INFLUENCE OF TEACHER ATTIRE ON MIDDLE SCHOOL STUDENTS' ACADEMIC ACHIEVEMENT AND BEHAVIOR

By

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(Under the Direction of John Mativo)

ABSTRACT

The purpose of this study was to examine the effect teacher professionalism, through professional dress and attire, had on middle school students' performance on assessments and behavior as compared to the average condition. A quasi-experimental approach was used in the study. This study wanted to establish if any effects exist from manipulating teacher attire, professionally or casually, or verify teacher attire has little or no effect on grades or student behavior. The treatment was manipulation of clothing worn by instructors. The response was the effect teacher attire influence had on math scores and behavior violations for two weeks during the experiment. The control was average scores on weekly math quizzes and behavioral data recorded for the weeks before the intervention. Results suggest that teacher attire, both professional (P) and casual (C), does affect academic achievement based on math scores compared to the average prior to the intervention.

Results indicate students scored 11 points higher on math quizzes during the week teachers were professionally dressed (*Mean* = 70.33) compared to the baseline (B) (*Mean* = 59.68) scores and indicate students scored ten points higher during the week teachers

were casually dressed (*Mean* = 69.33) compared to baseline scores. ANOVA indicates a statistically significant effect of teacher attire on student scores, $F(2,87) = 6.64$, $p = .002$.

Results indicate no statistically significant differences in behavior when teachers were professionally dressed compared to baseline scores. Results indicate students scored 0.61 points higher on behavior during the week teachers professionally dressed (*Mean* = 32.67) compared to baseline (*Mean* = 33.28) scores with P-value of .92; not significant at the .05 alpha value. Results indicate students behaved 0.92 points better during the week teachers were casually dressed (*Mean* = 34.20) compared to the baseline (*Mean* = 33.28) with a P-value of .74; not significant at the .05 alpha value.

Since P-C scores were similar for math and behavior, this suggests students reacted to the change of teacher attire more than the clothing teachers were wearing during the experiment. Results and conclusion of the study were presented, in addition to recommendations for further research and practice.

INDEX WORDS: Academic Achievement, Attire, Behavior, Clothing, Dress, Middle School Students, Professionalism, Teachers

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DEDICATION

This dissertation is dedicated to my husband, Dale Harbin, and to my children, Justley and Jessica, for all your love and support.

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CHAPTER 1

INTRODUCTION

The impression teachers leave on students may last a lifetime. Most people remember a certain teacher from their time in school that has either made a positive or negative impact on their educational experiences. Teachers that dress professionally compared to teachers that dress casually may encounter variations in behavior and academic achievement in students (Simmons, 1996). What instructors choose to wear in the classroom does influence the perceptions of their students however, few studies have directly examined the effects of instructor dress in the classroom (Carr, Davies, & Lavin, A., 2009; Gorham, Cohen, & Morris, 1997, 1999; Simmons, 1996).

The subject of teacher professionalism and attire has gained the attention of local school systems extending up to superintendent positions in several states. Workman and Freeburg (2010) studied the local dress code policies in teacher handbooks from across the country and had discovered commonalities of norms in their research. (See Appendix A). Several states including Georgia have even developed teacher evaluations standards for professionalism listing maintaining professional demeanor and behavior, including attire, as a performance indicator (Georgia Department of Education, n.d.).

Teachers, knowingly or unknowingly, serve as role models in everything they do, including how they dress (Simmons, 1996; Workman & Freeburg, 2010). Many authors agree that dress communicates who teachers are as individuals and as professionals (Carr et al., 2009; Gorham et al., 1999, 1997; Simmons, 1996).

The student's perceptions of teachers may contribute to behavioral and academic inconsistencies. Previous research at the secondary and college level has revealed that teacher attire affected student's learning, discipline, work habits, and attitudes (Freeburg, Workman, Arnett, & Robinson, 2011). Very few, if any, studies have been conducted correlating teacher attire and middle school academic achievement. Experimental research on the middle school level focused only on the effects the band director's attire had on students' behavior (Camacho, 2005).

Teacher attire, dress, and clothing are used interchangeably. Merriam-Webster (n.d.) defines *attire* as dress, clothing, apparel or outfit. *Dress* can be explained as "an assemblage of body modifications and /or supplements displayed by a person in communicating with other human beings" (Roach-Higgins & Eicher, 1992. p. 1.). *Clothing* is defined as a primary impression management tool (Malloy, 1975; Morris et al., 1996). Clothing and the style of dress can communicate status and power (Carr et al., 2009). *Professional dress* can be described as classic business attire consisting of dark business suits, white shirts, tie, and dress shoes for men, skirts with sheer hose, blouses, and high heeled pumps for women (Gorham et al., 1997, 1999). *Moderately formal* or *casual professional dress* is described as khaki slacks for men, button-up shirts, tie, and brown leather loafers. Similarly, examples of women's attire are skirts, sweaters, turtlenecks or blouses, and low dress pumps. Examples of *casual dress* are faded, worn blue jeans, sport shirt or t-shirt, unbuttoned flannel shirt, and sneakers (Gorham et al., 1997, 1999).

Perception is explained as the way one feels about or interprets information, such as dress, and can be used as a form of communication (Storm, 1987). Research has shown

that perceptions of teachers dressed professionally were seen as more organized, knowledgeable, and better prepared while teachers dressed less professionally were perceived as sympathetic, friendly, flexible, fair, and even enthusiastic (Gorham et al., 1997, 1999). Perception of teacher dress by students, administration, parents, the community and even other teachers is essential to the way the public views the profession (Workman & Freeburg, 2010). Malloy argues that "teachers are not paid like professionals because they do not look like professionals" (1975; Simmons, 1996. p. 3) while other researchers agree that teachers will be treated as they are dressed (Simmons, 1996; Wong & Wong, 1991).

Behavior is how one acts in a particular place and position according to the roles associated with that position (Workman & Freeman, 2010). Teachers that embrace the role of teaching are usually dressed professionally while teachers that distance themselves from their teaching role and view teaching as just a job tend to dress inappropriately or unprofessionally. Role embracement and role distance are concepts that convey the relationship between role and identity (Goffman, 1961; Workman & Freeburg, 2010).

Purpose Statement

Little research has been conducted regarding the influence of teacher attire on student achievement and behavior, especially on middle school students. Most studies involve surveys that determine if clothing affects how college students perceive their instructors but lack results regarding their academic achievement and behavior. In addition, college student perceptions of the quality of instruction and program quality have also been researched. (Atkinson, 2008; Kagoda, 2015; Lavin, Davies, & Carr, 2010;

Mosca & Buzza, 2013). Furthermore, data on the effects of teacher attire in middle school students are even less available. Several authors have explored the psychology of dress in society (Johnson & Lennon, 2014) and professional dress (Johnson et al., 2008; Mosca & Buzza, 2013; Pinto, 2016; Workman & Freeburg, 2009) without correlating them to middle school students' achievement and behavior.

The purpose of this study was to examine the influences of teacher professionalism and attire on the achievement and behavior of sixth-grade students from a middle school in northeast Georgia. A quasi-experimental research design was used because of the lack of complete control of the experiment involving approximately 200 students. This study utilized a quantitative approach to collect data on the academic performance and behavior of two groups of middle school students and supplemented with a qualitative analysis of interviews from a random and non-random group of students and teachers.

In this study, Bandura's social cognitive theory (1986), the theoretical perspective that people learn from observing others, will be used to relate middle school student performance, specifically academic achievement and behavior, to teacher attire. The response variables are defined, generally, as student performance academically and also student behavior and discipline problems as recorded on positive behavior interventions and support (PBIS) cards and referrals. These variables can be tracked numerically as continuous variables. The treatment variable is defined, generally, as teacher professionalism in professional dress and attire for classroom teachers as described above. The control variables in the study are similarly grouped sixth-grade students,

identical weekly student schedule, shared curriculum, the same chapter assessments, and matching teaching strategies from teachers within their first two years of teaching.

Research Questions

1. Does teacher professionalism in professional dress and attire affect student performance on assessments as measured by weekly quizzes?
2. Does teacher professionalism in professional dress and attire have an effect on student behavior as recorded on PBIS behavior cards and referrals as compared to the average condition?

Theoretical Framework

People learn things by observing what other people do (Simmons, 1996; Wood & Bandura, 1989). Whether it is the latest fashions, how to swing a baseball bat, or even how to dance, people are watching. Teachers can be some of the most influential people in a child's life. Workman and Freeburg (2010) claim that students learn both attitudes and behavior by observing teachers. Children are very good at modeling the behavior of the teachers they observe (Mosca & Buzza, 2013); therefore, teachers serve as role models and should pay attention to the clothes they wear (Simmons, 1996).

Although there are numerous theories about student behavior, emotions, and cultural norms, the theoretical framework for this study was based on the following theories as they closely relate to the study the effects of teacher professionalism in attire has on student behavior and academic achievement in middle schools. Mainly, the theories used are about student behavior being influenced by their environment and social interactions which can also affect student grades.

Bandura's social cognitive theory describes how a person responds to one's environment (Bandura, 1986) and learns from social experiences. Social cognitive theory better explains personality in terms of how a person responds to one's environment (Bandura, 1986). It involves the interaction and influence of three factors upon each other as shown in Figure 1, which are: behavior, environment, and the individual's personality, which Bandura called reciprocal determinism theory (Bandura, 1978). This study utilized this model to determine if teacher attire (environmental) affected student achievement (personal/cognitive) and student behavior (behavior).

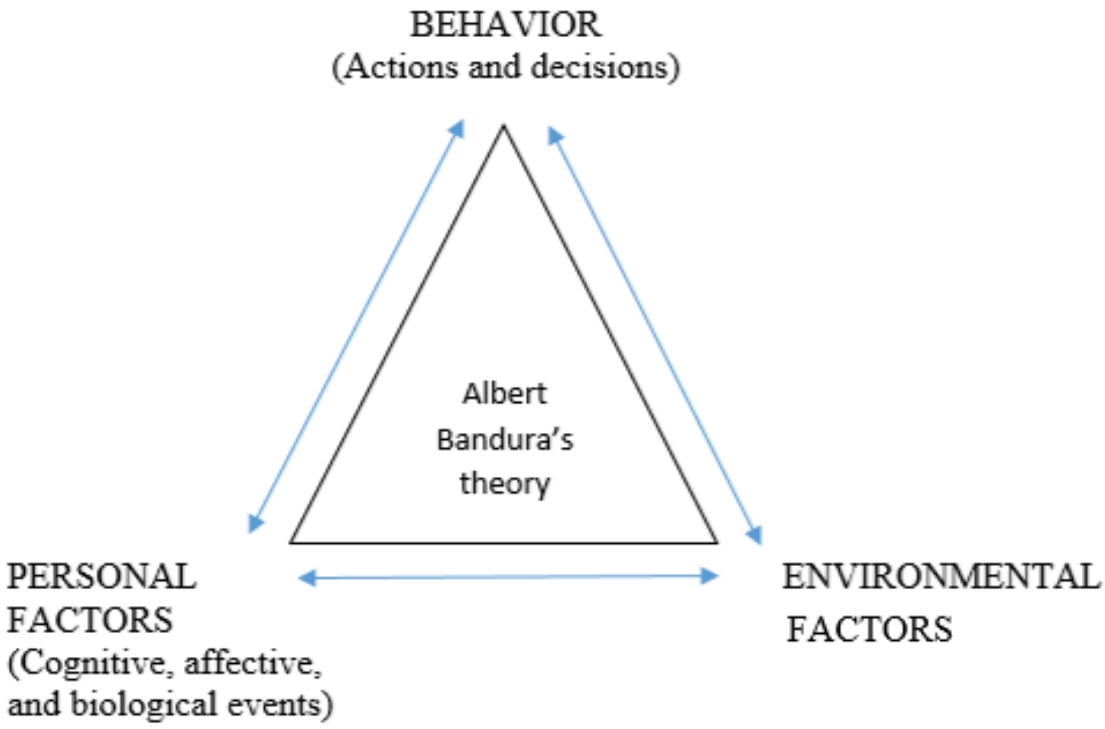

Figure 1. Reciprocal determinism theory. Adapted from "The Self System in Reciprocal Determinism," by A. Bandura, 1978, *American Psychologist*, 33(4), 344-358.

Bandura's social cognitive theory was used as the primary theory of the study. The educational environment is academically and socially driven. Responses to certain behaviors and personalities of groups of students and their teachers in the educational environment may be correlated to student academic achievement and behavior.

Furthermore, Bandura's social learning theory was the basis for his social cognitive theory which he developed in 1986 (Bandura, 1986; McLeod, 2016). Social learning theory hypothesizes new behaviors can be learned by observing others' behavior or by experiencing new behaviors themselves (Bandura, 1971). This theory suggests many behaviors expressed by individuals are learned by others' examples. Social learning theory emphasizes how modeling can influence the behavior, attitudes, and emotional reactions of others (Bandura, 1969, 1977; McLeod, 2016). Using this framework, teachers act as models to students in the way they behave and dress.

Cultural norms are prevalent in public schools and students will learn behavior from others. Sociocultural learning theory pertains to the study by emphasizing how public schools are learning environments where students learn from each other, their teachers, and others in the community who may associate with the student within schools.

The nonverbal communication theory pertains to how teachers communicate with their style of clothing and appearance. Nonverbal cues such as physical appearance and gestures are viewed before verbal communication is spoken. (Burgoon, et al., 2016). Teachers communicate with students nonverbally through their actions and attire. This theory correlates to the study by emphasizing how clothing norms can affect student learning and behavior through emotions and perceptions. Attire can communicate how

teachers feel about their role as an educator which can be perceived positively or negatively by students and can result in differences in student behavior and grades.

Significance of Study

This study is conducted in an effort to better understand the effects of professional attire influence at the middle school level. Findings will be used to inform the educational field to what extent students are affected by teacher attire.

Benefits from this project may give insight on the effects of teacher professionalism on student behavior and academic achievement. Information gained may be used to help design teacher dress codes in local school systems and improve the image of teacher professionals.

While some teachers may feel they should be able to wear anything to school, they are required to wear professional clothing according to the Georgia Department of Education. Many teachers feel their rights are being limited or violated and object to teacher dress codes. Teachers are professionals and know what works in the classroom (Graham, 2016). Since teachers are now being evaluated on their professionalism through the Georgia Professional Standards Commission with the Teacher Keys Evaluation System (TKES), this study may assist teachers in meeting that standard. The teacher evaluation standard for professionalism lists maintaining professional demeanor and behavior, including attire, as a performance indicator (Georgia Department of Education, n.d.). Appendix B lists the guidelines for teachers to meet Performance Standard 9: Professionalism.

CHAPTER 2

A REVIEW OF THE LITERATURE

Research has suggested that teacher attire can affect the emotions of students consciously or subliminally and that school attire is related to the school environment. School environment can affect the level of school engagement, although little is known about the relationship between school environment and engagement, leading to outcomes of academic achievement (Freeburg & Workman, 2010; Wang & Holcombe, 2010). Self-determination theory suggests the level of engagement is determined by the students' interaction with school environment and that learning outcomes are a result of the opportunities provided by the school environment (Deci & Ryan, 2008; Wang & Holcombe, 2010).

Previous Studies

The physical appearance, attractiveness, and professional behavior potentially impact student perceptions of instructors. Studies have found that teachers that dress more professionally are perceived as more knowledgeable while casually dressed teachers seem friendlier, thus formal or professional attire is more positively perceived by students (Lavin et al., 2010).

Camacho (2005) suggests that students do pay attention to what their teachers wear and that when teachers change their appearance, it causes students to become more easily distracted and more likely to get off task more frequently. In addition, Gage, Larson, Sugai, and Chafouleas (2016) suggests student perceptions of school

environment may have an impact on their behavior at school.

Although not specific to middle school but relevant to how attire affects behavior, a comprehensive review of published literature was analyzed to determine the effect of dress on the behavior of others and self. Findings suggest the physical environment affects emotions and causes a behavioral response. The review indicated that dress had significant effects on behavior in 85.3% of the studies reviewed (Johnson, Yoo, Kim, & Lennon, 2008).

Although several researchers describe areas of dress in general categories such as professional, formal professional, casual professional, business formal, moderately formal, and business casual, there is little evidence of general attire practices specifically designated for middle school teachers only. However, research by Camacho (2005) describes the categories of dress worn by a middle school band director as casual attire, business casual attire, and business formal attire. Casual attire is considered as jeans, sneakers, t-shirts, and other shirts worn as jackets and not tucked in. Business casual clothes are described as khaki pants, long-sleeved button-down shirts tucked in with a belt, and shoes other than sneakers. Business formal attire is considered as wearing a suit or slacks, long-sleeved button-down dress shirt tucked in with a tie and belt, and sports coat or suit coat with formal dress shoes (Camacho, 2005).

In the *Fashion in the Classroom* series, dress is categorized as formal professional, casual professional, casual, and immodest (Gorham et al., 1997). The formal professional category for males includes dark business suits with a dark tie, white shirt, and dress shoes. Female dress in the formal professional category includes a dark or neutral business suit with a skirt, sheer hose, and high-heeled shoes or pumps. The casual

professional category for males includes light-colored casual slacks, a dark or plaid button-down sports shirt, with brown leather casual shoes. Ties are not considered casual professional attire. Females wearing sweaters and skirts in primarily tan or dark colors with dress shoes or pumps are considered wearing casual professional attire. On the other hand, faded blue jeans with light colored t-shirts, plaid flannel shirts worn unbuttoned and athletic shoes describe casual attire for both men and women (Gorham et al., 1997). Immodest or inappropriate attire consists of half-shirts, exposing undergarments and private body parts, short skirts, see-through clothing, and low necklines as well as tight or form-fitting pants and shirts (Freeburg et al., 2011).

Atkinson (2008) categorizes teachers' attire as "apple jumper, teacher babe, and bland uniformer," each of which describes a stereotype of a teacher. The categories of dress describe how female teachers relate to their profession and how the conditions in their professional settings produce that relationship. The "apple jumper" describes the type of teacher that wears jumpers and seasonal attire and is associated with being a motherly type. The "teacher babe" type wears fitted clothing that shows off feminine shape. The "bland uniformer" type wears attire that neutralizes and masks female features. This type portrays schooling expertise and professionalism being more authoritative (Atkinson, 2008).

Freeburg and Workman (2010) discuss items that are inappropriate for teachers, in general, to wear to school and the items described as violations of norms or standards of dress for teachers. Dress norms are considered standards of what to wear or what not to wear (Freeburg et al., 2011). Three groups considered inappropriate dress are casual dress, sexually revealing dress, and dress that violated conventional norms. Casual dress

violations include most athletic wear and caps, slippers, flip-flops, cutoff shorts, sweat pants, jeans, shorts, tank tops, and torn or wrinkled clothing. Sexually revealing dress includes dresses and shirts that show cleavage; jeans that expose skin; short skirts and dresses; and skimpy, strapless or sleeveless tops and dresses. Spandex and stretch pants; spaghetti straps; tube tops or crop tops; and see-through clothing or clothing that is too tight is also considered sexually revealing dress. Dress that violates conventional norms can include tattoos, body piercings, and clothing associated with drug or alcohol use (Freeburg & Workman, 2010).

Simmons (1996) argues that being overdressed can be as detrimental to students as being too casually dressed. And that miniskirts that reveal the lace on bikini underwear, as well as low-cut blouses, tight pants, shorts, and inappropriate slogans on t-shirts, are not beneficial to the learning environment.

Varying Perspectives

In live classroom contexts, experimental studies have indicated teacher attire has minimal effect on the perception of the instructor (Gorham, Cohen, and Morris, 1999). The research concluded that dressing up did not help newly hired teachers gain credibility and competence in the classroom.

Camacho's (2005) research suggested formal attire was not the most successful in controlling student's behavior. Although business casual produced the best results, casual produced the worst. Business formal had a slight advantage over casual.

Gorham, Cohen, and Morris's (1997) earlier study produced similar results. Findings indicated teacher attire had no effect on perceptions of instructor knowledge or

composure. The study concluded that instructor behavior had more of an impact on instructional effectiveness than did attire.

Deficiencies in Past Literature

Few researchers have fully studied the effects of teacher professionalism and dress on student academic achievement and behavior (Carr, Davies, & Lavin, 2009; Morris, Gorham, Cohen, & Huffman, 1996; Simmons, 1996). However, Freeburg and Workman have investigated dress codes as described in teacher handbooks (2010) and social norms (2009). While others have participated in college-level studies on the effect of business faculty attire on college student perceptions of the quality of instruction and program quality (Atkinson, 2008; Kagoda, 2015; Lavin, Davies, & Carr, 2010; Mosca & Buzza, 2013). Additionally, Gorham, Cohen, and Morris' (1997) *Fashion in the Classroom* series researched teacher attire and immediacy in regard to college student perceptions.

Furthermore, data on the effects of teacher attire in middle school students are even less available. Camacho's (2005) work specifically targeted middle school students enrolled in band. The study investigated the relationship between a middle school band director's attire and incidences of student off-task behaviors in the classroom. Several authors have explored the psychology of dress in society (Johnson & Lennon, 2014) and professional dress (Johnson et al., 2008; Mosca & Buzza, 2013; Pinto, 2016; Workman & Freeburg, 2009) without correlating them to middle school students' achievement and behavior.

Camacho (2005) conducted a study in January 2005 to examine the effects of clothing on students using a counterbalanced design. A middle school band director from

Florida participated in a twenty-day study where he wore his normal business casual clothing, business formal clothing, and simply casual clothing. Business casual attire consisted of khaki pants, long-sleeved button-down shirt tucked in with a belt, and dress shoes. Business formal clothing includes suits, sports jackets, slacks, button-down shirt tucked in, tie, and dress shoes. Casual attire was listed as jeans, sneakers, t-shirt, and button-down shirt worn as a loose jacket.

