giving up on a difficult task, how likely is it that this teacher will make you keep trying?

- ○ Not at all likely (1)
- ○ Slightly likely (2)
- ○ Somewhat likely (3)
- ○ Quite likely (4)
- ○ Extremely likely (5)

Q16 How much does this teacher encourage you to do your best?

- ○ Does not encourage me at all (1)
- ○ Encourages me a little (2)
- ○ Encourages me some (3)
- ○ Encourages me quite a bit (4)
- ○ Encourages me a tremendous amount (5)

Q17 How often does this teacher take time to make sure you understand the material?

- ○ Almost never (1)
- ○ Once in a while (2)
- ○ Sometimes (3)
- ○ Frequently (4)
- ○ Almost always (5)

Q18 Overall, how high are this teacher's expectations of you?

- ○ Not high at all (1)
- ○ Slightly high (2)
- ○ Somewhat high (3)
- ○ Quite high (4)
- ○ Extremely High (5)

Q19 How well do people in your class understand you as a person?

- ○ Do not understand at all (1)
- ○ Understand a little (2)
- ○ Understand somewhat (3)
- ○ Understand quite a bit (4)
- ○ Completely understand (5)

Q20 How connected do you feel to the teacher in this class?

- ○ Not at all connected (1)
- ○ Slightly connected (2)
- ○ Somewhat connected (3)
- ○ Quite connected (4)
- ○ Extremely connected (5)

Q21 How much respect do students in this class show you?

- ○ No respect at all (1)
- ○ A little bit of respect (2)
- ○ Some respect (3)
- ○ Quite a bit of respect (4)
- ○ A tremendous amount of respect (5)

Q22 How much do you matter to others in this class?

- ○ Do not matter at all (1)
- ○ Matter a little bit (2)
- ○ Matter somewhat (3)
- ○ Matter quite a bit (4)
- ○ Matter a tremendous amount (5)

Q23 Overall, how much do you feel like you belong in this class?

- ○ Do not belong at all (1)
- ○ Belong a little bit (2)
- ○ Belong somewhat (3)
- ○ Belong quite a bit (4)
- ○ Completely belong (5)

Q24 How excited are you about going to this class?

- ○ Not at all excited (1)
- ○ Slightly excited (2)
- ○ Somewhat excited (3)
- ○ Quite excited (4)
- ○ Extremely excited (5)

Q25 How often do you get so focused on class activities that you lose track of time?

- ○ Almost never (1)
- ○ Once in a while (2)
- ○ Sometimes (3)
- ○ Frequently (4)
- ○ Almost always (5)

Q26 In this class, how eager are you to participate?

- ○ Not at all eager (1)
- ○ Slightly eager (2)
- ○ Somewhat eager (3)
- ○ Quite eager (4)
- ○ Extremely eager (5)

Q27 When you are not in class, how often do you talk about ideas from class?

- ○ Almost never (1)
- ○ Once in a while (2)
- ○ Sometimes (3)
- ○ Frequently (4)
- ○ Almost always (5)

Q28 Overall, how interested are you in this class?

- ○ Not at all interested (1)
- ○ Slightly interested (2)
- ○ Somewhat interested (3)
- ○ Quite interested (4)
- ○ Extremely interested (5)

Q29 How respectful is this teacher towards you?

- ○ Not at all respectful (1)
- ○ Slightly respectful (2)
- ○ Somewhat respectful (3)
- ○ Quite respectful (4)
- ○ Extremely respectful (5)

Q30 If you walked into class upset, how concerned would your teacher be?

- ○ Not at all concerned (1)
- ○ Slightly concerned (2)
- ○ Somewhat concerned (3)
- ○ Quite concerned (4)
- ○ Extremely concerned (5)

Q31 If you came back to visit class three years from now, how excited would this teacher be to see you?

- Not at all excited (1)
- Slightly excited (2)
- Somewhat excited (3)
- Quite excited (4)
- Extremely excited (5)

Q32 When your teacher asks how you are doing, how often do you feel that your teacher is really interested in your answer?

- Almost never (1)
- Once in a while (2)
- Sometimes (3)
- Frequently (4)
- Almost always (5)

Q33 How excited would you be to have this teacher again?