Sixth and seventh-grade students' behavior was studied in each of the three clothing types noting misbehaviors during three class times, morning, mid-day, and afternoon. Students were also given a questionnaire at the conclusion of the study. Results showed when the instructor strayed from his normal business casual attire, off-task behavior increased. Business casual attire was the most successful and produced the best-behaved classes (Camacho, 2005).

Little research has been conducted regarding the influence of teacher attire on student achievement and behavior, especially on middle school students. Most studies involve surveys that determine if clothing affects how students perceive their college instructors with few results on behavior and little or none regarding academic achievement.

Historical Background

The way teachers present themselves is correlated with student learning and behavior. Faculty members transmit knowledge and influence students both verbally and non-verbally (Okoro & Washington, 2011). Students' perceptions of educators that dress professionally or casually may be considered favorably or adversely. This study focused

on how student's behavior is directly influenced by the teacher's attire and performed an experiment on the effects teacher appearance has on student academic achievement.

Teachers are expected to act and behave professionally at all times. They should be professionally dressed, clean, neat, with their hair styled and wearing appropriate footwear. According to Workman & Freeburg (2010), teachers fill an important societal position and how they dress contributes to that role and professional identity. In addition, the way teachers dress forms an important part of the total teacher image (Rutherford, Conway, and Murphy, 2015).

History of Clothing

The origin of clothing most likely began with adornment to enhance appearance. Neanderthal man appears to have used dress to adorn his body, a practice that simpler cultures still use today (Storm, 1987). Some types of adornment include changing the body permanently through tattooing, piercing, or scarring while temporary adornment can include make-up, jewelry, and clothing.

Teachers have long been stereotyped typically as a woman in a non-form-fitted skirt and blouse or a dress that covered everything but her hands and head, wearing glasses, with her long hair pulled back into a bun. Stereotypes are formed from biases, which influence our behavior by giving us expectations based on generalized and selective perception (Storm, 1987). Most recently, women teachers have become one of three stereotypes: the apple jumper, the teacher babe, and the bland uniformer (Atkinson, 2008). Each of the three types is distinctly described by their clothing. The "apple jumper" refers to a type of clothing worn by teachers that resembles long aprons and promotes their teaching career by displaying items associated with teaching. This type of

teacher frequently wears seasonal attire and is considered “extreme” or not normal. And although this teacher looks the part, they are not described as being intelligent. The teacher babe type is a teacher that wears form-fitted clothing such as tight skirts that are hemmed above the knee with a top that displays her feminine figure. This type of teacher is described as attractive but also unintelligent and immoral. The third stereotype of teacher is the bland uniformer as this teacher wears clothing that is almost non-expressive and “masks their female sexuality” (Atkinson, 2008). This teacher’s style of dress is described as gender-neutral and does not call attention to themselves either positively or negatively. Teachers of this stereotype are associated with being intelligent and tend to wear business casual clothing like their male counterparts in the school.

How Clothing Has Changed Over Time

Over the last 15 years, the norms for body modification such as tattoos and body piercings have changed dramatically. Teacher attire has evolved from the stereotypical woman covered with unrevealing clothing to a very casually dressed individual. Teaching was one of the first professions to go from professional attire to a more casual dress code (Workman & Freeburg, 2010). Teachers are wearing slacks, polo-type shirts, and tennis shoes as professional dress. Rarely does a male teacher wear a tie in school these days. In some progressive schools, teachers are allowed to have visible tattoos and can dye their hair any color. Teachers that are expected to follow a stricter dress code may feel their rights to dress as they please are being infringed upon (Freeburg, Workman, Arnett, and Robinson, 2011; Graham, 2016).

Psychology of Dress

Clothing is specific only to humans. The clothes humans wear are specific to that individual person. Dress is a form of communication that universally reflects social status and identity (Storm, 1987). "Clothing has an obvious effect on the perceived status of an individual" (Roach, 1997. p.127). Dress can relay personal information such as mood, intelligence, and authority and can even impose respect from others. Items of dress and behaviors are linked to social positions as well as to meanings, therefore, dress is used to infer information about others.

Dress can also affect how one perceives themselves:

> The social psychology of dress is concerned with answering questions about how an individual's dress-related beliefs, attitudes, feelings, and behaviors are shaped by the influence of others. It is concerned with how an individual's dress affects the behavior of self as well as the behavior of others. (Johnson & Lennon, n.d.)

Clothing has a physical and psychological effect on humans. The effects of clothing can be derived from both the external and internal responses of an individual (Roach, 1997). The feeling of the clothes on our bodies is physically stimulating and how we perceive the clothing is psychological. Storm (1987) describes perception as the process of absorbing data through our senses where it is transmitted to the brain where it is identified and given significance through organization and interpretation.

What we wear and when we wear it affects us psychologically. Having an outfit that is favored over the others could be caused by receiving positive comments and achieving some type of success when wearing it. When dressed for work people tend to be in a more serious psychological state, while when wearing leisure dress at home

allows a feeling of relaxation and freedom (Storm, 1987). When relaxed clothing is worn to work, it allows personal identity to become apparent, but workers tend to be less productive and more relaxed in their work as well (Freeburg et al., 2011). Dressing for an expected role promotes on-task behavior with little disruption (Storm, 1987).

Researched Theories

The empirical research and emerging theories explaining what is known about how teacher professionalism influences middle school students' behavior or performance is limited. Yet, theories related to social aspects and theories associated with how students learn exist and can be used in this study. The educational environment is academically and socially driven. Responses to certain behaviors and personalities of groups of students and their teachers in the educational environment may be correlated to student academic achievement and behavior.

There are numerous theories about student behavior, emotions, and cultural norms. However, little research has been conducted regarding the influence of teacher attire on student achievement, especially on middle school students. Most studies involve college surveys that determine if clothing affects how students perceive their instructors with few results on behavior and little or none regarding academic achievement. Therefore the following theories could be used as they appear to be the most closely related to the study the effects of teacher professionalism in attire has on student behavior and academic achievement in middle schools. Mainly, the theories used are about student behavior being influenced by their environment and social interactions which can also affect student grades.

Social Cognitive Theory

Social cognitive theory describes how a person responds to one's environment and learns from social experiences and will be used as the primary theory of the study. Social cognitive theory better explains personality regarding how a person responds to one's environment (Bandura, 1986). It involves the interaction and influence of three factors upon each other: behavior, environment, and the individual's personality, which Bandura called reciprocal determinism theory (Bandura, 1978).

Social Learning Theory

Social learning theory is the foundation of social cognitive theory, which could also be used in the study. Since social learning theory originated from individuals learning new behaviors from others, it relates to how teachers model specific behaviors and clothing norms.

Bandura's social learning theory was the basis for his social cognitive theory which he developed in 1986 (Bandura, 1986; McLeod, 2016). Social learning theory hypothesizes new behaviors can be learned by observing others' behavior or by experiencing new behaviors themselves (Bandura, 1971). This theory suggests many behaviors expressed by individuals are learned by others' examples. Social learning theory emphasizes how modeling can influence the behavior, attitudes, and emotional reactions of others (Bandura, 1969, 1977; McLeod, 2016). Using this framework, teachers act as models to students in the way they behave and dress.

Bandura is known for conducting an experiment involving preschool children and a "Bobo" doll. Children that witnessed adults model aggressive behavior toward the doll exhibited significantly more aggressive behavior toward the doll when they were left

alone with the toy than those children that were not exposed to aggressive behavior toward the toy (Bandura, 1969, 1971, 1977). Using this framework, teachers act as models to students in the way they behave and dress. Bandura's experiment with children and aggression toward the Bobo doll (Bandura, 1969, 1977; McLeod, 2016), could be associated with how teachers interact with students and the resulting behavior from those interactions.

Although most instances of behavioral similarities in children are from modeling adults, the source of exposure is hard to determine from teachers, other adults, peers, and the media. Conversely, modeling is not the only source of behavior and attitudes as similarities in the behavior of children or adults can result from education, environment, and culture (Bandura, 1969). However, social cognitive theory supports more of the theory of learning from social experiences and environment (McLeod, 2016). Social cognitive theory provides a conceptual framework for specifying the psychological mechanisms that link individual behavior to organizational cultures (Wood & Bandura, 1989). Stimuli such as teacher attire and classroom environment can affect students. Bandura indicates his findings of perception produce retrievable images of modeled sequences of behavior (Bandura, 1969). Consequently, students' perception of the teacher can alter student behavior.

Sociocultural Learning Theory

The sociocultural learning theory suggests that learning is a social process. Russian psychologist, Leo Vygotsky, developed the sociocultural learning theory based on the idea that a learner's environment affects their learning process including culture, language, and the zone of proximal development. It implies that learners may directly

impact one another and that a learner's behavior may be influenced by cultural norms (Pappas, 2015). Cultural norms are commonplace in public schools and students learn behavior from others. Sociocultural learning theory pertains to the study by emphasizing how public schools are learning environments where students learn from each other, their teachers, and others in the community who may associate with the student within schools.

Nonverbal Communication Theory

The nonverbal communication theory relates to how teachers communicate with their style of clothing and appearance. Nonverbal cues, such as physical appearance and gestures, are viewed before verbal communication is spoken. (Burgoon et al., 2016). Teachers communicate with students nonverbally through their actions and attire. This theory correlates to the study by emphasizing how clothing norms can affect student learning and behavior through emotions and perceptions. Attire can communicate how teachers feel about their role as an educator which can be perceived positively or negatively by students and can result in differences in student behavior and grades.

Expectancy Value Theory

Expectancy value theory links school characteristics and school engagement through student motivational beliefs. Academic achievement and school engagement are choices influenced psychologically by the students' expectation of success. The theory suggests students that are engaged in school have more self-confidence when it comes to academic achievement than those students who are not engaged. Diverse activities provided by teachers enlighten students of their ability to succeed, thus creating more engagement in school and the increase of autonomy in learning (Wang & Eccles, 2013).

Expectancy Violations Theory

The expectancy violations theory is a communication theory that suggests that doing the opposite of what is expected can be positive. It proposes that positive violations of expectations can produce outcomes that are better than the original positive supports and that negative violations can be worse than the original negative supports (Burgoon, 2015; Wang & Holcombe, 2010).

Self-Determination Theory

Deci & Ryan (2008) derived the self-determination theory pertaining to human motivation and personality. It focuses on types of motivation to predict outcomes in relations and performance and the social conditions that enhance or diminish them.

Theory of Reasoned Action

The theory of reasoned action and the theory of planned behavior posits that individuals' behavior is determined ahead of time, called behavioral intention. Behavioral intention is determined by ones' behavior and how one perceives social norms. The theory of reasoned action gave way to the theory of planned behavior with the idea that perceived control is determined independently of behavioral intention (Montaño & Kasprzyk, 2015)

Social Control Theory

Social control theory was derived from combining elements from the normative socialization theory, social learning theory, and symbolic interactionist theory to give a better explanation in describing the behaviors resulting from dress. The theory identifies norms and suggests deviance complying with norms or violating the norms are part of human behavior (Workman & Freeburg, 2009). *Dress norms* are knowing what to wear

and what not to wear and abiding by dress code policies. *Violation of dress norms* is the defiance of abiding by the norms or dress code. Being seen out of dress code is the *recognition of norm violation,* and the discussion of the infraction from others is described as the *report of norm violation. Sanctions* are the response to the violation such as disapproval. Finally, *enforcement of sanctions* is when the norm must be corrected and ensured not to be repeated (Freeburg, Workman, Arnett, & Robinson, 2011). Research shows this six-step process is a valuable tool not only in teacher dress codes but general body modification societal norms (Freeburg & Workman, 2009).

Stage-Environment Fit Theory and Person-Environment Theory

The stage-environment fit theory and the person-environment fit theory describe how an individual is situated in their environment as they go through physical changes in development (Eccles, Midgley, Wigfield, Buchanan, Reuman, Flanagan, & Mac Iver, 1993). Stage-environment fit theory is the fit of adolescents that focuses on the negative psychological changes that may occur as the individual transitions between their physical changes and their environment. (Eccles et al., 1993).

Hunts' (1975) person-environment fit theory deals with how individuals and their environment interact to produce positive results such as academic achievement (Symonds & Hargreaves, 2016). Stage-environment fit theory revised the person-environment theory by adding a chronological order of interactions in an environment with developmental characteristic and maturity (Symonds & Hargreaves, 2016).

Other Factors Related to Student Achievement and Behavior

Teacher professionalism entails several areas including teacher attire and has been described in numerous ways. Professionalism is related to the way a teacher interacts

with others and the responsibilities, attitudes, and behaviors they adopt, and the knowledge they use (Beijaard, Meijer, & Verloop, 2004).

According to the Georgia Department of Education (n.d.), *professionalism* is where the teacher engages in a high level of professional growth and application of skills and contributes to the development of others and the well-being of the school and community. Professional teachers also maintain a professional demeanor and behavior such as appearance, punctuality, and attendance. Another example of professionalism in teaching includes evaluating and identifying areas of personal strengths and weaknesses related to professional skills and their impact on student learning and also sets goals for improvement. Professional teachers also demonstrate flexibility to school change and engage in activities outside of the classroom to enhance school and student relations. Abiding by the teacher Code of Ethics, school board policies and regulations, and maintaining confidentiality are other factors of teacher professionalism (Georgia Department of Education, n.d.).

Although physical appearance and professionalism have the potential to impact student perceptions of the teacher (Lavin, Davies, & Carr, 2010), studies show that what teachers do affects student achievement and behavior. Research shows the teaching environment is enhanced by dressing professionally (Good, 2014) and formal dress strongly affects how people are treated and can improve motivation and performance (Sebastian & Bristow, 2008). Teachers dressed in formal professional attire were viewed as more organized, knowledgeable, and better prepared to teach while informally dressed teachers seemed friendly and enthusiastic (Gorham et al.,1999; Lavin et al., 2010).

Studies have also shown that when people are dressed casually, communication between people can become more casual as well. This attitude could find its way into the school system where teachers could be called by their first names by students (Sebastian & Bristow, 2008).

Additionally, there could be several other factors that may have some influence on student achievement and behavior. Student-based stimuli such as dress code and transitioning to middle school as well as teacher-based influences such as teacher turnover and teacher knowledge and effectiveness could have an impact on students' success and behavior, see Figure 2. Student relationships with their peers and teachers also contribute to student achievement and behavior.

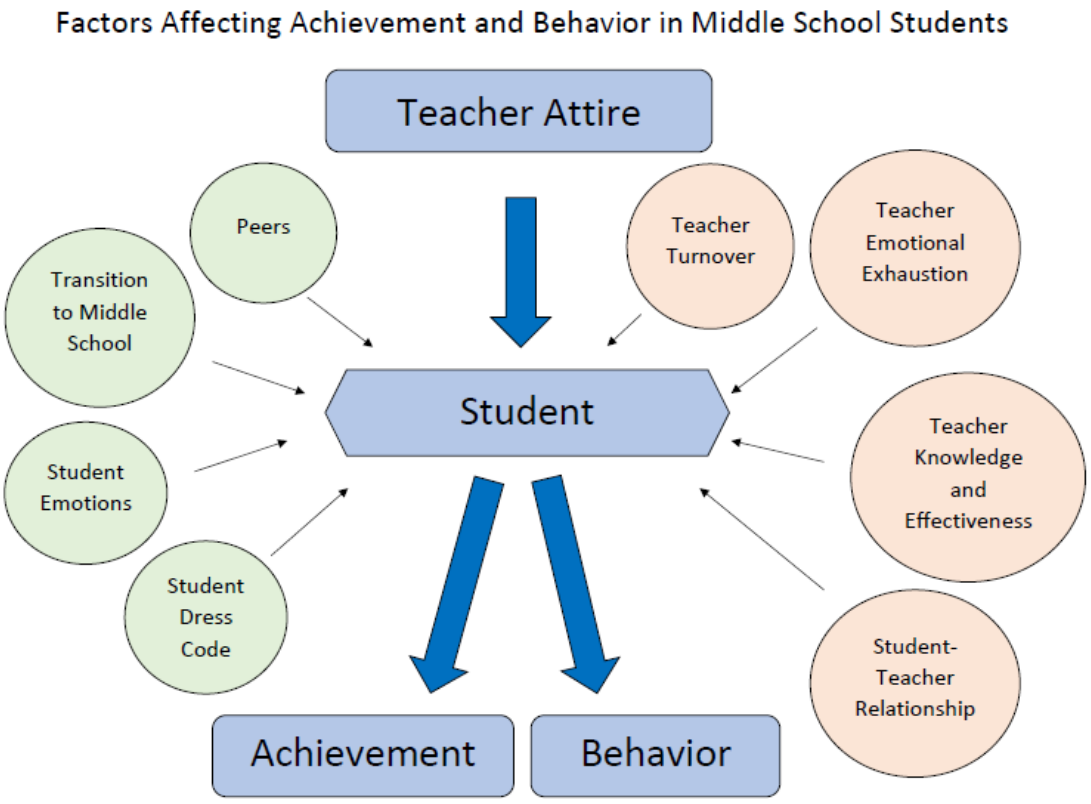

Figure 2. Factors affecting student achievement and behavior (Created by Harbin, 2017).

Student dress code. School uniforms signify order (Rutherford, Conway, & Murphy, 2015). Most students are not in favor of student dress codes. In a study of opinions of public middle school students, Sanchez, Yoximer, and Hill (2012) discovered that 87% of students surveyed indicated their resistance to wearing school uniforms. The study researched responses from students enrolled in a public middle school that had implemented a school dress code policy requiring uniforms for the first year. Researchers have discovered that parents, students, scholars, and educators have strong reactions to uniform policies, both positively and negatively. Although uniforms may have originated in private, upper-class schools, they have been adopted by public schools to improve

school climate, enhance school safety, and increase attendance (Sanchez et al., 2012). Other studies have suggested that school uniforms could be helpful in identifying non-school students, decreasing distractions such as sexually explicit clothing and bullying, teaching appropriate dress for middle school students, decreasing theft of clothing, lowering parental clothing costs, and preventing display of gang attire (Daugherty, 2002; Sanchez et al., 2012).

The study also compared school discipline data from the previous year without a uniform policy and indicated a reduction in referrals for behavior as well as police data including gang-related violence. Although the study did not compare academic school achievement data, it did note that an unsafe school environment and ongoing disciplinary problems may impede efforts toward improvement in school achievement (Sanchez et al., 2012).

Teacher turnover. Student achievement can be affected by teachers leaving their jobs. Teacher turnover has a negative effect on the school, teachers, and students. Teacher turnover not only negatively affects students in the classrooms of new teachers but of students that stay at the same school for multiple years. Replacement teachers lack institutional knowledge and don't have the trust of the faculty or collegial support which can evidently affect student outcomes (Ronfeldt, Lankford, Loeb, Wyckoff, and National Bureau of Economics, 2011).

Peers. Student achievement and behavior may be influenced by peer clothing. However, empirical evidence is limited. Experimental studies provide evidence that peers, in general, are potentially powerful models for the socialization of motivation, engagement, and achievement in school through the exchange of information, modeling,

and reinforcement of peer norms and values. Modeling, or the observation of others, can introduce new behaviors as well as enlighten an individual of the consequences of such behaviors (Ryan, 2000).

Rahimi & Liston (2009) researched how clothing worn by middle school females could produce harmful reactions from peers and teachers. The study focuses on how female students are faced with contradictory positions in their sexual habits by dressing fashionably or conservatively. Female students who dress provocatively are labeled and harassed by their peers in a derogative manner as being sexually active and called vulgar names (Rahimi & Liston, 2009). It also describes how students of lower socioeconomic status may endure negative reactions due to their clothing being worn or too small.

Student emotions. Students' emotions may be linked to their academic achievement. Most emotions felt by students about their academic learning and achievements are seen as achievement emotions (Pekrun, Frenzel, Goetz, & Perry, 2007). Positive emotional experiences have a significant impact on students' academic performance (Mega, Ronconi, & De Beni, n.d.). Achievement emotions are associated with achievement activities or outcomes that are judged by others (Pekrun et al., 2007). Research has suggested emotions can influence students' motivations and predict student performance (Mega et al., n.d.). Adolescents emotional responses may be impacted by developmental social and biological changes (Symonds & Hargreaves, 2016). Student emotions and achievement are intertwined implying that their academic status affected their emotional development and vice-versa (Meyer & Turner, 2009). Emotions are also shaped through verbal messages, as well as nonverbal messages and the environment, including teachers who use emotions to support student learning (Meyer & Turner, 2009;

Pekrun et al., 2007). In middle school, studies have indicated that teachers' emotional response to students can affect student motivation which suggests teachers will need to be more aware of emotions to conform to the norms of effective practice (Meyer & Turner, 2009).

Transition. The transition of elementary students into middle school may affect student achievement. Students are accustomed to one or few teachers in elementary school whereas middle school changes classes and students may have six to eight teachers. Research has indicated areas of anxiety for rising sixth-graders which include changing clothing for PE, restroom breaks, lunch times, locker use, peer pressure and drug use. Getting lost, making new friends, learning and following school rules, and having a mean teacher are also factors causing anxiety for rising sixth-graders (Bailey, Giles, & Rogers, 2015). Another factor that may have an impact on student achievement deals with the ages of students transitioning to middle school being during puberty (Eccles et al., 1993).

Teacher Emotional Exhaustion. Teachers' emotional exhaustion can negatively affect students' achievement. Teaching requirements for the job demand sustained effort which can lead to adverse physiological and psychological outcomes. Student test scores reflect on the teacher thus placing teachers under stress which can cause anxiety, depression, and exhaustion. Other factors leading to teacher exhaustion include increased workload, the number of classes taught, high levels of job engagement, lack of social support, and in some cases, student discipline (Klusmann, Kunter, Trautwein, Lüdtke, & Baumert, 2008).

Teacher knowledge and effectiveness. Instructor credibility is affected by how well the students perceive the teacher knows the subject matter (Lavin et al., 2010). Teacher evaluations, level of education, and years of experience are factors considered in judging the effectiveness of teachers. Ineffective or unknowledgeable teachers may be accountable for the decline in attitudes toward school (Symonds & Hargreaves, 2016). An effective teacher will be dressed appropriately and professionally (Mosca & Buzza, 2013). Teacher knowledge of content is related to student achievement (Freeburg & Workman, 2010; Good, 2014).

Student-teacher relationships. The relationships teachers have with students are complex. Teachers must manage children who are not there voluntarily (Bailey et al., 2015; Wilson & Peterson, 2006). Middle school teachers teach significantly more students than elementary students and do not have the opportunity to make as much time to get to know the students whereas the students may perceive middle school teachers are mean (Bailey et al., 2015). A teacher's willingness to answer questions and listen to the students are viewed more credible by the students, even if they are dressed more casually (Lavin et al., 2010).

Student achievement may also be altered by the psychological effects that teacher appearance generates. A teacher's choice of dress can relay the feeling the class is important to the teacher in which students' respond by studying more and exhibit greater classroom engagement, (Roach, 1997). What professors do, their behavior, and their appearance, can be as important as what they discuss in the classroom (Carr et al., 2009). Teacher attire as a nonverbal form of communication can be considered more important than what is spoken. Research has revealed 55% of communication is visual while 38% is

vocal, and only 7% is verbal (Freeburg & Workman, 2010; Mehrabian, A., 1981). Students may be more focused on how the teacher looks than what the teacher is saying.

The relationship between age of teachers and their students may affect student behavior toward their teacher. Older teachers have more separation from students which can give them more respect from students. Teachers with years of experience have credibility while younger teachers have to work harder to be seen as competent (Roach, 1997).

Teacher attitude toward professional dress may affect the student perceptions of teacher attire. Prior studies suggest students' perceptions of teachers wearing sloppy or casual dress to mean the teacher does not have a serious attitude toward or does not care about teaching (Roach, 1997). Workman and Freeman (2010) described teachers' attitudes toward dressing professionally as role embracement and role distance. Teachers that embraced their role as a teacher are neat, clean, and well-groomed, while those teachers that distanced themselves from the role of teacher dressed more casually or immodest. Casual clothes tend to be more comfortable, and in a study by Gordon (2010), teachers stated they dress the way they do to be comfortable. Many teachers assume other roles in the schools such as lunch duty, afterschool duty, and other roles that require mobility and comfort (Gordon, 2010; Graham, 2016).

Guidelines for Research

Qualitative research should be conducted in a natural setting to avoid skewed results due to abnormal conditions. Creswell and Plano's (2007) guidelines for collecting qualitative data begin with identifying the sites where research is collected. In this case, the site was in the natural middle school setting. Since qualitative designs usually do not

have identifiable independent and dependent variables and do not use numerical data, this information was not included in that part of the research. Multiple sources of data such as interviews, documents, and observations were used. Interviews included a script and thank you letters, and a logbook of descriptive data was used. Although research can be collected using existing instruments designed by other researchers, this study required a new instrument to be developed. Once the data was collected, it was analyzed either by a computer program, if applicable, or by hand and sorted by themes or compatible results (Creswell & Plano, 2007; Gall, Gall, & Borg, 2003; Keppel, & Wickens, 2004).

In quantitative research, Creswell and Plano (2007) state procedures for selecting a sample and the size of the sample should be indicated. The population and the size of the study are first identified. Then, the sampling design, such as single-stage or cluster sampling is identified. Also, the selection process for the individuals in the population, such as random sampling, systematic sampling, or convenience sampling, is determined as well as if the sample will involve stratification (Creswell & Plano, 2007; Keppel, & Wickens, 2004; Shuttleworth, 2008).

This study utilized quantitative analysis of data and supplemented the findings with qualitative research from open-ended questionnaires. However, a mixed-methods approach was considered. To use a mixed method design both quantitative and qualitative data is collected, either concurrently or sequentially, using the above procedures.

Quasi-experimental designs are used extensively in the social sciences and psychology as it is very useful in measuring social variables (Keppel, & Wickens, 2004; Shuttleworth, 2008). Due to the lack of full experimental control of variables, a quasi-experimental design is best suited. Campbell and Stanley (1966) state no experiment is

perfect, and the researcher should design the very best experiment which the situation makes possible as this is crucial in quasi-experimental designs.

There are advantages and disadvantages to using a quasi-experimental research design. The advantage of using a quasi-experimental research design is it can be used when total experimental control of all variables cannot be secured. The ability to collect numerical data through scores and behavior records was challenging in a setting that proves difficult to control all variables. Specific to quasi-experimental research is the ability to select certain groups according to the variable being tested and not randomly assigned to groups (Creswell, 2014; Keppel, & Wickens, 2004). A disadvantage of this research design is that quasi-experimental designs are sometimes viewed as unscientific or unreliable. Due to the lack of control of all possible factors, quasi-experimental research results can be affected by other variables. However, identifying the variables during the experimental process can improve the validity of the data (Shuttleworth, 2008).

After securing a sample group, the survey instrument is determined, either by using an existing instrument, modifying an existing instrument, or combining instruments after permission from the developer has been secured. The validity and reliability of an existing instrument can be used in the research but modified, and custom instruments need to reestablish validity and reliability during data analysis. Cover letters and consent forms, as well as instructions for the questionnaire, are drafted and steps for completing the process are identified. A method of following-up with the subjects needs to be also established (Creswell & Plano, 2007).

CHAPTER 3

METHOD

Purpose of the Study

The purpose of this study was to examine the influences of teacher professionalism and attire on the achievement and behavior of sixth-grade students from a middle school in northeast Georgia. A quasi-experimental research design was used because of the lack of complete control of the experiment involving approximately 200 students. This study utilized a quantitative approach to collect data on the academic performance and behavior of two groups of middle school students and supplemented with a qualitative analysis of interviews from a random and non-random group of students and teachers.

In this study, Bandura's social cognitive theory (1986), the theoretical perspective that people learn from observing others, was used to relate middle school student performance, specifically academic achievement and behavior, to teacher attire. The response variables were defined as student performance academically and student behavior and discipline problems as recorded on positive intervention behavior cards or PAWS (Positive, Accountable, Willing, Successful) cards (See Appendix C) and referrals. These variables were tracked numerically as continuous variables. The treatment variable was defined as teacher professionalism in professional dress and attire for classroom teachers as described above. The control variables in the study were similarly grouped sixth-grade students, identical weekly student schedule, shared

curriculum, similar chapter assessments, and matching teaching strategies from teachers within their first couple of years of teaching.

The significance of this study was to research the effect teacher professionalism, as in professional dress and attire, has on student performance on assessments on weekly quizzes and also the effect on student behavior as recorded on behavior cards and referrals as compared to the average condition. The extent of the results may support the belief that teacher attire does have some effect on student behavior and academic achievement, or may verify that teacher attire has little or no effect on student behavior and grades.

Research Questions

This study was designed to determine if a connection existed between the way teachers dress and the perception students have of those teachers which affects student achievement and behavior. In this chapter, the researcher provides a methodical approach describing how the study was conducted and how the data was collected. The results of the study were used to determine if there was a significant difference in scores and behavior during the intervention compared to the average (control) of the previous weeks. Also, the research was used to reveal what affects students more: teachers dressed casually or teachers dressed professionally. Using a quantitative, quasi-experimental design, the study answers the following research questions:

1. Does teacher professionalism in professional dress and attire affect student performance on assessments as measured by weekly quizzes?

2. Does teacher professionalism in professional dress and attire have an effect student behavior as recorded on PAWS behavior cards and referrals as compared to the average condition?

Each question was fully analyzed to determine the amount of student experience after each intervention. The hypothesis that suggests student performance during the week of the professionally dressed teachers was significantly higher than the student performance during the week of the casually dressed teachers was determined as supported or not supported.

Research Design

The research employed a quantitative, quasi-experimental design to research the effects teacher professionalism in attire has on student behavior and academic achievement in middle schools. The baseline for performance was obtained by averaging quizzes given each week before the intervention for all classes on each of the two teams in the study. The baseline for student behavior was obtained from the previous weeks' PAWS cards, records on positive behavior intervention system (PBIS) spreadsheets, and administrative referrals and documentation on Infinite Campus student information system. Each of the types of behavioral infractions were listed and averaged for the semester to find the baseline for each.

The treatment for the study was the altering of teacher attire. Teachers were recruited and agreed to dress either very casually or more formally in business or professional attire for one week each. (see Appendix D). Casual attire is described as faded, worn blue jeans, sports shirt or t-shirt, unbuttoned flannel shirt, and sneakers. Professional dress is described as classic business attire consisting of dark business suits,

white shirts, tie, and dress shoes for men, skirts with sheer hose, blouses, and high heeled pumps for women. The two teams of teachers altered their style of dress to meet the descriptions of casual or professional attire for a week of each style. However, the teams were dressed opposite of each other for the two weeks.

The outcomes of the intervention were compared to the baseline data. The math scores from each team were compared to the average scores from the previous weekly scores. The behavior data was sorted, and each type of misconduct was noted. The types of misbehavior, as well as frequency, were compared to the baseline behavior incidences from the previous weeks. The outcomes suggest if teacher attire does affect either student behavior and student achievement or both and the extent each was affected.

After requesting permission to conduct research (See Appendix E) and receiving authorization from the school system (See Appendix F), IRB (Institutional Review Board) approval was secured. (See Appendix G). Viable research, using statistical data as well as personal responses, was obtained emphasizing a quantitative research approach initially, then supplemented by qualitative properties from responses from questionnaires. As teacher attire fluctuates from business professional to casual dress, the students' perceptions of their teachers' choice of clothing may influence both their academic achievement and general classroom behavior, as recorded in scores on quizzes and behavior records; therefore a quantitative approach is warranted. Additionally, individual questionnaires from randomly selected students, as well as responses from the teachers of those students, also enriched the data qualitatively.

This study utilized both quantitative and qualitative analysis. The quantitative data gathered from weekly math quiz scores and student behavior records were collected

prior to administering the qualitative interviews as not to inform the students of the study. Questionnaires were used to obtain responses from a non-random group of middle school teachers, and randomly selected students.

As referenced in Chapter 2, a quasi-experimental research design was used in the study. Quasi-experimental designs are used extensively in the social sciences and psychology as it is very useful in measuring social variables (Keppel, & Wickens, 2004; Shuttleworth, 2008). Due to the lack of full experimental control of variables, a quasi-experimental design was best suited for the study.

Participants and Setting

Participants in the study were from a suburban middle school in northeast Georgia. It is a labeled as a charter school and Title 1 school with the majority of students (64%) receiving free or reduced lunch.

The school has approximately 800 students enrolled including 238 eighth graders, 288 seventh graders, and 262 sixth grade students. There are eleven sixth grade classrooms: eight classrooms of students with on or below grade level Lexile scores, two classrooms with advanced level scores, and one classroom at the gifted level. The eight classrooms of similar students were used in the study. The research experiment involved two teams of sixth-grade teachers and eight classes of average students.

A sampling frame from students was selected from each of the independent variables, baseline (B), professional (P), and casual (C). Math scores (n = 2687) and behavior totals (n = 3961) were collected over a 16-week period prior to the intervention. A random sample of 30 students was selected and their math scores and behavior totals were averaged over available weeks and recorded to calculate a baseline average (B).

Students from each team, Team 1 (t1) and Team 2 (t2), were equally represented for each of the intervention weeks. In math, a random sample (n = 30) of students (that were not selected as baseline samples) were selected from Team 1 (n = 80) and Team 2 (n = 76). Each team's scores were recorded for the professionally dressed weeks (P) and were each compared to the baseline. A random sample (n = 30) of math students, not used as baseline nor professional samples, were selected as participants for casually dressed weeks (C) from both teams (n = 78 and n = 82, respectively) and compared to the baseline scores. For behavior, a random sample (n = 30) of students, not used as baseline samples, were selected for each professionally and casually dressed weeks and compared to baseline averages. Both teams were represented equally in all three areas being researched.

To help acquire quantitative data, the school system used for the study employs a software program called "ALL in Learning" which is used to give immediate feedback on assessments and calculates and records assessments. The program, pioneered by Dr. Darrell Ward, is a type of Student Response System (SRS) that can utilize technology in the form of scanning bubble sheets on written assessments as well as by giving immediate feedback using "clickers" where students enter their answers by pressing a button on a remote. Technology use has become the norm in many schools as there are more than ten million response units nationwide in classroom use (All in Learning). The ALL in Learning program has subgroups categorized by gender, ethnicity, race, limited English proficiency, special education status, economic status, instructional educational program, 504 accommodations, gifted, and at-risk. To clarify, a 504 Plan is a plan developed to ensure that a child who has a disability identified under the law and is

attending an elementary or secondary educational institution receives accommodations that will ensure their academic success and access to the learning environment (Washington.edu, 2017). Each set of data received will have average class scores as well as scores from each subgroup.

The methods used in determining the general sample population were based on a sampling frame of sixth-grade students enrolled in regular math classes. Furthermore, a stratified random sampling of those students was used in selecting participants to answer the questionnaire using a name or number generator. A sampling frame of teachers from sixth grade was used in the study with a convenience sampling or opportunity sampling of teachers from two similar teacher teams that were used to carry out the manipulation of teacher attire and answer the teacher questionnaire.

The sample sizes of students were from two similar teams of students of approximately 80-100 students each. The student sample selected to complete a questionnaire were selected randomly by the math teacher from the two teams and consisted of one student from each math class on each team, totaling eight students. The teachers drew names from each one their classes using cards or sticks to select students to participate in the questionnaire as they would during a regular classroom activity.

The teacher sample size also consisted of eight teachers, four teachers from each of the two teams, that participated in the study of teacher attire and the effect it has on student behavior and academic achievement on weekly math quizzes. Each team of teachers employs three female teachers and one male teacher. In this study, only the two female math teachers, one from each of the two teams, collected math scores data. All the teachers used the PAWS behavior cards for every student, so the behavior records were

included in the study. Questionnaires were given to the eight sixth-grade teachers participating in the study. Both teams were used to generate a larger sample size and create more diversity of students.

Using a small middle school from a less populated district may be beneficial to the study as the staff, administration, and superintendent were very cooperative and supportive of the research. Students were already grouped according to ability and were accustomed to taking weekly math quizzes throughout the year.

Instrumentation

The review of literature revealed no similar studies, hence, an original instrument was developed. The Delphi technique was used to collect qualitative data from students and teachers, which was verified to be appropriate to the targeted groups by colleagues of the corresponding grade level at the school under study.

Qualitative data was gathered using the All in Learning program. The students' perception of teacher attire, a multivariate construct, was measured quantitatively by looking at (a) scores on weekly math quizzes and (b) behavior records that were recorded on cards and other behavior violations that were electronically submitted to the administration, and qualitatively by looking at (c) questionnaires given to students and teachers about the study intervention. The qualitative research collected in this study was from questionnaires answered by (a) the teachers of the two sixth grade teams and by (b) students from those teams selected randomly by math teachers in each class. The data collection instruments, descriptions, changes, and indicators are found in Table 1.

Table 1

Data Collection Instruments, Descriptions, Changes, and Indicators

Construct	Instrument	Description	Changes	Indicators
Student behavior	Cards Referrals	Positive behavior cards/ administrative referrals	Differences in behavior	+/- = influence No change = no influence
Student scores	ALL in Learning	Math quiz scores	Differences in scores	+/- = influence No change = no influence
Student questionnaire	Descriptive Questionnaire	Intervention observations	Observed or not observed	Response themes
Teacher questionnaire	Descriptive Questionnaire	Intervention observations	Observed or not observed	Response themes

Procedure

The research experiment collected data from two teams of sixth-grade students in math classes where the teachers manipulated their attire from business professional for one week or dressed casually for one week, alternating between teams. Table 2 shows the intervention plan and the week each team dressed professionally or casually.

Table 2

Intervention Plan

Comparison Groups:		
Category	Team 1 (4 classes)	Team 2 (4 classes)
Week 1	Casual Attire	Professional Attire
Week 2	Professional Attire	Casual Attire
Control	Normal Attire	Normal Attire

The length of the intervention lasted for two consecutive one-week periods of similar weeks with minimal changes in schedule (no holidays, extra activities, fire drills, etc.). Table 3 lists the dates of the intervention and the two activities that caused the variations in the weekly schedule during the two weeks. This study was confidential, and the students were not informed of the study nor the motives of the teacher's choices of attire for each of the two weeks.

Table 3

Intervention Schedule

Week	Dates	Professional	Casual	Altered Schedule
1	March 13-17, 2017	Team 2	Team 1	3/16 Thursday Scoliosis Screening
2	March 20-24, 2017	Team 1	Team 2	3/23 Thursday Advisement Period

Data from the weeks before the intervention was used as a control including average scores from weekly math quizzes and behavior incidents. Math quizzes were

given during each week of the intervention. (See Appendices H and I). New data recorded from each of the two weeks of the study were compared with data from the weeks prior to the intervention. Scores from weekly math quizzes stored in the "ALL in Learning" program were averaged for each class, team, and school groups. Classroom behavior was recorded on positive intervention behavior cards, also knowns as PAWS (Positive, Accountable, Willing, Successful) cards for each period of each class daily as well as recorded on a grade-level spreadsheet by all sixth-grade teachers and elective teachers. Other types of behavior incidences were recorded on a Student Information System (SIS) called "Infinite Campus" that can be accessed by school administration and shared with teachers. Infinite Campus is an online teacher grade book that allows real-time data to be accessed by teachers, parents, and students. School districts enter the student's information, such as demographic data, transcripts, medical alerts, attendance, standardized test scores, behavior, among other types of significant data, and as the student progresses from elementary to high school, the data stays with them through graduation (Infinite Campus, n.d.).

Eight teachers from sixth grade consented to the study and were assigned to one of two groups by team. (See Appendix J). Table 4 shows sixth-grade teachers and the subjects they teach. Four teachers from Team 1 dressed in business professional attire for Week One. Four teachers from Team 2 were dressed very casually for the same week. Week Two of the experiment included the same teachers. Teachers from Team 1 were dressed very casually for Week Two. Teachers from Team 2 were dressed in business professional attire during the same week. Since there were no risks associated with this type of study, students nor parents were informed of the research experiment at the time

of the intervention. Table 4 identifies sixth-grade teachers and the subjects they teach. For example, Teacher 1-1 only teaches math on Team 1 while Teacher 1-4 teaches all four subjects, math, science, language arts and social studies on Team 4.

Table 4

6th Grade Teacher Teams

Team 1 (Average)	Team 2 (Average)	Team 3 (Advanced)	Team 4 (Gifted)	Subjects Taught
Teacher 1-1	Teacher 1-2	Teacher 1-3		Math
Teacher 2-1	Teacher 2-2			Science
Teacher 3-1	Teacher 3-2		Teacher 1-4	Language Arts
Teacher 4-1	Teacher 4-2	Teacher 2-3		Social Studies

After the two weeks of data collection concluded, teachers in the experiment were asked to answer a questionnaire. (See Appendix K). Students chosen randomly from each team were also asked to answer questions on a student questionnaire. (See Appendix L). Both questionnaires were administered face to face in an individual setting. The student questionnaire was only given to students after the parental permission forms were returned (See Appendix M), and after the student gave their assent to participate (See Appendix N). The teacher questionnaire consisted of five open-ended questions about the study, including behavior differences and any comments or reactions about teacher attire made by the students. The student questionnaire consisted of five open-ended questions related to their perceptions of the differences in classroom behavior. Responses

to the questionnaire were transcribed by the researcher and approved or corrected by the subject as read.

Teachers were asked not to alter their teaching styles for this study. The treatment was the manipulation of clothing worn by instructors. The response was the effect teacher attire had on scores on math quizzes and student behavior for the two weeks. The control was the average scores on weekly math quizzes and behavioral data recorded for the weeks prior to the intervention.

Data Analysis

Collected data was recorded in tables and entered into Excel. The statistical computing software of R and the data analysis tool of Excel were used to analyze results. Results were interpreted to formulate and draw conclusions. Both software packages were used to provide statistical analyses of the quantitative data including descriptive data and frequency distributions.

Quantitative data was gathered using the "ALL in Learning" software program designed to collect data on student performance and reaching state performance standards. ALL in Learning can be used to calculate the averages per class, per school, and the district averages. Qualitative data was processed into themes and summarized in data tables and graphs. The interviews, observational data, and behavior records were triangulated to validate if there is a correlation between teacher attire and behavior.

To determine whether there are any statistically significant differences in means between two or more independent groups in the sample data, a One-way Analysis of Variance (ANOVA) was used. The One-way ANOVA, also known as a between-

subjects' ANOVA, is an omnibus test statistic that indicates if groups are significantly different from each other, but doesn't indicate which two groups.

ANOVA is a way of comparing the ratio of systematic variances to unsystematic variances in a study. That ratio, known as *F*-ratio, is used to assess how well a regression model can predict an outcome compared to the error within that model (Fields, 2012). The One-way ANOVA calculates an *F*-ratio based on the variability between groups and within groups. The probability of finding an *F*-ratio larger than the one calculated using One-way ANOVA is used to reject or fail to reject the null hypothesis. A null hypothesis states there is no statistical significance between two variables. An alternative hypothesis states there is a statistically significant relationship between two variables. If the probability value (P-value) is less than .05, there is less than a five percent chance of the *F*-ratio being as large as calculated, given the null hypothesis is true, and resulting in statistically significant group means in the population.