- Not at all excited (1)
- Slightly excited (2)
- Somewhat excited (3)
- Quite excited (4)
- Extremely excited (5)

Q34 How often does your teacher seem excited to be teaching your class?

- Almost never (1)
- Once in a while (2)
- Sometimes (3)
- Frequently (4)
- Almost always (5)

Q35 How fair or unfair are the rules for the students in this class?

- ○ Very unfair (1)
- ○ Somewhat unfair (2)
- ○ Slightly unfair (3)
- ○ Neither unfair nor fair (4)
- ○ Slightly fair (5)
- ○ Somewhat fair (6)
- ○ Very fair (7)

Q36 How pleasant or unpleasant is the physical space in this classroom?

- ○ Very unpleasant (1)
- ○ Somewhat unpleasant (2)
- ○ Slightly unpleasant (3)
- ○ Neither pleasant nor unpleasant (4)
- ○ Slightly pleasant (5)
- ○ Somewhat pleasant (6)
- ○ Very pleasant (7)

Q37 How positive or negative is the energy of this class?

- ○ Very negative (1)
- ○ Somewhat negative (2)
- ○ Slightly negative (3)
- ○ Neither negative nor positive (4)
- ○ Slightly positive (5)
- ○ Somewhat positive (6)
- ○ Very positive (7)

Q38 In this class, how much does the behavior of other students hurt or help your learning?

- ○ Hurts my learning a tremendous amount (1)
- ○ Hurts my learning some (2)
- ○ Hurts my learning a little bit (3)
- ○ Neither helps nor hurts my learning (4)
- ○ Helps my learning a little bit (5)
- ○ Helps my learning some (6)
- ○ Helps my learning a tremendous amount (7)

Q39 How much does this teacher know about the topic of his/her class?

- ○ Almost nothing (1)
- ○ A little bit (2)
- ○ Some (3)
- ○ Quite a bit (4)
- ○ A tremendous amount (5)

Q40 During class, how good is this teacher at making sure students do not get out of control?

- ○ Not good at all (1)
- ○ Slightly good (2)
- ○ Somewhat good (3)
- ○ Quite good (4)
- ○ Extremely good (5)

Q41 How interesting does this teacher make what you are learning in class?

- ○ Not at all interesting (1)
- ○ Slightly interesting (2)
- ○ Somewhat interesting (3)
- ○ Quite interesting (4)
- ○ Extremely interesting (5)

Q42 How often does this teacher give you feedback that helps you learn?

- ○ Almost never (1)
- ○ Once in a while (2)
- ○ Sometimes (3)
- ○ Often (4)
- ○ Almost always (5)

Q43 How good is this teacher at teaching in the way that you personally learn best?

- ○ Not good at all (1)
- ○ Slightly good (2)
- ○ Somewhat good (3)
- ○ Quite good (4)
- ○ Extremely good (5)

Q44 How well can this teacher tell whether or not you understand a topic?

- ○ Not well at all (1)
- ○ Slightly well (2)
- ○ Somewhat well (3)
- ○ Quite well (4)
- ○ Extremely well (5)

Q45 For this class, how clearly does this teacher present the information that you need to learn?

- ○ Not at all clearly (1)
- ○ Slightly clearly (2)
- ○ Somewhat clearly (3)
- ○ Quite clearly (4)
- ○ Extremely clearly (5)

Q46 How comfortable are you asking this teacher questions about what you are learning in his/her class?

- ○ Not at all comfortable (1)
- ○ Slightly comfortable (2)
- ○ Somewhat comfortable (3)
- ○ Quite comfortable (4)
- ○ Extremely comfortable (5)

Q47 Overall, how much have you learned from this teacher about Art?

- ○ Learned almost nothing (1)
- ○ Learned a little bit (2)
- ○ Learned some (3)
- ○ Learned quite a bit (4)
- ○ Learned a tremendous amount (5)

Q48 Would you like to enter a drawing for a chance to win a $25 Chick-Fil-A gift card?

- ○ Yes (1)
- ○ No (2)

Survey 2

Type your name and email below.

- ○ Type your first and last name here. (1) _____
- ○ Type your email here. (2) _____