ANOVA is a parametric test based on normal distributions of data. Most parametric tests based on a normal distribution must meet assumptions for the test to be accurate. These assumptions include the population data sets are normally distributed, the variances in each experimental condition need to be similar, and the group data items are independent. Independent groups have no relationship between participants in any of the groups. (Field et al., 2012). Equal variances and normally distributed data is uncommon. However, equal numbers make balanced designs while unequal sample sizes result in unbalanced designs. Negative effects of violations of assumptions are increased the more unbalanced the design.

The research data was used to calculate effect size. Effect size, used largely in

education, is the main finding of a quantitative study to find the difference between two groups. P-values examines whether the findings are likely to be due to chance and can detect whether an effect exits, but it does not reveal the size of the effect. Effect size is used to determine the efficacy of an intervention or educational practice relative to a comparison group or approach. It is used to indicate if an intervention would work and can predicts how much impact to expect in a range of scenarios.

Assumptions

The study produced the following assumptions:

1. Both teachers and students were given questionnaires specific to each group for them to answer on their own will and respond honestly.
2. All participants experienced the same or similar phenomenon of the study.
3. Both the teacher and student samples were representative of the population in the study.
4. Both the teacher and student samples had a sincere interest in participating in the research without any other motives, such as teachers getting administrative recognition or students receiving a better grade in a course.

Limitations

The quasi-experimental design was used because it could account for when total experimental control of all variables could not be secured. School settings from week to week varied and selecting two identical weeks to implement the intervention proved difficult. For example, a scoliosis screening was scheduled during week one and advisement was held during week two. Other weeks had multiple events such as visitors in the building, fire drills, and reward free-time scheduled. Alterations to student

schedules may affect student behavior and current academic abilities. Matching the two weeks of intervention with the same amount of distractions was used to keep the experiment as comparable as possible.

Another limitation of the research is the timing of the experiment. Due to scheduling conflicts and teacher participation requirements, two weeks of intervention was the maximum amount of time allowed to implement the experiment. These two weeks of data were compared to the averages from the previous semester.

Additionally, obtaining willing participants may present a problem with the teachers and the school administration. Teachers that dress more casually may not want to dress professionally for an extended period of time. And the school image may suffer from having very casually dressed teachers working at that school.

Other limitations included student attendance and student count. Absences can result from students becoming ill from sicknesses or being away on field trips or even behavior issues where students are not in class from in-school suspension or suspended from school entirely. Additionally, student count may vary slightly due to new students enrolling in or withdrawing from the school under study. Teacher absences may also be detrimental to the study, as many students generally misbehave for substitute teachers.

Delimitations

This study focuses on teacher attire and the effects it has on students' perceptions resulting in changes in behavior and academic scores. A teacher's knowledge and effectiveness was not taken into consideration as a common math curriculum is used and the same weekly quizzes for all math students across sixth grade were administered. A survey was not utilized as responses to interview questions needed to be open-ended for

true opinions and descriptions to be evaluated. The effect of other students' clothing on students' behavior and grades was not included, as all students are required to adhere to a strict dress code of school uniforms and should not be a factor (See Appendix O). Neither the eight teachers included in the study nor the two teams of students were randomly selected, as both groups were a sample of convenience. The study of science was excluded due to the possibility of bias as the instructor/researcher teaches science on Team 1. Therefore only math scores from weekly quizzes are used in this study.

CHAPTER 4

RESULTS

The purpose of this research study was to examine the influences of teacher professionalism and attire on the achievement and behavior of sixth-grade students from a middle school in northeast Georgia. This study utilized quantitative analysis of research collected on the academic performance and behavior of two groups of middle school students supplemented with a qualitative analysis of interviews from a random and non-random group of students and teachers.

This chapter provides results based on an analysis of the data obtained for each research question. The statistical computing software of R and the data analysis tool of Excel were used to analyze results. Both software packages were used to provide means and frequency distributions. A One-way Analysis of Variance (ANOVA) was used to determine whether there were any statistically significant differences in means between two or more independent groups.

Demographic Characteristics of the Sample

The methods used in determining the general sample population were based on a sampling frame of demographically similar sixth-grade students enrolled in regular math classes. The total student count was 262 students enrolled in sixth grade at the time of the intervention, from those, 178 were eligible for the study. One hundred fifty-four (87%) sixth-grade students were present to take the Week One math quiz. During Week Two, 162 (91%) sixth-grade students took the quiz. Behavior data was collected from seven

classes over thirty weeks. Table 5 shows the similar demographics of the two groups in the first week of the intervention. Teacher 1-1 is the math teacher from Team 1 and teacher 1-2 is the math teacher from Team 2.

Table 5

Student Demographics		Math Teacher	Student Count Week 1	Student Count Week 2
Study Participants			154	162
Teacher 1, Team 1 total students each week		1-1	78	80
Teacher 1, Team 2 total students each week		1-2	76	82
Gender	Male	1-1	44	45
		1-2	29	33
	Female	1-1	34	35
		1-2	47	49
Ethnicity	Hispanic	1-1	13	12
		1-2	15	16
Race	American Indian	1-1	2	1
		1-2	1	1
Race	Asian	1-1	5	5
		1-2	2	2
Race	Black or African American	1-1	16	17
		1-2	14	16
Race	Native Hawaiian	1-1	0	0
		1-2	0	0
Race	White or Caucasian	1-1	55	56
		1-2	56	59
Race	Multiracial	1-1	0	1
		1-2	3	4
Limited English Proficiency		1-1	4	4
		1-2	2	4
Special Ed Status		1-1	2	2
		1-2	12	15
Economic Status		1-1	52	51
		1-2	44	51
Gifted		1-1	0	0
		1-2	0	0

Results

The findings of this study provided responses to the research questions. Question 1 investigated if teacher professionalism in professional dress and attire affected student performance on assessments as measured by weekly quizzes. Student academic achievement was measured by comparing the two weeks of scores during the intervention to the baseline scores.

Results for Research Question 1

Does teacher professionalism in professional dress and attire affect student performance on assessments as measured by weekly quizzes?

A One-way Analysis of Variance (ANOVA) was used to examine the question of whether teacher attire, professional or casual, affects math scores compared to the baseline averages. The null hypothesis for the math scores in this study is H_0: $\mu_{baseline} = \mu_{professional} = \mu_{casual}$ where the group means (average scores) for the three groups are equal. The alternative hypothesis for this study is H_a: $\mu_i \neq \mu_k$ where at least two of the groups means are significantly different from each other. The descriptive data in Table 6 represent the population and sample group math scores by baseline (B), professional dress (P), and casual dress(C).

Table 6

Math Scores Variable Scale Statistics

	Population			Sample		
	B	P	C	B	P	C
N	2371	156	160			
SD	62.71	68.90	67.99			
SE	17.61	14.71	20.77			
n				30	30	30
Mean				59.68	70.33	69.33
SD				11.31	13.51	12.58
SE				2.07	2.47	2.30
Skewness				-0.37	0.02	0.62
Kurtosis				-0.91	-0.44	0.45
SE of Kurtosis				2.07	2.47	2.3

The independent variable is based on teacher attire or the type of clothing teachers wear: professional or casual. The dependent variable was based on academic achievement or scores. The average scores students made on math quizzes ranged from 0 to 100. *Mean* and standard deviation are also listed.

Testing the Assumption of Independence

Assumptions underlying the tests of significance were checked. The assumption of independence was met. This is indicated by the independence of each of the three groups of students upon each other. A stratified random sampling technique was used, which focused on obtaining a random selection of sixth-grade students for each of the three types of teacher attire: baseline, professional, and casual. If this assumption is not met, the one-way ANOVA is an inappropriate statistic.

Testing the Assumption of Normality

The assumption of normality was met for this set of data. Retaining the null hypothesis, where there is no significant departure from normality for each of the groups or levels, indicates the assumption of normality has been met. Rejecting the null hypothesis in support of an alternative hypothesis indicates there is a significant departure from normality and the assumption has not been met. Normality for this study is indicated by the fact that none of the standardized skewness values exceeded ± 3.29 for math scores, nor were any of the probability values less than (or equal to) the .001 alpha level set for the Shapiro-Wilk test. The Shapiro-Wilk tests whether data differ from a normal distribution. Figure 3 shows the distribution of baseline math scores. The histogram is multi-modal with a large sample size (over 20). The percentage on the baseline math scores from the Shapiro-Wilk test indicates $W = 0.95$, $p = 0.217$, which is not significant at the .05 alpha level.

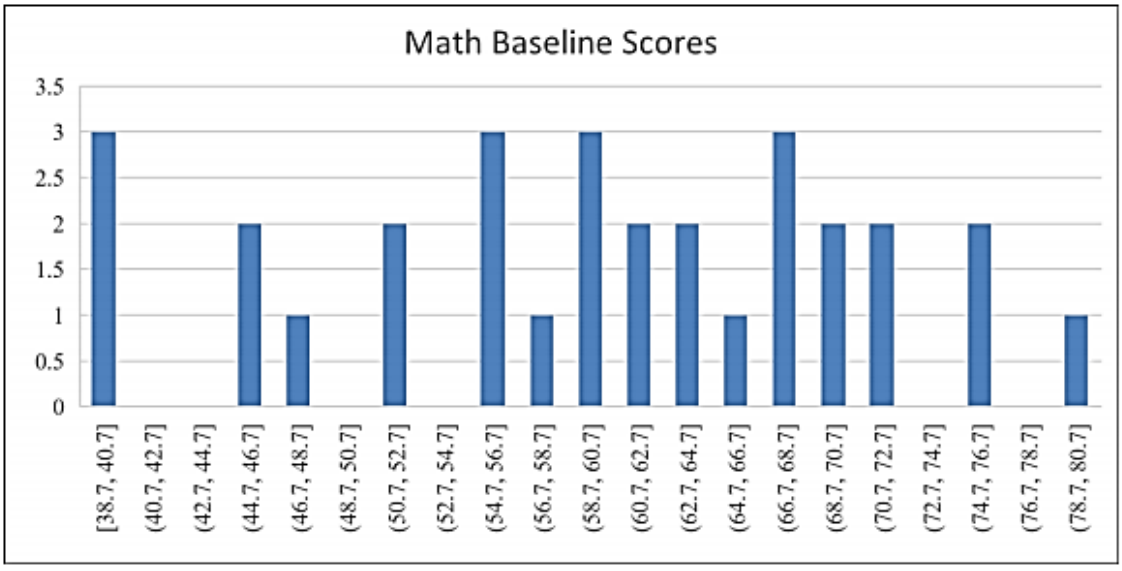

Figure 3. Histogram of math baseline scores.

The Shapiro-Wilk test also indicates professional scores are not significant, $W = 0.96$, $p = .238$. Nor are casual scores, $W = 0.86$, $p = .002$, at the .05 alpha level, as shown in Figure 4. If the results are significant, the data is non-normal data, but since the results are non-significant, the data is normal.

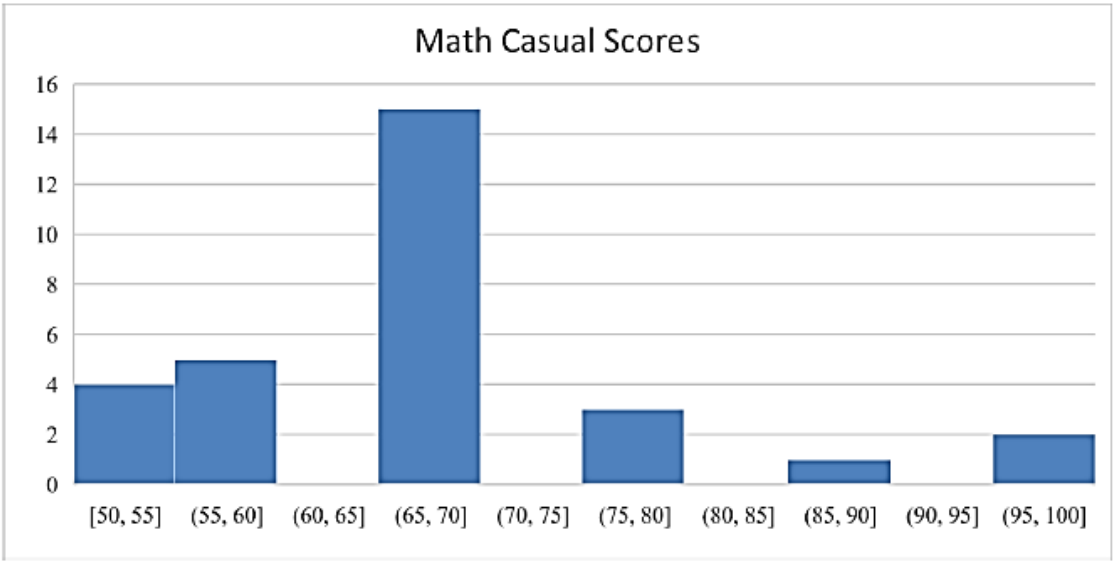

Figure 4. Histogram of math casual scores.

Figure 5 illustrates math score means by student and independent variable. One student per class period represents each of the baseline, professional, and casual scores on the bar chart for a total of 90 different students. For example, the first set of scores had the following results: baseline = 67.29, professional = 60.00, and casual = 60.00. These figures were used to compare scores on math quizzes as grouped by baseline scores, the scores from the week of professional dress, and the scores from the week of casual dress by students during the study.

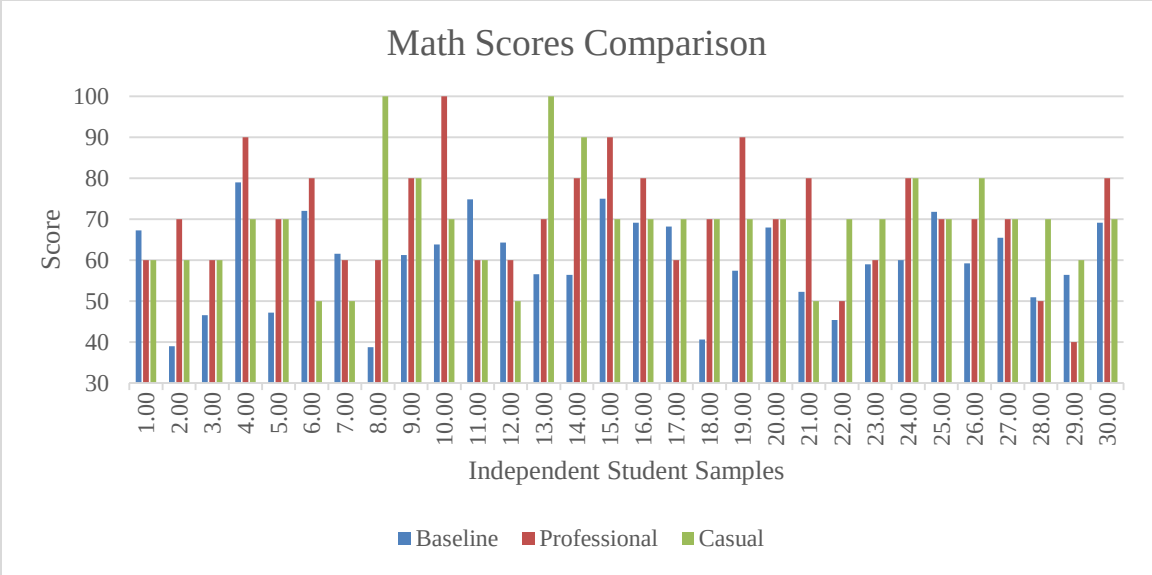

Figure 5. Math scores comparison. Math score means for each variable: baseline, professional, and casual.

Boxplots were created to display the distribution of data based on the five number summary including the minimum number, first quartile, median, third quartile, and maximum number. The boxplots in Figure 6 summarize the data collected for student's math scores for the baseline, professional, and casual dress for teachers interventions. The math baseline five-number summary is minimum: 38.72, first quartile: 53.31, median: 60.64, mean: 59.68, third quartile: 68.13, and maximum number: 78.98. The math professional five-number summary is minimum: 40.00, first quartile: 60.00, median: 70.00, mean: 70.33, third quartile: 80.00, and maximum number: 100.00. The math casual five-number summary is minimum: 50.00, first quartile: 60.00, median: 70.00, mean: 69.33, third quartile: 70.00, and maximum number: 100.00.

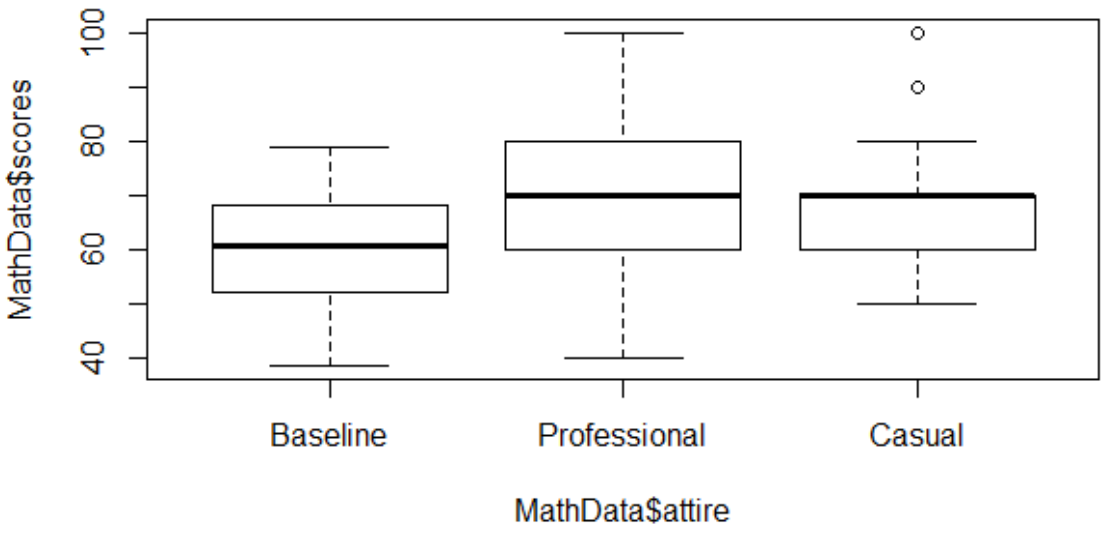

Figure 6. Box plots of math scores and attire.

To check if the math scores were Normally distributed, a Q-Q plot was created in R as shown in Figure 7. A Q-Q plot is a graphical tool used to check the assumption if the statistical analysis assumes the dependent variable is Normally distributed. The scatterplot was created by plotting two sets of quantiles (points that a certain percentage of the data falls below) against one another and is used to assess if a set of data came from some theoretical distribution such as a Normal or exponential.

The distribution appears to be a safe assumption as the points fall closely to the straight line, with some minor deviation in the tails. Normal Q-Q plots that exhibit this behavior usually mean the data have more extreme values than would be expected if they truly came from a Normal distribution. If the points form a straight line, the two sets of quantiles, or percentiles, came from the same distribution. The x-axis plots the theoretical quantiles from the standard Normal distribution with *Mean* 0 and standard deviation 1.

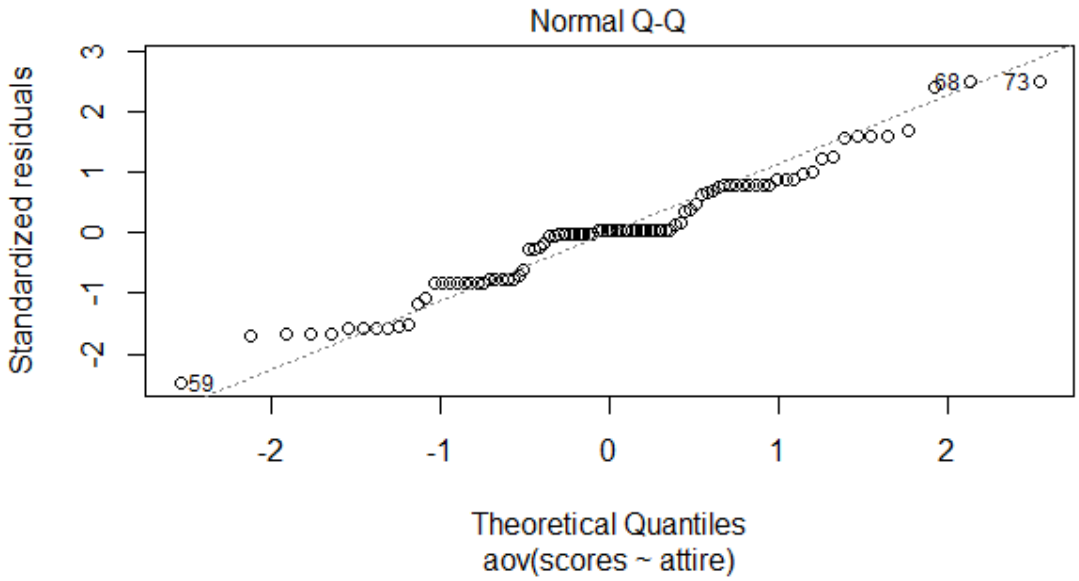

Figure 7. Q-Q plot of math scores and attire.

The significance level, denoted as alpha or Greek letter α, for a given hypothesis test is a value for which a P-value less than or equal to is considered statistically significant. Typical values are 0.1, 0.05, and 0.01. These values correspond to the probability of observing such an extreme value by chance. A significance level of .05 indicates a 5% risk of concluding that a difference exists when there is no actual difference. The significance level is the probability of rejecting the null hypothesis when it is true. When a P-value is less than or equal to the significance level, you reject the null hypothesis. The probability of making a Type I error is denoted by the Greek letter alpha (α), and the probability of incorrectly concluding no statistical significance when there is a true difference, or making a Type II error, is denoted by Greek letter beta (β). Statisticians use the Greek letter β (beta) to indicate the probability of failing to reject the

hypothesis tested when that hypothesis is false and a specific alternative hypothesis is true. For a given test, the value of β is determined by the previously selected value of α (alpha), certain features of the statistic that is being calculated (particularly the sample size), and the specific alternative hypothesis that is being tested.

Testing the Assumption of Homogeneity of Variance

The assumption of homogeneity of variance was met for these data as indicated by the Levene's Test of Homogeneity of Variances, $F(2,87) = 5.881$, $p = .558$. With the P-value of .558, which indicates non-significance at the significant level of $\alpha = .05$, the null hypothesis (no variance difference) is not rejected – as such, indicating that the assumption of homogeneity of variance is met. At the significant level of $\alpha = .05$, the null hypothesis cannot be rejected and the variances from different groups are similar, thus, the homogenous of variance assumption is satisfied.

The graph in Figure 8 is used to test homogeneity of variance. The points are spread equally across the three groups which implies that variances are similar across groups. This reinforces the results calculated from Levene's Test. A non-normal plot may have funnel shaped points indicating unequal variances across groups.

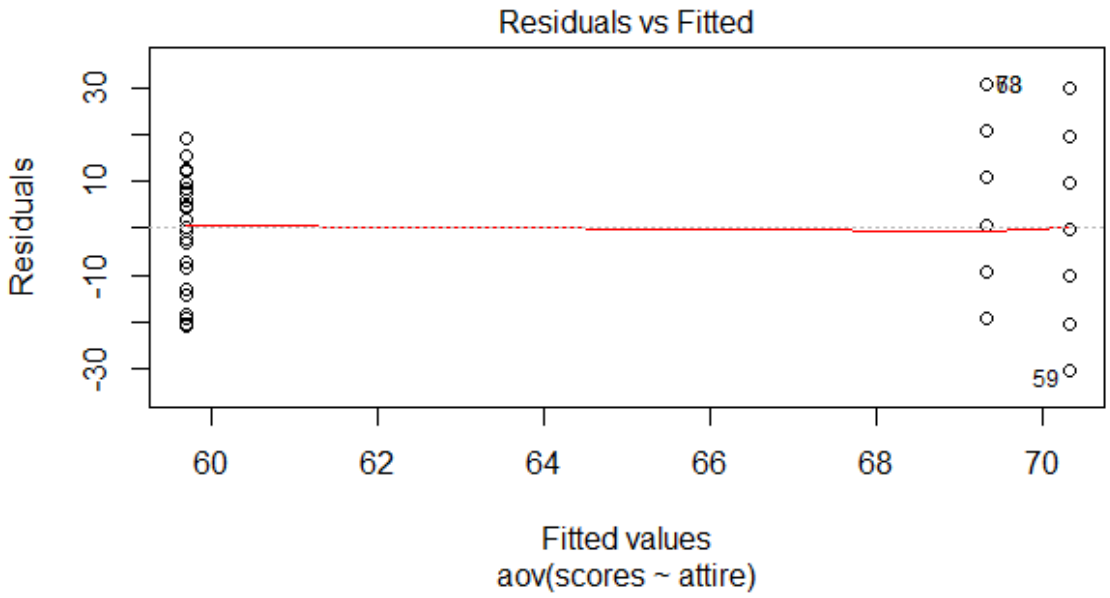

Figure 8. Math homogeneity of variance.

With the assumptions met, a One-way Analysis of Variance (ANOVA) statistical test was conducted to compare the effect of teacher attire on student academic achievement and behavior. ANOVA showed that there was a statistically significant effect of teacher attire on student scores, $F(2,87) = 6.64$, $p = .002$.

These results indicate students scored higher on math quizzes during the week teachers were professionally dressed (*Mean* = 70.33) compared to the baseline (*Mean* = 59.68) scores. These results also indicate students scored higher on math quizzes during the week teachers were casually dressed (*Mean* = 69.33) compared to the baseline (*Mean* = 59.68) scores. The effect sizes for these two comparisons were $d = 0.81$, and $d = 0.53$, respectively. r^2 correlation on a 95% confidence interval for behavior-professional (B-P) is -0.38 [1.35, -0.28] and for behavior-casual (B-C) is -0.26 [-0.58, -0.13]. Cohen's Effect sizes for math B-P were small at -0.38 while effect sizes for B-C were small at -0.26. The research data was used to calculate effect size. Effect size, used largely in education, is

the main finding of a quantitative study to find the difference between two groups. P-values examines whether the findings are likely to be due to chance and can detect whether an effect exits, but it does not reveal the size of the effect. Effect size is used to determine the efficacy of an intervention or educational practice relative to a comparison group or approach. It is used to indicate if an intervention would work and can predicts how much impact to expect in a range of scenarios.

Post hoc comparisons were conducted to determine which pairs of the three independent variables differed significantly. Post hoc analysis can be performed by using several different tests. Bonferroni, Tukey, and Dunnett are all tests that can be used to compare combinations of groups or treatments. Bonferroni tests correct the P-value and produce a grid comparing P-values for all combinations of groups. When homogeneity of variance is met and sample sizes are equal, Tukey's HSD test should be used. Similarly, Dunnett's test gives the same results as Tukey but only compares the groups to the baseline. Additionally, the Games-Howell test, a non-parametric test based on Welch's correction can be used when the assumption of normality is not necessary (Games & Howell, 1976; Games, Keselman, & Clinch, n.d.).

Results from Tukey's HSD test indicate a statistically significant result between baseline and professional comparisons as $p = .004$ which is well below the .05 significance level. The results between the baseline and casual comparisons also indicate a statistically significant difference as $p = .01$ which is smaller than the .05 level. Although results for interaction of professional and casual were not sought, results indicate there is no statistically significant interaction between the week of professional (P) dress compared to the week of casual (C) dress by the math teachers as the probability

value (P-value) = .949 is much larger than the nominal .05 alpha value needed for statistical significance.

Question 2 explored if teacher professionalism in professional dress and attire had an effect on student behavior as recorded on behavior cards and referrals as compared to the average condition. Behavior was measured by the positive marks on the PAWS cards, number of administrative referrals, and remarks on the behavior spreadsheet on the grade-level Google Classroom.

Results for Research Question 2

Does teacher professionalism in professional dress and attire have an effect on student behavior as recorded on PAWS behavior cards and referrals as compared to the average condition?

Analyzing the effects teacher attire exerts on students' behavior was a complex process. Behavior cards for each of the eight teachers were collected over the weeks before the intervention. Each card was issued for three weeks at a time and held a total of 120 possible positive behavior scores. Each class had an average of 22 students. Table 7 lists the total for all behavior cards (n = 3961) collected. The baseline (B) for the weeks prior to the intervention (n = 3663), professional (P) weeks (n = 147), and casual (C) weeks (n = 151) are listed.

Table 7

Behavior Scores Variable Scale Statistics

	Population			Sample		
	B	P	C	B	P	C
N	3663	147	151			
Mean	34.08	31.93	33.03			
SD	6.72	8.95	9.09			
n				30	30	30
Mean				34.20	33.28	32.67
SD				7.76	2.45	8.21
SE				.45	1.50	1.42
Skewness				-1.38	-0.5	-1.38
Kurtosis				0.43	-0.18	0.61
SE of Kurtosis				1.42	0.45	1.5

A One-way Analysis of Variance (ANOVA) was used to examine the question of whether teacher attire, professional or casual, affects student behavior compared to the baseline averages. The null hypothesis for behavior scores in this study is H_0: $\mu_{baseline} = \mu_{professional} = \mu_{casual}$ where the group means (average scores) for the three groups are equal. The alternative hypothesis for this study is H_a: $\mu_i \neq \mu_k$ where at least two of the groups means are significantly different from each other. Interaction between professional dress and casual dress scores were not relative to the study as the data was based on comparison to the baseline scores.

The independent variable is the type of clothing teachers wear: professional or casual. The dependent variable was based on scores. The average scores students received on behavior cards ranged from 0 to 40. *Mean* and standard deviation are also listed.

Testing the Assumption of Independence

Assumptions underlying the tests of significance were checked. The assumption of independence was met. This is indicated by the independence of each of the three groups of students upon each other. A stratified random sampling technique was used, which focused on obtaining a random selection of sixth-grade students for each of the three types of teacher attire: baseline, professional, and casual. If this assumption is not met, the one-way ANOVA is an inappropriate statistic.

Testing the Assumption of Normality

The assumption of normality was met for this set of data. Retaining the null hypothesis, where there is no significant departure from normality for each of the groups or levels, indicates the assumption of normality has been met. Rejecting the null hypothesis in support of an alternative hypothesis indicates there is a significant departure from normality and the assumption has not been met. Normality for this study is indicated by the fact that none of the standardized skewness values exceeded ± 3.29 for behavior scores, nor were any of the probability values less than (or equal to) the .001 alpha level set for the Shapiro-Wilk test. The Shapiro-Wilk tests whether data differ from a normal distribution. Figure 9 shows the distribution of behavior scores. The histogram is skewed left with a large sample size (over 20). The percentage on the baseline math scores from the Shapiro-Wilk test indicates $W = 0.97$, $p = .662$, which is not significant at the .05 alpha level. The Shapiro-Wilk test indicates professional scores are significant, $W = 0.77$, $p = 0.00$, also are casual scores, $W = 0.72$, $p = 0.00$, at the .05 alpha level, as shown in *Figure 9*. If the results are non-significant, the data is normal, but since the results are significant, the data is non-normal.

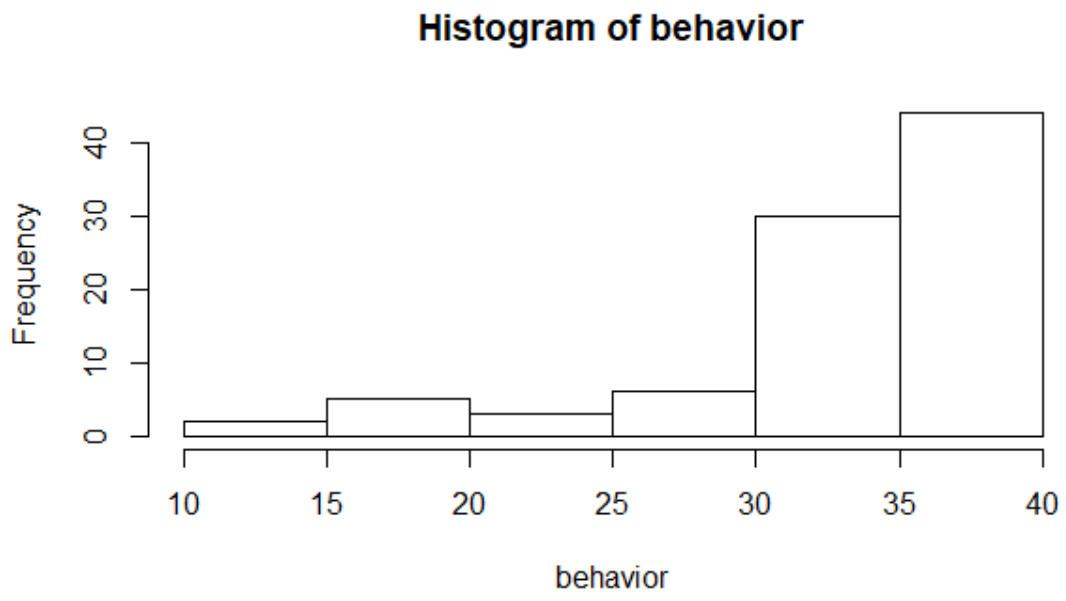

Figure 9. Histogram of behavior scores.

Figure 10 illustrates behavior means by students. The figure shows the behavior scores from the three sample populations from each of the three variables: baseline, professional, and casual. Each random sample had 15 students selected from each team for the corresponding weeks: professional and casual attire, as well as equally from the baseline scores. For example, the first three bars show a behavior score of 34.29 for the first student, a professional score of 40 for the second student, and a casual score of 23 for the third student. Each bar represents a student's mean score for each variable in random order.

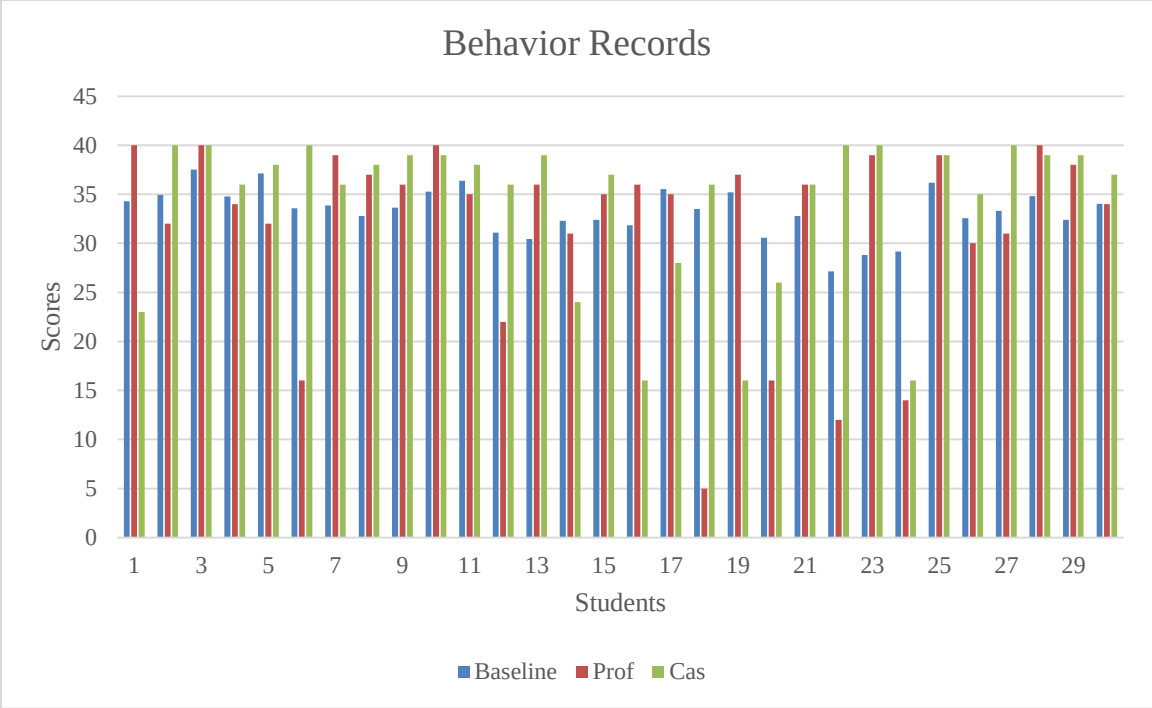

Figure 10. Behavior means by student.

Boxplots were created to display the distribution of behavior data based on the five number summary including the minimum number, first quartile, median, third quartile, and maximum number. The boxplots in Figure 11 summarize the data collected for student's behavior scores for the baseline, professional, and casual dress for teachers interventions. Outliers are present. The behavior baseline five-number summary is minimum: 16, first quartile: 35.25, median: 37.50, mean: 34.20, third quartile: 39.00, and maximum number: 40.00. The behavior professional five-number summary is minimum: 27.14, first quartile: 32.31, median: 33.54, mean: 33.28, third quartile: 39.40, and maximum number: 37.54. The math casual five-number summary is minimum: 12, first quartile: 31.25, median: 35.50, mean: 32.67, third quartile: 38.00, and maximum number: 40.00.

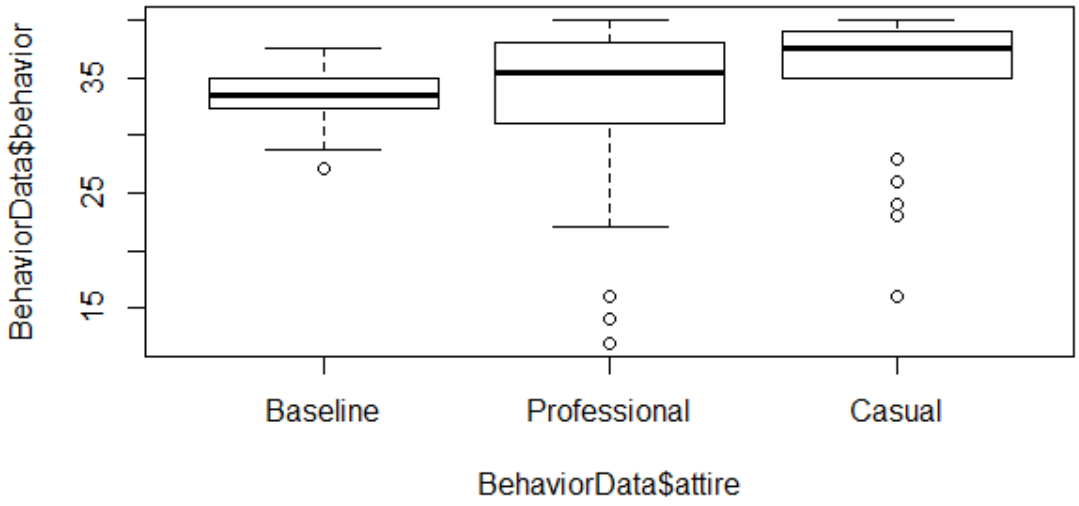

Figure 11. Behavior boxplots.

To check if the math scores were Normally distributed, a Q-Q plot was created in R as shown in Figure 12. A Q-Q plot is a graphical tool used to check the assumption if the statistical analysis assumes the dependent variable is Normally distributed. The scatterplot was created by plotting two sets of quantiles (points that a certain percentage of the data falls below) against one another and is used to assess if a set of data came from some theoretical distribution such as a Normal or exponential.

The distribution appears to be heavily skewed at the lower end with slight deviation toward the top. Normal Q-Q plots that exhibit this behavior could interfere with parametric tests. Positive values of skew indicate too many low scores in the distribution. However, if the points form a straight line, the two sets of quantiles, or percentiles, came from the same distribution. The x-axis plots the theoretical quantiles from the standard Normal distribution with mean 0 and standard deviation 1.

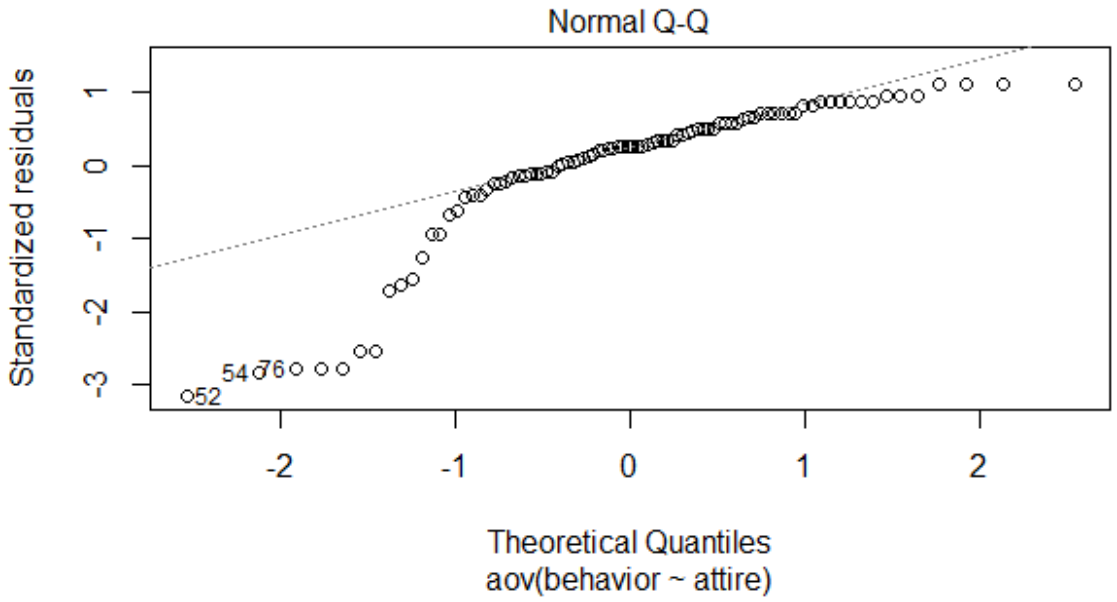

Figure 12. Behavior Q-Q plot.

Testing the Assumption of Homogeneity of Variance

The assumption of homogeneity of variance was not met for these data as indicated by the Levene's Test of Homogeneity of Variances, $F(2,87) = 3.596$, $p = .032$. With the P-value of .032, which indicates significance at the alpha level of $\alpha = .05$, the null hypothesis (no variance difference) is rejected – as such, indicating that the assumption of homogeneity of variance is not met. At the significant level of $\alpha = .05$, the null hypothesis is rejected and the variances from different groups are not similar, thus, the homogeneity of variance assumption is not satisfied.

The graph in Figure 13 is used to test homogeneity of variance. The points are not spread equally across the three groups which implies that variances are not similar across groups. The non-normal plot appears funnel shaped with points indicating unequal variances across groups. This reinforces the results calculated from Levene's Test as not satisfying the homogeneity of variance.

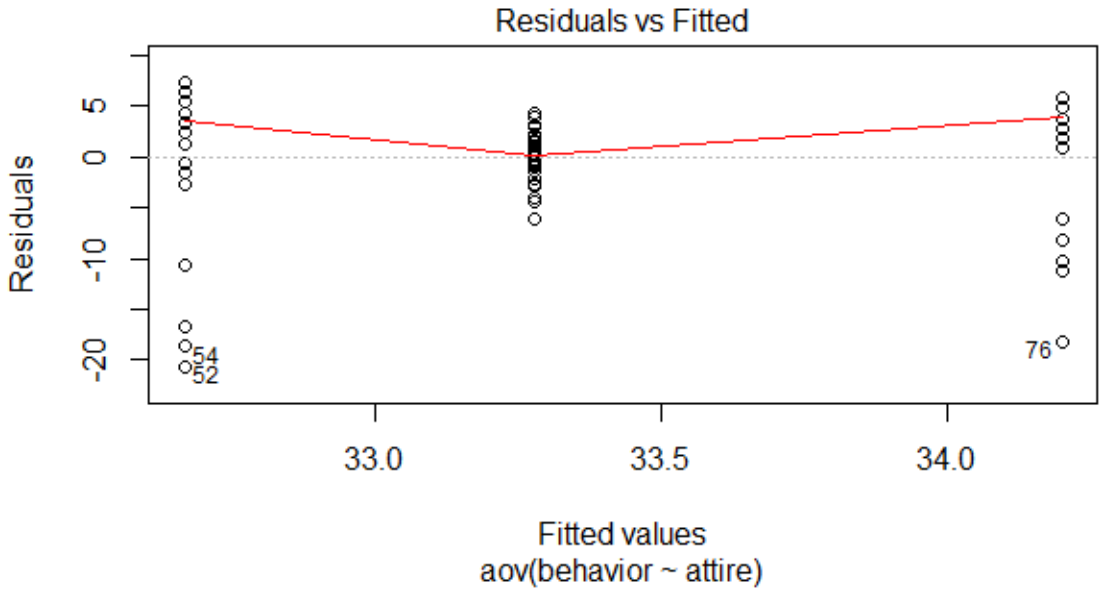

Figure 13. Behavior homogeneity of variance

Since the assumption of homogeneity of variance was not met for this data, the *Welch's* adjusted *F* ratio (0.288) test was used, which was significant at the .05 alpha level, and reported as *Welch's F*(2, 44.95) = 0.288, $p = 0.751$ (or, $p > .05$). This indicates that variances are not equal and the assumptions have been violated.

Since the *Welch's F* test was used, an adjusted omega squared formula is also used:

$\omega^2 = SS_M - df_M\,(MS_R)/SS_T + MS_R = 36 - 2*44.50/3907 + 44.50 = -53/3951.5 = 0.0134$.

The estimated omega squared ($\omega^2 = 0.0134$) indicates that less than 1% of the total variation in average score on students' behavior cards is attributable to differences in teacher attire.

These results indicate students scored higher on behavior cards during the week teachers were professionally dressed (*Mean* = 32.67) compared to the baseline (*Mean* =

33.28) scores. These results also indicate students behaved better during the week teachers were casually dressed (*Mean* = 34.20) compared to the baseline (*Mean* = 33.28) scores. The effect sizes for these two comparisons were $d = 0.10$, and $d = -0.16$, respectively. r^2 correlation on a 95% confidence interval for behavior-professional is 0.05 [-0.21, 0.31] and for behavior-casual is -0.08 [-0.33, 0.18]. Cohen's Effect sizes for behavior B-P were large at 0.10 while effect sizes for B-C were medium to large at 0.08. The research data was used to calculate effect size. Effect size, used largely in education, is the main finding of a quantitative study to find the difference between two groups. P-values examines whether the findings are likely to be due to chance and can detect whether an effect exits, but it does not reveal the size of the effect. Effect size is used to determine the efficacy of an intervention or educational practice relative to a comparison group or approach. It is used to indicate if an intervention would work and can predict how much impact to expect in a range of scenarios.

Post hoc comparisons were conducted to determine which pairs of the three independent variables differed significantly. Post hoc analysis can be performed by using several different tests. Bonferroni, Tukey, and Dunnett are all tests that can be used to compare combinations of groups or treatments. Bonferroni tests correct the P-value and produce a grid comparing P-values for all combinations of groups. When homogeneity of variance is met and sample sizes are equal, Tukey's HSD test should be used. Similarly, Dunnett's test gives the same results as Tukey but only compares the groups to the baseline. Additionally, the Games-Howell test, a non-parametric test based on Welch's correction can be used when the assumption of normality is not necessary (Games & Howell, 1976; Games, Keselman, & Clinch, n.d.).

Results from the Games-Howell test indicate a non-statistically significant result between baseline and professional comparisons as $p = .92$ which is more than the .05 significance level. The results between the baseline and casual comparisons also indicate a non-statistically significant difference as $p = .81$ which is greater than the .05 level.

Although results for interaction of professional and casual were not sought, results indicate there is no statistically significant interaction between the week of professional (P) dress compared to the week of casual (C) dress by the math teachers as the probability value (P-value) = .74 is much larger than the nominal .05 alpha value needed for statistical significance.

The preliminary data collected from PBIS spreadsheets and referrals, listed in Table 8A and Table 8B was used to record behavior means and is included in this study as supplemental data. The behavior data was collected using three methods, PAWS cards, records on PBIS spreadsheets, and administrative referrals as documented on Infinite Campus student information system. The primary source of information came from averages on PAWS cards. Thirty weeks of data were collected using PAWS cards, PBIS referrals, and administrative referrals. The numbers were averaged per week to develop a baseline average. The intervention weeks were then compared to the baseline

Table 8A

Team 1 Behavior Data

		1-1			2-1			3-1			4-1			Ad
Week	Date	PAWS	PBIS	Referral	PAWS	PBIS	Referral	PAWS	PBIS	Referral	PAWS	PBIS	Referral	Referral
1	8/1	38.95			39.1			39.12			39.75			
2	8/8	36.18			34.67			35.08			37.56			
3	8/15	33.82			31.96			32.8			34.88			
4	8/22	37.22			32			35.16			37.35			
5	8/29	36.5			33.22			34.16			34.94			
6	9/5	37.18			34.88			35.92			36.29			
7	9/12	35.71	2		33.08			35.46			35.85			
8	9/19	34.83			33.8			33.64			37.31			
9	9/26	34.13	1		32.44			30.79	1		35.43			3
10	10/3	37.5			34.10			34.92			35.43			
11	10/17	36.7			36.62			36.04			35.43			
12	10/24	32.45			31.33		1	31.69			35.87			2
13	10/31	35.27			33.76			33.8			31.8			2
14	11/7	34.14			32.08		1	33.38			34.57			1
15	11/14	31.59			29.21			29.04			34.33			2
16	11/28	34.61			36.32			33.5	1		33.06			
17	12/5	33			33.52			32.5			32.94			1
18	12/12	32.39			33.43			33.23			35.12			1
19	1/2	37.13			36.92			35.32			37.29			
20	1/9	32.65			32.04			33.27			36.79			
21	1/17	34.13			31.42	1	1	34.59			35.57			
22	1/23	35.4			32.67	1		36.95			37.93			2
23	1/30	29.9			32.94		3	35.19			38.57			
24	2/6	26.05			29.78			33			33.67			4
25	2/13	34.10			30.94	2	2	34.6			33.22			
26	2/20	33.64			35.06	2		34.90			34.45			1
27	2/27	34.23			31.29			32.52			34.44			
28	3/6	37.32			32.64	1		32.11			35.95			1
29 C	3/13	33.29			33.38		1	34.88			36.43			
30 P	3/20	30.87			29.2			33.62			35.29			
*		34.52564			33.14605			34.03974			35.68324			

Note. *PAWS (positive behavior) average before intervention. PAWS cards are only issued by home base teachers. AD = Administrators.

Table 8B

Team 2 Behavior Data

		1-2			2-2			3-2			4-2			Conn/ other	
Week	Date	PAWS	PBIS	Referral	PAWS	PBIS	Referral	PAWS	PBIS	Referral	PAWS	PBIS	Referral	PBIS	Referral
1	8/1	38.61			39.25			37.70			39.14			1	
2	8/8	34.95			36.75			35.83			37.71				2
3	8/15	32.19	3		34.75	1		32.17	1		32.86	5			
4	8/22	36.10			36.47	1		34.19			36.47			2	2
5	8/29	35.38			37.7			33.95			36.05	2		1	
6	9/5	33.90			37.39	1		34.59	1		34.68	1		1	
7	9/12				36.39	2		36.05			35.57	1		6	2
8	9/19				34.95	1		34.8			33.95	1		1	
9	9/26		1		36.7	1		33.2			34.57	2		1	
10	10/3	30.77			35.8			35.74	1		33.42	6	1	1	4
11	10/17	31.22			36.55	1		32.63	2		31.26	1		2	
12	10/24	28.09			32	1		30.42			30.63			3	1
13	10/31	35.5			33.95	3		33.41	1		36.89	4	2	3	
14	11/7	35.94			27.11			35.53			36.53	2		3	3
15	11/14	28.06	1	1	31.79	4		29.47			32.84	1		3	
16	11/28				31.5	4		35.35			36.11				
17	12/5		6		31.67	5		33.29	4		37.61		1	1	
18	12/12		3		16.24		1	32.12			36.72	1		2	
19	1/02				37.65	1		38.95							
20	1/9				34.53			36.73							
21	1/17		1		34.24	1		36.8	2	1			1	1	1
22	1/23	35.59	1		35.29	8	1	34.58			36.65	4		1	1
23	1/30	33.27	2		33.71	5		32.84	3		36.65	2		1	
24	2/6	28.5		1	34.5	6		31.52	1		33	2		1	
25	2/13	35.11	3		37.91	2	2	36.38	2			2	1	1	
26	2/20	34.09			37.8	3	1	34.88	2					1	1
27	2/27	31.67	4	1	35.4	2		36.38	2					2	
28	3/6	32.45	1		33.39	5		35.61	1					5	1
29P	3/13	31.32			30.89			32.47					1		
30C	3/20	28.98	5		28.94	1		33.02	2				1	1	
*		33.00084			34.25734			33.47306			35.20655				

*PAWS (positive behavior) average before intervention. PAWS cards are only issued by home base teachers. Conn/Other = Connections teachers or other staff.

Teacher Responses

Teacher responses to the interview questions are listed in Tables 9A through Table 9E. Common themes that emerged from the answers to the five questions on the

teacher questionnaire (See Appendix K) are recorded. During the intervention weeks, most teachers had positive feelings when they were dressed professionally and negative feelings when they dressed casually as seen in Table 9A. Although most teachers felt they were doing a better job when they dressed professionally, they harbored some negative feelings of being overdressed which caused more distance from the students. Also, teachers had a slightly more positive than negative reactions from their students when they dressed in casual clothes. Some teachers reacted both positively and negatively because although they were wearing comfortable clothes, they were embarrassed wearing that type of clothing in front of students. Casual clothes seemed to place the teachers on the same level as students.

Table 9A

Teacher Interview Responses

Question 1. Did you feel any different than average weeks wearing "professional" or "casual" clothing?

Teacher code	Professional		Casual	
	Positive	Negative	Positive	Negative
1-1	Felt good about self because looked nice		Comfortable	Felt like a bum
2-1		Seemed overdressed		Felt uncomfortable wearing yoga pants in front of students
3-1		Frustrated	More comfortable	
4-1		Uptight – more distance from students	More teamwork with students	
1-2	Professional dress made teacher feel better		More comfortable	
2-2			Dialog with students less formal	Felt out of place/ embarrassed wearing casual
3-2	Liked dressing professionally wore clothes normally wouldn't wear felt good/ more productive			
4-2	Teaching sharper			Thought teaching was not as solid Got irritated with students

Note. Teacher 1-1 reads Team 1-Teacher 1. Teacher 2-1 refers to Team 1-Teacher 2, etc.

The intervention also caused mixed reactions in student behavior according to the teachers. Positive student behavior was depicted by hard work in their assignments.

Negative student behavior was depicted by defiance and off-task activities. Table 9B lists teacher responses regarding student behavior during the intervention.

During the casually dressed weeks, fights, bullying, as well as severe behavior from one student were recorded. Positive feedback was made by teachers depicting students were on-task and their students acted better during the week the teachers were casually dressed. Two teachers gave neutral comments as they did not notice any difference in behavior when they dressed casually as recorded in Table 9B.

Table 9B

Teacher Interview Responses

Question 2. Did you notice any difference in the behavior of the students during the study weeks? If so, what was the difference and which type of clothing were you wearing?

Teacher code	Professional		Casual		Neutral
	Positive	Negative	Positive	Negative	
1-1	Students were more responsive			Noticed a lot of little things	
2-1	Students worked harder			Severe behavior problems with one student	
3-1					Not sure students noticed until they commented – behavior depended on what they were doing
4-1		More off-task behavior	Less redirection – more on task		
1-2	Students were more "with it"				Normal behavior
2-2		More misbehavior – same types	Acted better	2 major problems: bullying & fight	
3-2		More defiance 1st of the week - better at the end			Usual level of behavior
4-2	More attention given – listen and do things quicker			Teachers and students on the same level	

Table 9C lists comments made by students to teachers questioning why the teachers were “dressed up” during the weeks of professional dress. Students also seemed jealous that teachers got to dress very comfortably during the casual weeks because they are required to wear school uniforms. Additionally, this question produced several neutral comments from teachers implying the students did not notice their casual attire.

Table 9C

Teacher Interview Responses

Question 3. Did students ask questions about the way you were dressed during the study? If so, what were the student's comments or questions?

Teacher code	Professional		Casual		Neutral/No Comments
	Positive	Negative	Positive	Negative	
1-1	Asked why teacher was dressed up looked nice Liked that teachers looked nice				
2-1		Are you going to a funeral? Why are you so dressed up?		Students wished they could dress in jogging pants	
3-1				Asked teacher if she was going to the gym since she was dressed in jogging pants	
4-1		Asked, "who died"? Are you going to a wedding?			No comments – normal behavior
1-2	Are you going on a date?				Did not notice
2-2	You look nice today			Why do you get to dress out of uniform and we don't? Why are you wearing that?	
3-2	Why are you wearing a dress? I like your dress Why are you dressed up?				No comments
4-2					None

Opinions teachers made about the effect their clothing has on students were overwhelmingly positive for professional dress as recorded in Table 9D. Teachers stated they thought professional dress gave them more respect and authority and felt more businesslike while casual dress made them feel they were more accessible to the students.

Table 9D

Teacher Interview Responses

Question 4. What is your opinion about how teacher professionalism and attire affects student behavior and academic achievement?

Teacher code	Professional		Casual		Neutral
	Positive	Negative	Positive	Negative	
1-1	Students take jobs seriously Structure and organization				
2-1	If introduced as the norm Students would have higher expectations and standards				
3-1	Prof behavior affects kids more than attire				Students are used to teachers in jeans this year – different results if not wearing jeans so much
4-1	More authority figure	More distance/ barrier between teacher and student	Felt more accessible	Teacher has to be on guard more	
1-2	Makes students more serious				Students wear uniforms - Teachers need to dress nicer than students
2-2	Nicer/ better to a certain extent Affects younger students more	Diminished return			
3-2	Dressing more business-like is better Dress the part				Difference not noticed but thinks it would affect students
4-2	Respected more in business clothing				

In the interviews, a majority of teachers indicated in Table 9E that factors at school, such as altering students' schedules (63%) could affect student success and behavior in the classroom. Teachers listed factors from students' home life (50%), which can include changes in family relationships, parental attitudes toward education, socio-economic status, and child abuse, could also affect student success and behavior in the classroom (Bennett, 2017). Teachers listed a variety of factors from uniforms (25%) to full moons (13%) and the weather (13%) that could have an impact on student grades and behavior.

Table 9E

Teacher Interview Responses

Question 5. What are other factors that could have an impact on student behavior and academic achievement?									
Factor	Teacher Response								Total
	1-1	2-1	3-1	4-1	1-2	2-2	3-2	4-2	
Out of routine/schedule change	X	X	X		X			X	5
Home life	X			X	X	X			4
Ability level of students							X	X	2
Class Rules and expectations						X		X	2
Dress down days/out of uniform		X	X						2
Lack of consistency			X					X	2
Peer pressure				X			X		2
Professional behavior by teachers			X			X			2
Time of year	X	X							2
Emotionally stable							X		1
External events						X			1
Full moon	X								1
No break in school	X								1
Outside/educational support							X		1
Parent involvement					X				1
Student environment/ school culture							X		1
Substitute teachers								X	1
Weather	X								1

Student Responses

Students responded to the student questionnaire (See Appendix L) with mixed answers. The sixth-grade students that were randomly chosen answered for all categories including positive responses, negative responses, and neutral or no comment at all.

Student responses to the five questions asked in the student questionnaire are listed in Tables 10A through 10E.

Even though some teachers claimed students did not notice their casual attire, a majority of students interviewed commented on the casual attire of their teachers. Specific teachers' clothing was listed by some students while others could not remember any changes. For behavior, the perception most students had regarding their teachers' behavior during the two-week intervention was that generally no changes were detected as seen in Table 10A. However, some students did comment in more than one category.

Table 10A

Student Interview Responses

1. What were the changes you noticed in the clothing types your teachers were wearing over the past few weeks? What about changes in your teachers' behavior?

Student code	Attire			Behavior		
	Professional	Casual	Neutral	Professional	Casual	Neutral
1-1		Workout clothes/ Jeans/ boots		SS - more relaxed when dressed up		Teachers acted the same
2-1	Math pretty, bright dresses SS – ties	SS wore sweatpants and Georgia shirt				No change
3-1	Fancy shirts, ties, hair worn up,	Sweatpants Adidas / athletic pants, UGA jersey			SS - more comfortable/ laid back when casual	No real changes
4-1	Nice clothes look good,	Sweats look like teacher "just put something on"			Sweat clothes look like teacher "didn't care"	Teachers acted the same
1-2		Science teacher not dressed up	Didn't notice other teacher			no behavior changes
2-2		All appropriate – not too short – no holes in jeans	Did not notice when teacher dressed up			Teachers acted the same
3-2			Didn't notice change in attire			Teachers acted the same way
4-2	Science – wore ties SS - wore necklaces					

In Table 10B, students' feelings about their teachers' attire ranged from feeling like the teacher was going to a funeral at one extreme, to feeling like the teacher didn't care about them at the other extreme. Student responses varied and a consistent theme could not be established.

Table 10B

Student Interview Responses

2. How did it make you feel to see your teacher "dressed up" or "not being dressed up"?

Student code	Professional		Casual		Neutral
	Positive	Negative	Positive	Negative	
1-1	Good when dressed up				
2-1	SS told student dressed up due to "teacher death"				Kinda weird Did not know what was happening
3-1	Math – dressed up dressed up school looked more professional				Student noticed but tried to act the same
4-1	Made students look different than teachers			Sweats look like teacher didn't care	
1-2		Tried harder to get students to work	Laid back casual Didn't have to try as hard to get students to work		
2-2					Didn't make a difference since "we are all here to learn"
3-2	Like something was happening like awards presentation				
4-2	Told science he was "rocking that tie" Dressed up and in a good mood	Not something he would usually wear			

When asked about the class' reaction to their teachers' attire, almost every student interviewed responded positively about their teachers' being professionally dressed as shown in Table 10C. The students completing the questionnaire also claimed most of their classmates reacted negatively about teachers wearing casual clothes, with the exception of some neutral remarks. According to the student participants, their class showed a lack of respect for a casually dressed teacher. In Table 10C, students are coded by team and math class number.

Table 10C

Student Interview Responses

3. How would you describe your class' reaction to seeing your teacher "dressed up" or "not being dressed up"?

Student code	Professional		Casual		Neutral
	Positive	Negative	Positive	Negative	
1-1	Class commented; More students involved; teacher helped more				
2-1				Math – more discipline	
3-1	Students noticed math dressed up			Students misbehaved more than usual	
4-1	Class asked why teacher was dressed up				
1-2	Group of boys talked less				Nothing during casual week
2-2	Some students commented on fancy clothes and ties				Students commented but acted the same; same attitude toward teacher
3-2	Asked why ELA wearing a dress			Student got into trouble	
4-2	Nice; respected more; class doing good and not getting into trouble			Students did not have to respect teachers	

Table 10D lists student responses concerning the perceived effects of teacher attire on student's academic ability on math quizzes. Results revealed more neutral responses as the students felt their performance was the same both weeks. Although one student claimed to have done better during the casual week, more positive than negative remarks were made concerning the week their teacher was dressed professionally. The same students gave more than one answer which was also noted in Table 10D. Students are coded by team and math class number.

Table 10D

Student Interview Responses

4. Of the two weeks your teacher was "dressed up" or "not being dressed up," how did it affect you taking the weekly math quiz?

Student code	Professional	Casual	Neutral
1-1	Better; math teacher helped more		
2-1	Probably did better		No change; did the same both weeks
3-1	Did better		Paid attention both weeks
4-1			No effect either way; did the same either way
1-2			About the same both weeks
2-2		Did better; more prepared; calm	No effect
3-2	Did better		Did good on both
4-2			No idea; not super hard; maybe did better on one

Table 10E indicates themes do exist from the responses students gave regarding what teachers should wear and how they should behave. Thirty responses from students were recorded and categorized into 16 categories of clothing. Thirteen percent of answers received from students specifically mentioned teachers should be allowed to wear jeans to school. Ten percent of student responses suggested that teachers should dress "like themselves." Almost 17% of student responses indicated teachers should dress in uniforms or dress like the students. From the responses concerning teacher behavior, 14% think teachers should "act like themselves." Table 10E shows each of the eight student's responses by teacher regarding teacher attire and teacher behavior. Students are coded by team and math class number.

Table 10E

Student Interview Responses

5. How do you think teachers should dress and behave when teaching middle school students?

	Student Response								Total
Teacher Attire	1-1	2-1	3-1	4-1	1-2	2-2	3-2	4-2	
Jeans	X				X	X	X		4
Dress like themselves		X		X	X				3
Dress pants/Khakis	X						X	X	3
Dressed up/appropriate	X		X			X			3
Should wear uniform			X			X	X		3
Dress like the students	X							X	2
No sweats/ baggy clothes					X			X	2
T-shirts	X				X				2
Comfortable					X				1
Dress somewhere in the middle			X						1
No jeans								X	1
No shorts							X		1
No tennis shoes								X	1
Ties	X								1
Wear what they wear on weekends		X							1
Workout clothes	X								1

	Student Response								Total
Teacher Behavior	1-1	2-1	3-1	4-1	1-2	2-2	3-2	4-2	
Act like themselves		X							1
Behave the same as they are now				X					1
Dress shows personality		X							1
Nicer but stricter						X			1
SS stricter when more professionally dressed					X				1
Student doesn't pay attention to how teachers act	X								1
Teachers behavior changes when teachers change attire					X				1

Results Summary

This chapter reported the findings for each of the two research questions with quantitative data on math scores and behavior records and supplemented with qualitative responses from teachers and students. The results suggest that teacher attire, both professional and casual, does affect academic achievement based on math scores compared to the average of the weeks before the intervention. Results from Research Question 1 indicate students scored higher on math quizzes during the week teachers were professionally dressed (*Mean* = 70.33) compared to the baseline (*Mean* = 59.68) scores. These results also indicate students scored higher on math quizzes during the week teachers were casually dressed (*Mean* = 69.33) compared to the baseline (*Mean* = 59.68) scores. A One-way Analysis of Variance (ANOVA) statistical test was conducted to compare the effect of teacher attire on student academic achievement and behavior. ANOVA showed that there was a statistically significant effect of teacher attire on student scores, $F(2,87) = 6.64$, $p = .002$. Math scores improved an average of 11 points during the weeks of professional dress *and* math scores also improved an average of ten points during the weeks of casual dress compared to the baseline average. The effect sizes for these two comparisons were $d = 0.81$, and $d = 0.53$, respectively. r^2 correlation on a 95% confidence interval for behavior-professional is -0.38 [1.35, -0.28] and for behavior-casual is -0.26 [-0.58, -0.13]. Cohen's Effect sizes for math B-P were small at -0.38 while effect sizes for B-C were small at -0.26.

Results for Research Question 2 indicate there were no statistically significant differences between behavior scores on behavior cards of students when teachers were professionally dressed (P) compared to the baseline (B) scores. Results indicate students

scored higher on behavior cards during the week teachers were professionally dressed (*Mean* = 32.67) compared to the baseline (*Mean* = 33.28) scores with a probability value (P-value) of .92; not significant at the .05 alpha value. These results also indicate students only behaved slightly better during the week teachers were casually dressed (*Mean* = 34.20) compared to the baseline (*Mean* = 33.28) scores with a probability value (P-value) of .74; not significant at the .05 alpha value. Behavior scores declined an average of 0.61 points during the weeks of professional dress while behavior scores improved almost one (.92) point during the weeks of casual dress compared to the baseline average. The effect sizes for these two comparisons were $d = 0.10$, and $d = -0.16$, respectively. r^2 correlation on a 95% confidence interval for behavior-professional is 0.05 [-0.21, 0.31] and for behavior-casual is -0.08 [-0.33, 0.18]. Cohen's Effect sizes for behavior B-P were large at 0.10 while effect sizes for B-C were medium to large at 0.08.

CHAPTER 5

CONCLUSION

This chapter provides a summary of the study, a review of the findings, and conclusions drawn from the findings regarding the perceptions of middle school students of teacher attire. Recommendations for future research are also included.

Summary of the Research Study

The purpose of this study was to determine if teacher attire exerts an influence on student perceptions which may affect academic achievement and behavior of middle school students. This study was guided by the following research questions:

1. Does teacher professionalism in professional dress and attire affect student performance on assessments as measured by weekly quizzes?
2. Does teacher professionalism in professional dress and attire have an effect on student behavior as recorded on PAWS behavior cards and referrals as compared to the average condition?

To answer the research questions, the following four factors were examined:

1. Understanding and defining types of dress
2. Recognizing dress as a form of non-verbal communication
3. Determining influences of student learning and behavior
4. Examining previous studies in literature

Bandura's social cognitive theory was used as the primary theory of the study which better explains personality in terms of how a person responds to one's environment

(Bandura, 1986). The results agree with the premise that responses to certain behaviors and personalities of teachers may be correlated to student academic achievement and behavior. Bandura's social cognitive theory describes how a person responds to one's environment (Bandura, 1986) and learns from social experiences. This study utilized Bandura's model to determine if teacher attire affected student achievement and student behavior.

Other theories considered include sociocultural learning theory and non-verbal communication theory. Sociocultural learning theory pertains to the study by emphasizing how public schools are learning environments where students learn from each other, their teachers, and others in the community who may associate with the student within schools. The nonverbal communication theory relates to how teachers communicate with their style of clothing and appearance.

An instrument was developed after researching the literature for similar studies and not being able to locate one applicable to this study. Further, a detailed model to examine the effects of teacher professionalism in attire on student achievement and classroom behavior was created. Once these steps were accomplished, the intervention was designed to manipulate types of teacher dress over a two-week period.

A quantitative, quasi-experimental design was used in the study. Two teams consisting of eight teachers and approximately two-hundred sixth-grade students were studied. The baseline for academic performance was obtained by averaging quizzes given each week before the intervention for all classes on each of the two teams in the study. The baseline for student behavior was obtained from the previous weeks' PAWS cards, PBIS records, and administrative referrals. Scores on PAWS cards were averaged from

the weeks before the intervention to find the baseline for each. Qualitative data, including personal responses from teachers and students, was collected and used to supplement findings in the quantitative data. At the conclusion of the experiment, debriefing forms were sent home and mailed back with signatures approving the use of information from students. (See Appendix P).

Summary of the Findings

Chapter 4 reported the findings for each of the two research questions. Quantitative data from math scores and behavior records were supplemented with qualitative responses from teachers and students. Results indicate statistically significant differences in math scores when teachers were professionally (P) dressed compared to the baseline (B) scores. In addition, results indicate there were no statistically significant differences between the behavior scores of students when teachers were dressed casually (C) compared to the baseline (B) scores.

This study was designed to determine if a connection existed between the way teachers dress and the perception students have of those teachers which affects student achievement and behavior. The results of the study were used to determine if there was a significant difference in scores and behavior during the intervention compared to the average (control) of the previous weeks. Also, the research was used to reveal what affects students more: teachers professionally dressed or teachers casually dressed.

Using a quantitative, quasi-experimental design, the study answers the following research questions:

1. Does teacher professionalism in professional dress and attire affect student performance on assessments as measured by weekly quizzes?

2. Does teacher professionalism in professional dress and attire have an effect on student behavior as recorded on PAWS behavior cards and referrals as compared to the average condition?

Results from Research Question 1 indicate students scored higher on math quizzes during the week teachers were professionally dressed (*Mean* = 70.33) compared to the baseline (*Mean* = 59.68) scores. These results also indicate students scored higher on math quizzes during the week teachers were casually dressed (*Mean* = 69.33) compared to the baseline (*Mean* = 59.68) scores. A One-way Analysis of Variance (ANOVA) statistical test was conducted to compare the effect of teacher attire on student academic achievement and behavior. ANOVA showed that there was a statistically significant effect of teacher attire on student scores, $F(2,87) = 6.64$, $p = .002$. A significance level of .05 indicates a 5% risk of concluding that a difference exists when there is no actual difference. The significance level, also denoted as alpha or α, is the probability of rejecting the null hypothesis when it is true. When a P-value is less than or equal to the significance level, the null hypothesis is rejected. The effect sizes for these two comparisons were $d = 0.81$, and $d = 0.53$, respectively. r^2 correlation on a 95% confidence interval for behavior-professional is -0.38 [1.35, -0.28] and for behavior-casual is -0.26 [-0.58, -0.13]. Cohen's Effect sizes for math B-P were small at -0.38 while effect sizes for B-C were small at -0.26.

The same reasoning should be applied to results for Research Question 2 which indicate there were no statistically significant differences between behavior scores on behavior cards of students when teachers were professionally dressed (P) compared to the baseline (B) scores. Results indicate students scored lower on behavior cards during the

week teachers were professionally dressed (*Mean* = 32.67) compared to the baseline (*Mean* = 33.28) scores with a probability value (P-value) of .92; not significant at the .05 alpha value. These results also indicate students only behaved slightly better during the week teachers were casually dressed (*Mean* = 34.20) compared to the baseline (*Mean* = 33.28) scores with a probability value (P-value) of .74; not significant at the .05 alpha value. The effect sizes for these two comparisons were $d = 0.10$, and $d = -0.16$, respectively. r^2 correlation on a 95% confidence interval for behavior-professional is 0.05 [-0.21, 0.31] and for behavior-casual is -0.08 [-0.33, 0.18]. Cohen's Effect sizes for behavior B-P were large at 0.10 while effect sizes for B-C were medium to large at 0.08.

The results of this study do not support the hypothesis stated in Chapter 3 that suggests student performance during the week of the professionally dressed teachers were better than the student performance during the week of the casually dressed teachers as both interventions produced a positive result. It agrees with the postulation that teacher attire *would* make a positive difference in student perceptions and, as a result, students *would* learn more and make better grades. However, the hypothesis can only be partially supported as math scores also increased when teachers were dressed casually during the study. Math scores improved an average of 11 points during the weeks of professional dress *and* math scores also improved an average of ten points during the weeks of casual dress compared to the baseline average.

The results of this study do not support the hypothesis stated in Chapter 3 that suggests student behavior during the week of the professionally dressed teachers were better than the student behavior during the week of the casually dressed teachers. It disagrees with the postulation that teacher attire *would* make a positive difference in

student perceptions and, as a result, students *would* exhibit better behavior. The hypothesis cannot be supported as behavior scores declined slightly when teachers were professionally dressed during the study. Behavior scores declined an average of .61 points during the weeks of professional dress while behavior scores improved almost one (.92) point during the weeks of casual dress compared to the baseline average.

Social cognitive theory worked well with this study. Most students reacted either positively or negatively to the intervention which suggests students are aware of their environment to some extent. The difference in math scores and behavior may have been influenced by the experiment, but due to the quasi-experimental design, so supporting the hypothesis with this research may need more data and testing.

Results from this study imply that student perceptions of their teacher's attire have little effect on their behavior. It seems some teachers were more consistent in stamping students' PAWS cards while others were not. The data indicates the behavior cards collected from some teachers had higher averages than others. The behavior data indicate a strong Block effect from the teachers, meaning behavior scores may be influenced due to the teacher. Although all teachers filled out cards for every student for every class, the averages were higher on behavior cards from some of the same home base teachers. Possible explanations could be that home base group of students behaved better than other home base groups, the teacher marked the cards more consistently, or more students returned their cards to their home base teachers.

Unexpected Findings

After researching numerous books, journals, and reports in the literature review in Chapter 2, the behavior results were unforeseen. Comparison of professional and casual

dress produced unexpected results. Student's academic achievement increased during the weeks of professional (*Mean* = 70.33) and casual (*Mean* = 69.33) attire worn by teachers as compared to the baseline (*Mean* = 59.68) with almost the same amount of change (10.65 and 9.65, respectively). For behavior, unexpected results of lower positive behavior points were recorded during the week teachers were professionally dressed (*Mean* = 32.67) as compared to the baseline scores (*Mean* = 33.28). But, surprisingly, an increase in behavior points were reported for the casual week (*Mean* = 34.20). The week of casually dressed teachers improved the behavior scores by almost one point (0.92).

The consensus of previous researchers was to expect differences in behavior due to teacher attire: Better behavior from students when teachers were dressed professionally, and worse behavior from students when teachers were dressed casually (Gage et al., 2016; Johnson et al., 2008; Lavin et al., 2010). Conversely, neither types of dress produced significant results in behavior. The week of professionally dressed teachers produced lower than average behavior scores. Camacho (2005) suggests that when teachers change their appearance, it causes students to become more easily distracted and more likely to get off task more frequently. The change of attire produced a negative response in behavior scores from students during the professionally dressed weeks and, ironically, a slight increase in behavior scores during the casually dressed weeks compared to the baseline average.

Data from math scores and behavior records were used to perform a One-way Analysis of Variance (ANOVA) statistical data test. To perform an ANOVA meant the large amount of data collected for each math and behavior baselines had to be weighted as if they were obtained from a smaller number of individuals. Baseline averages were

calculated by randomly selecting 30 students from the math population as well as from the behavior population. This design allowed ANOVA tables to be presented in forms that are more recognizable.

Period effect for math was consistent with the findings as there was not much evidence of variation between the two math teachers. The weeks teachers were professionally dressed showed an increase in math scores on quizzes as previously thought. Unexpectedly, casually dressed teachers also had an improvement in math scores over the baseline scores. ANOVA tests also imply there were significant statistical differences in the comparison of professional and casual weeks. Comparison tests between teams were not relevant to the study and were not tested.

Results from the behavior data indicate a strong Block effect from the teachers. The data indicates the behavior cards collected from some teachers had higher averages than others. All teachers patricipated in filling out PAWS cards for every student for every class. However, the averages were higher on behavior cards from some of the same home base teachers. Some home base groups of students may have behaved better than other home base groups, so the teacher may have marked the cards more consistently, or more students returned their cards to their home base teachers to be marked are possible explanations.

Limitations

A quasi-experimental research design was used as complete control of all variables could not be secured. The experiment was loosely designed to account for possible events that could alter the outcome. The factors that could be controlled were similarly grouped sixth-grade students, identical weekly student schedule, shared

curriculum, similar chapter assessments, and matching teaching strategies from teachers within their first couple of years of teaching. However, minor unforeseen factors could have impacted the study.

Although the eight teachers agreed on altering their dress for the two weeks, the specific articles of clothing they chose to wear could not be determined ahead of time. Some teachers wore slacks and ties as professional dress while other teachers considered khakis and wallaby shoes as professional. Several comments from the students were about the extreme differences in their teachers' attire. Field notes taken each day of the intervention describing the variability of teacher attire are listed in Appendix Q.

The timing of the intervention was crucial to the study. Intervening later in the school year may have skewed the results as invalid. The timing of the two weeks of intervention had to be before the two weeks of Georgia Milestones standardized testing because a week-long spring break immediately followed the test. After the two weeks of standardized testing and week-long break, the tone of the remaining weeks of school becomes more relaxed. The mindset of students and teachers alike are focusing less on the curriculum and more on the last day of the school year. Teachers could still alter their attire for the two weeks; however, the data collection for academic achievement would not be available as the math quizzes are discontinued after the standardized testing. Also, students' behavior data may be distorted the closer it gets to the end of the school year.

Absences and enrollment may have affected the results of both math scores and behavior data. When students were absent, their PAWS cards did not receive stamps. Also, some students that turned in PAWS cards during the first weeks of school withdrew and new students enrolled throughout the year. Math scores may have also been affected.

Students that were absent missed the material taught by teachers, or were absent and missed the quiz altogether. New students enrolled from other schools may not have covered the material yet or might be more advanced than the current students in math classes. Random selection of independent student samples were used to account for these factors. Teacher absences or teacher attrition may affect both math scores and behavior totals. Data collected from Team 2 may have been affected as the science teacher left abruptly and a replacement, long-term sub was hired late in the first semester. The intervention was in March, so students had become familiar with the new science teacher, who earned his degree in science education that year. Another teacher on Team 1 was out during the intervention but had a substitute teacher that the students already knew.

The actual two weeks scheduled for the intervention were chosen due to several factors. Securing two weeks for a research study in a middle school without any extra activities was practically impossible. School schedules are altered almost weekly for events such as fire drills, pep rallies, and field trips, among other events. Having two complete weeks without interruptions would be ideal; however, the weeks chosen had equal distractions with only one break in the normal schedule. Changes to the weekly schedule were accommodated by matching each week with one scheduled event on the same day, both on Thursdays, to make the weeks as similar as possible.

Other problems included parental permission and interview schedules. Some parents refused to sign the permission forms for the questionnaire, and, as a result, the math teachers had to select more students randomly as replacements. The timing of interviews was difficult to schedule and was held later than expected due to testing and spring break.

Missing stamps on PAWS cards may have influenced the outcome of the study. Since PAWS is based on positive rewards, students that did not have their cards stamped by their teacher, or were absent, did not receive stamps for those spaces. On the contrary, some unruly students would not give the cards to the teacher on purpose to avoid getting an undesirable stamp, or letter. Absences were counted negatively because students were encouraged to attend school. Some students did not care if they received enough stamps because the rewards offered did not appeal to them and they did not mind attending study hall as a consequence. Also, some teachers were more apt to stamp the cards consistently while other teachers were not.

The students were not informed of the intervention to avoid the Hawthorne Effect. The Hawthorne Effect occurs when people in an experiment behave differently from how they would normally behave if they were aware of the experiment (Shuttleworth, 2009). If aware of the intervention, students' may have modified their behavior and their true comments and questions may not have been expressed. Although teachers were aware of the study, procedures for administering quizzes as well as behavior protocols were in place to avoid bias.

Research experiments involving school-age children may be affected by factors beyond the doors of the school. Students reactions at school could stem from events they experience at home. When a student's home and family life are changed, the student may act out in school by behaving poorly or allowing grades to fall.

Recommendations

The first recommendation is that the study needs to be more longitudinal. Further research could be done by expanding the intervention over a month, semester, or year.

This extension would be beneficial as the results of this study indicate the change of teacher attire may have caused some of the effects. Consistency in teacher attire from the first day of school may allow more accurate data to be collected when an intervention is implemented by removing the shock students may feel when they see their teacher in different types of clothing. Starting the intervention at the beginning of the school year in professional or casual attire before changing to the other type may keep students' from becoming accustomed to "normal" attire before intervening.

A second recommendation will be to use a newer data system developed for more efficient record keeping. A new system for giving students positive points has been created and may be more accurate than the PAWS cards. Whereas students were responsible for keeping up with their PAWS cards and having the teachers give stamps (positive) or letters (negative), now teachers enter points for each student on the computer after class. The program allows for teachers to make comments and parents are able to view the results immediately. The points are used for school-wide rewards that appeal to the students.

A third recommendation is to implement a more consistent level of dress for teachers. The findings indicate math scores increased over the baseline scores during the week's teachers were professionally dressed and also when teachers were casually dressed. This experiment could model future research by using this set-up to study the types of clothing that affect student academic achievement. Consequently, this innovative study may be beneficial to school systems when creating dress codes for teachers.

A final recommendation is to have all research instruments in place before the experiment begins. With the large amount of data that can be collected, it is vital to file

the research appropriately and methodically. Focusing on one aspect to research and keeping better records of all events would improve the accuracy of the results of the study.

Implications for Practice

Although this study was an innovative design to establish if effects exist between middle school students and their perceptions of teacher attire, it could be used as a model for future research. The quasi-experimental nature of the design should be planned for as much as possible using more control variables and eliminating unexpected variability in practice. Limiting the number of participants could allow more solid results to be gained. Hence, this study has numerous possibilities, not only from the behavior and grades viewpoint, but for scheduling, testing, and school environment resources as well as extending beyond the school day into extracurricular activities and even home influences dealing with families.

Summary

The purpose of this study was to examine the effects professional dress and attire had on middle school students' performance on assessments on weekly quizzes and student's behavior as recorded on behavior cards and referrals compared to the average condition. A quantitative, quasi-experimental design was used in the study.

The results suggest that teacher attire, both professional and casual, does affect academic achievement based on math scores compared to the average of the weeks before the intervention. Both professional and casual dress produced significant results in math scores. However, professional weeks produced lower than average behavior scores

while casual weeks produced slightly higher behavior scores. Results indicate no statistically significant differences in behavior scores when teachers were professionally dressed as compared to the baseline score. No statistically significant differences were indicated when teachers were casually dressed as compared to the baseline. Results imply the change in teacher attire produced more of an effect than the type of clothing teachers wore during the experiment.

This study is conducted in an effort to better understand the effects of professional attire influence at the middle school level. Findings may be used to inform the educational field to what extent students are affected by teacher attire. Benefits from this project may give insight on the effects of teacher professionalism on student behavior and academic achievement. Information gained may be used to help design teacher dress codes in local school systems and improve the image of teacher professionals.

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APPENDIX A

Teacher Dress Code Policy

Dress Code/Uniform Policy: The purpose of this dress code is to assist administrators, teachers, students, and parents in fulfilling the mission of Barrow County Schools to provide all students quality educational opportunities that enable them to become successful, responsible, and contributing citizens. To accomplish this mission, the learning environment must be one that is safe, disciplined, and free of distractions. Therefore, the dress code regulations that follow are not designed to inhibit personal taste but to encourage learning, good behavior, and safety. If you come to school wearing clothing/jewelry that creates a disruption to the learning environment and/or is in violation of any of the following rules, you will be asked to call your parent/guardian to bring appropriate clothes to wear. Remember, always consider the **outer layer** of clothing for dress code compliance.

1. Any clothing, hairstyle (including hair color), jewelry (including facial piercings), chains, or attire that is distracting or causes a disruption or constitutes a safety issue will not be permitted at school.
2. **Shorts, skirts, dresses, and spirit wear must be of fingertip length.**
3. All shirts, dresses, and blouses must have moderate sleeves.
4. Clothing such as skirts, pants, trousers, etc., must be worn at the waist. Clothing shall not be poorly fitted or oversized or extremely baggy. Clothing that exposes underclothing or impedes walking will not be permitted.
5. **Jeans and other clothing with holes are NOT permitted.**
6. Clothing and/or jewelry, which advertises or displays any insignia of alcohol, illegal drugs, or tobacco is not permitted.
7. Clothing and/or jewelry with words or symbols which are offensive, insulting, embarrassing, sexually suggestive, obscene, gang-related, or promote violence, terrorism, or abusive behavior will not be permitted at school.
8. Clothing that distracts by exposing or accentuating the body, such as spandex pants, leggings/tights, see-through garments, halter or tube tops, backless dresses, muscle shirts, bare midriff outfits, or shirts, blouses, etc., that are tied at or may rise above the waist will not be permitted at school.
9. Sunglasses, caps, hats, and other head-coverings such as bandanas and hoods will not be worn inside the school building.
10. Appropriate shoes must be worn at all times at school. House/bedroom slippers are not permitted.
11. Pajamas/pajama pants are not permitted.

Uniform Policy: BCMS students in grades 6-8 must adhere to the uniform policy. Information about the uniform policy will be sent home during the first week of school.

Dress Code Discretionary Statement: The Principals/Site Administrators have the authority to interpret the dress code and make a case-by-case determination for appropriateness of dress and appearance, which is or is not covered in these dress code standards. Principals/Site Administrators may make occasional, school-wide exceptions to these standards for such events as "hat days" or "spirit days."

APPENDIX B

Georgia Professional Standards Commission Teacher Keys Evaluation System (TKES)

Performance Standard 9: Professionalism

The teacher exhibits a commitment to professional ethics and the school's mission, participates in professional growth opportunities to support student learning, and contributes to the profession.

Sample Performance Indicators

Examples may include, but are not limited to:

The teacher:

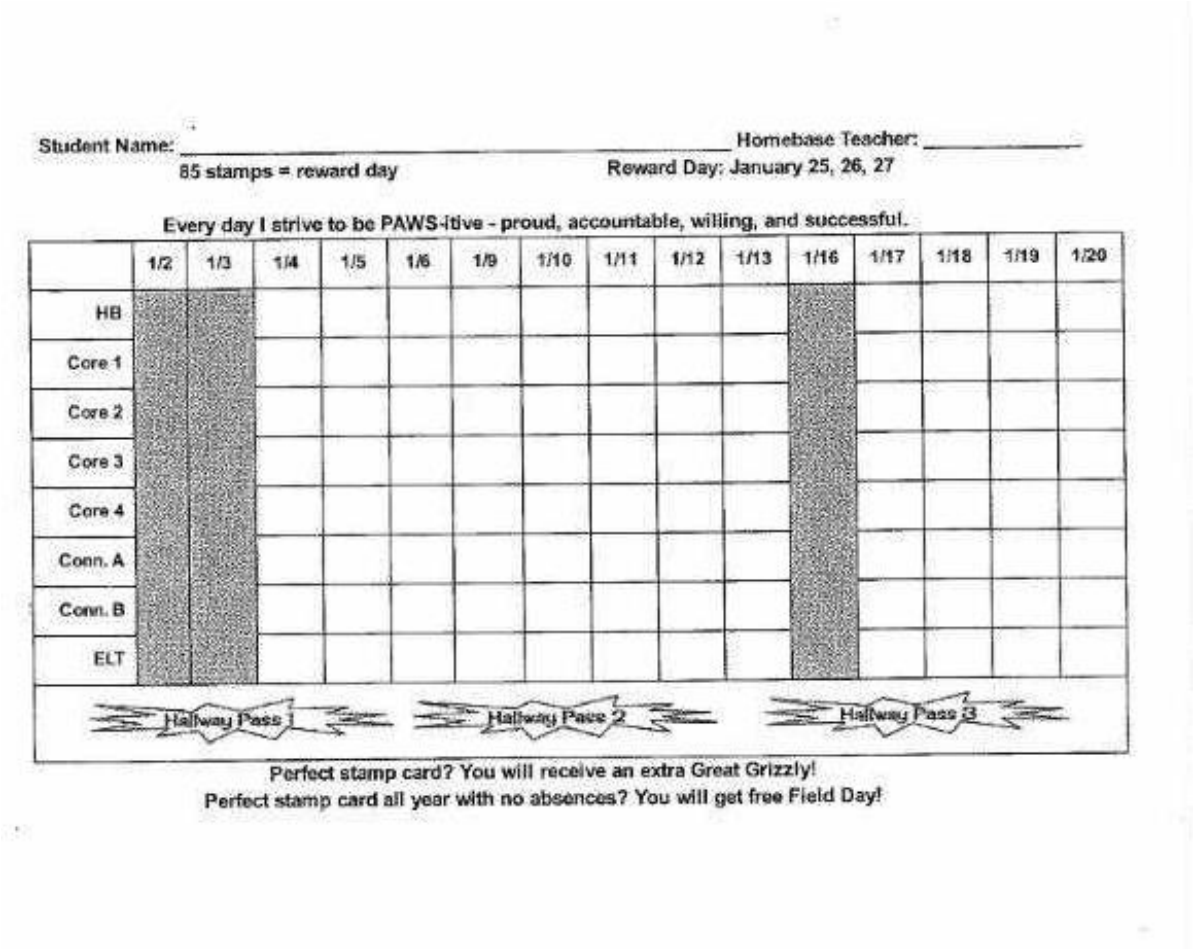
- Carries out duties in accordance with federal and state laws, Code of Ethics, and established state and local school board policies, regulations, and practices.
- Maintains professional demeanor and behavior (*e.g.,* appearance, punctuality and attendance).
- Respects and maintains confidentiality.
- Evaluates and identifies areas of personal strengths and weaknesses related to professional skills and their impact on student learning and sets goals for improvement.
- Participates in ongoing professional growth activities based on identified areas for improvement (*e.g.,* mentoring, peer coaching, course work, conferences) and incorporates learning into classroom activities.
- Demonstrates flexibility in adapting to school change.
- Engages in activities outside the classroom intended for school and student enhancement

Level IV *In addition to meeting the requirements for Level III*	Level III *Level III is the expected level of performance.*	Level II	Level I
The teacher **continually** engages in a high level of professional growth and application of skills and contributes to the development of others and the well-being of the school and community. *(Teachers rated as Level IV continually seek ways to serve as role models or teacher leaders.)*	The teacher **consistently** exhibits a commitment to professional ethics and the school's mission, participates in professional growth opportunities to support student learning, and contributes to the profession.	The teacher **inconsistently** supports the school's mission or seldom participates in professional growth opportunities.	The teacher shows a **disregard** toward professional ethics or the school's mission or rarely takes advantage of professional growth opportunities.

Across all levels, teachers are expected to abide by the Code of Ethics (http://www.gapsc.com/Rules/Current/Ethics/505-6-.01.pdf).

APPENDIX C

Sample PAWS Card



Student Name: _____ Homebase Teacher: _____

85 stamps = reward day Reward Day: January 25, 26, 27

Every day I strive to be PAWS-itive - proud, accountable, willing, and successful.

	1/2	1/3	1/4	1/5	1/6	1/9	1/10	1/11	1/12	1/13	1/16	1/17	1/18	1/19	1/20
HB															
Core 1															
Core 2															
Core 3															
Core 4															
Conn. A															
Conn. B															
ELT															

Hallway Pass 1 Hallway Pass 2 Hallway Pass 3

Perfect stamp card? You will receive an extra Great Grizzly!

Perfect stamp card all year with no absences? You will get free Field Day!

APPENDIX D

Recruitment Methods and Procedures

Recruitment Script

In today's teaching profession, teachers are expected to have modest attire. Modest attire seems to be neutral in influencing student learning. This has very little literature support. In an effort to understand the effects of professional attire influence at the middle school level, my professor, Dr. John Mativo, and I, Tonia Harbin, would like to conduct a study to establish if any effects exist with your cooperation. Dr. Mativo is a professor at the University of Georgia in the Department of Career and Informational Studies. This study has been approved by Barrow County Schools Superintendent, Dr. Chris McMichael, and Dr. Jennifer Wood, Principal, here at Bear Creek Middle School.

The purpose of this study is to research the effect teacher professionalism, as in professional dress and attire, has on student performance on assessments on weekly quizzes and also the effect on student behavior as recorded on behavior cards and referrals as compared to the average condition.

To conduct this research, eight teacher participants from sixth grade at Bear Creek Middle School will be asked to alter their attire for one week at a time. The teachers eligible to participate will be those who teach average students of both genders, similar socioeconomic status, and of diverse ethnicities.

During week one, group one of four teacher participants will be asked to dress professionally while group two will be asked to dress very casually. During week two,

group one will be asked to dress very casually while group two will be asked to dress professionally. Teachers should not alter their teaching styles or behavior during the two weeks of the study and students should not be informed of the study. Teacher participants from each group will record behavior incidences while math teachers from each group will collect data from the weekly quiz from each of the two weeks. Follow up interviews from teacher and student focus groups will be conducted after the two weeks of research is concluded. Anticipated results should reinforce the idea that teacher professionalism in attire does effect student behavior and academic achievement.

Benefits from this project may give insight on the effects of teacher professionalism on student behavior and academic achievement. Information gained may be used to help design teacher dress codes in local school systems and improve the image of teacher professionals.

Teacher participants may include mild discomfort for possibly altering their form of dress to more casual or professional attire and no foreseeable risks are expected. The time commitment for participants will be two weeks of intervention followed by a short meeting to answer five brief interview questions.

For more information, please contact the principal investigator (PI), Dr. John Mativo at the Department of Career and Informational Studies at the University of Georgia at jmativo@uga.edu or at (706) 583-8107, or contact me, Tonia Harbin, here at Bear Creek Middle School.

APPENDIX E

Request to Conduct Research

January 13, 2017

Dr. Chris McMichael, Superintendent

Barrow County School System

RE: Request to conduct research at BCMS

In today's teaching environment, teachers are expected to dress professionally. Modest attire seems to be neutral in influencing student learning. This notion has very little literature support. In an effort to better understand the effects of professional attire influence at the middle school level, I would like to conduct a study to establish if any effects exist.

Tonia Harbin and I respectfully request to be allowed to conduct this study at Bear Creek Middle School (BCMS). The teachers and administration at BCMS are in support of this two-week study. If approved, we are looking to conduct the study toward the end of January and early February, 2017.

I look forward to your decision as we learn more about the effects of attire to student learning. Accompanying this request is a 'School Authorization to Conduct Research' form that requires your signature. In the event additional information is needed, please reach me at 706-583-8107 or email at jmativo@uga.edu.

Sincerely,

Dr. John Mativo

Associate Professor, CIS

APPENDIX F

District Authorization to Conduct Research

SCHOOL AUTHORIZATION TO CONDUCT RESEARCH

Date: January 13, 2017

Dear Institutional Review Board:

The purpose of this letter is to inform you that I give Dr. John Mativo and Tonia Harbin permission to conduct the research titled *Influence of Teacher Professionalism in Attire on Middle School Students* at Bear Creek Middle School. We have agreed to the following study procedures:

- Teachers will dress in either professional dress or casual dress for a one-week period, then dress the other way for one week. The length of this study will be for two one-week periods, consecutively or non-consecutively, of similar weeks (no extra activities, fire drills, etc.).
- Data from Fall semester will be used as a control including average scores from weekly math quizzes and behavior incidents.
- To keep this study confidential and not inform students of the study nor discuss the teacher's choice of dress.
- Eight teachers from sixth grade will be assigned to one of two groups: with four participants from group one to dress in business professional attire for one week. Four participants from group two will be dressed very casually for the same week. Week two will include the same participants. The participants from group one will be dressed very casually for week two. Participants from group two will be dressed in business professional attire during the same week.
- Record new data from each of the two weeks to be used in comparison with data from Fall semester, 2016.
- Conduct a short follow-up interview that will be given after the two weeks of data collection have concluded. The questionnaire will consist of five questions about the study including behavior differences and any comments about teacher attire made by the students.
- Not to alter teaching styles for this study. The independent variable manipulated will be type of clothing worn by instructors. The dependent variables will be scores on weekly quiz and behavioral data collected.

This also serves as assurance that this school complies with requirements of the Family Educational Rights and Privacy Act (FERPA) and will ensure that these requirements are followed in the conduct of this research.

Sincerely,

Dr. Chris McMichael, Superintendent BCSS

APPENDIX G

IRB Approval

Phone 706-542-3199

Office of the Vice President for Research
Institutional Review Board

APPROVAL OF PROTOCOL

February 21, 2017

Dear John Mativo:

On 2/21/2017, the IRB reviewed the following submission:

Type of Review:	Initial Study
Title of Study:	Influence of Teacher Professionalism in Attire on Middle School Students
Investigator:	John Mativo
IRB ID:	STUDY00004275
Funding:	None
Grant ID:	None
Review Category:	Exempt 7

The IRB approved the protocol from 2/21/2017 through 2/20/2022.

In conducting this study, you are required to follow the requirements listed in the Investigator Manual (HRP-103).

Sincerely,

Dr. Gerald E. Crites, MD, MEd
University of Georgia
Institutional Review Board Chairperson

APPENDIX H

Math Quiz Week 1

Find the GCF of each.

1) 16, 40

A) 40
B) 6
C) 8
D) 80

2) 24, 30

A) 30
B) 6
C) 3
D) 120

3) List all positive factors of 18.

A) 1, 3, 6, 18
B) 1, 2, 3, 9, 18
C) 1, 2, 9, 18
D) 1, 2, 3, 6, 9, 18

Evaluate each expression.

4) 4.8 + 2.5

A) 7.3
B) 6.6
C) 0.9
D) 3.8

5) 6.521 - 3.2

A) 8.321
B) 1.391
C) 3.321
D) 7.151

6) Mary is saving $3.25 a week to buy a purse that costs $71.50. How many weeks will she have to save in order to buy the purse? (**MGSE6.NS.3)**

A) 11 weeks
B) 22 weeks
C) 33 weeks
D) 44 weeks

7) A bird flies at a constant speed for 48 yards. If it takes 5 seconds to fly the first 12 yards, which is the equation that can be used to find the time (**t)** it takes the bird to fly the 48 yards?

A) 12/5 = **t**/48
B) 12/5 = 5/**t**
C) 12/48 = t/5
D) 12/48 = 5/**t**

8) Twelve is less than 3 times another number can be shown by the inequality ***12 < 3n***. What number could possibly make this a true statement? **(MGSE6.EE.5)**

A) 5
B) 4
C) 3
D) 2

9) Which of the following represent equivalent expressions? **(MGSE6.EE.4)**

A) x/x = 3x
B) x + x + 7x = 7 + 3x
C) $x + 6 + x + x = x^3 + 6$
D) x + 6 + x + x = 3x + 6

10) Ms. Smith fills gum and toy machines in front of grocery stores. In the toy machine, there are two types of toys: stickers and bracelets. If Ms. Smith puts 15 stickers and 25 bracelets in an empty machine, what is the ratio of stickers to all the items in the machine? **(MGSE6.RP.1)**

A) 15:25
B) 3:8
C) 15:40
D) 3:5

APPENDIX I

Math Quiz Week 2

Find the GCF of each.

1) 24, 36

A) 24

B) 36

C) 2

D) 12

2) 18, 30

A) 18

B) 3

C) 30

D) 6

3.) Find the LCM of 5 and 10.

A) 50

B) 5

C) 2

D) 10

Evaluate each expression.

4) 12.3 + 8.2

A) 6.23

B) 15.8

C) 20.5

D) 94.3

5) 8.3(2.1)

A) 0.174

B) 1.74

C) 174

D) 17.4

6. De'ondre is saving $8.25 a week to buy a gaming system that costs $299.95. How many weeks will he have to save in order to buy the system? (**MGSE6.NS.3)**

A) 16 weeks
B) 26 weeks
C) 36 weeks
D) 46 weeks

7. AJ runs at a constant speed for 36 yards. If it takes 20 seconds to run the first 12 yards, which is the equation that can be used to find the time (**t)** it takes the AJ to run the 36 yards?

A) 12/36 = 20/**t**
B) 12/36 = **t**/20
C) 12/20 = 36/**t**
D) 12/20 = **t**/36

8. Eighteen is more than 4 times another number can be shown by the inequality ***18 > 4n***. What number could possibly make this a true statement? **(MGSE6.EE.5)**

A) 4
B) 5
C) 6
D) 7

9. Which of the following represent equivalent expressions? **(MGSE6.EE.4)**

A) $x + x + x = 4x$
B) $x + x + 7x = 7 + 3x$
C) $y + 8 + y + y = y^3 + 6$
D) $f + 9 + f + f = 3f + 9$

10. Ms. Sessions fills water and soda machines in front of grocery stores. In the machine, there are two types of soda: Dr. Pepper and Sprite. If Ms. Sessions puts 18 cans of Dr. Pepper and 22 cans of Sprite in an empty machine, what is the ratio of Sprite to all the cans in the machine? **(MGSE6.RP.1)**

A) 18:22
B) 9:20
C) 18:40
D) 11:20

APPENDIX J

Teacher Consent Form

UNIVERSITY OF GEORGIA
CONSENT FORM
INFLUENCE OF TEACHER PREFESSIONALISM IN ATTIRE ON MIDDLE SCHOOL STUDENTS

Researcher's Statement
We are asking you to take part in a research study. Before you decide to participate in this study, it is important that you understand why the research is being done and what it will involve. This form is designed to give you the information about the study so you can decide whether to be in the study or not. Please take the time to read the following information carefully. Please ask the researcher if there is anything that is not clear or if you need more information. When all your questions have been answered, you can decide if you want to be in the study or not. This process is called "informed consent." A copy of this form will be given to you.

Principal Investigator: Dr. John Mativo
Career and Informational Studies
jmativo@uga.edu
(706) 583-8107

Purpose of the Study
Teacher attire fluctuates from business professional to casual dress. The purpose of this study is to research the effects teacher dress has on student behavior and academic achievement in middle school students. You are being asked to participate based on inclusion criteria of the study of behavior data and/or scores on math quizzes over a two-week period.

Study Procedures
If you agree to participate, you will be asked to ...

Dress in either professional dress or casual dress for a one-week period, then dress the other way for one week. The length of this study will last for two one-week periods, consecutively or non-consecutively, of similar weeks (no extra activities, fire drills, etc.).

Retrieve de-identified or averaged data from fall semester to be used as a control including average scores from weekly math quizzes and behavior incidents. Record new data from each of the two weeks of the study to be used in comparison with data from fall semester.

Keep this study confidential and not inform students of the study nor discuss the teacher's choice of dress.

Be among eight teachers from sixth grade that will be assigned to one of two groups: with four participants from group one to dress in business professional attire for one week. Four participants from group two will be dressed very casually for the same week. Week two will include the same participants. The participants from group one will be dressed very casually for week two. Participants from group two will be dressed in business professional attire during the same week.

Answer interview questions that will be given after the two weeks of data collection have concluded. The questionnaire will consist of five questions about the study including behavior differences and any comments about teacher attire made by the students. The interview may last approximately fifteen minutes and will be conducted during planning time or after school.

Not alter teaching styles for this study. The independent variable manipulated will be type of clothing worn by instructors. The dependent variables will be scores on weekly quiz and behavioral data collected.

Photographs of attire may be taken and used without identification of teacher participants only.

Risks and discomforts

Teacher participants may include mild discomfort for possibly altering their form of dress to more casual or professional attire. We do not anticipate any risks from participating in this research.

Benefits

Benefits from this project may give insight on the effects of teacher professionalism on student behavior and academic achievement. Teacher participants may benefit from the study by increasing student quiz scores and reducing undesirable student behavior. Information may be used to help design teacher dress codes in local school systems and improve the image of teacher professionals.

Privacy/Confidentiality

Data collected will not include personal information that could identify any participants directly or indirectly. The research team of Dr. John Mativo and Tonia Harbin will not release identifiable results of the study to anyone other than individuals working on the project without your written consent unless required by law. Students will not be identified individually and names will not be published.

Taking part is voluntary

Your involvement in the study is voluntary, and you may choose not to participate or to stop at any time without penalty or loss of benefits to which you are otherwise entitled. Your decision to participate or not will have no bearing on your employment or employment evaluations. If you decide to stop or withdraw from the study, the information/data collected from or about you up to the point of your withdrawal will be kept as part of the study and may continue to be analyzed.

If you have questions

The main researchers conducting this study are Dr. John Mativo, a professor at the University of Georgia, and Tonia Harbin, a graduate student at the University of Georgia. Please ask any questions you have now. If you have questions later, you may contact Dr. John Mativo at jmativo@uga.edu or at (706) 583-8107. If you have any questions or concerns regarding your rights as a research participant in this study, you may contact the Institutional Review Board (IRB) Chairperson at 706.542.3199 or irb@uga.edu.

Research Subject's Consent to Participate in Research:
To voluntarily agree to take part in this study, you must sign on the line below. Your signature below indicates that you have read or had read to you this entire consent form, and have had all of your questions answered.

Dr. John Mativo	_____	_____
Name of Researcher	Signature	Date
_____	_____	_____
Name of Participant	Signature	Date

Please sign both copies, keep one and return one to the researcher.

APPENDIX K

Teacher Interview Questions

1. Did you feel any different than average weeks wearing “professional” or “casual” clothing?

2. Did you notice any difference in the behavior of the students during the study weeks? If so, what was the difference and which type of clothing were you wearing?

3. Did students ask questions about the way you were dressed during the study? If so, what were the student’s comments or questions?

4. What is your opinion about how teacher professionalism and attire affects student behavior and academic achievement?

5.What are other factors that could have an impact on student behavior and academic achievement?

APPENDIX L

Student Interview Questions

1. What were the changes you noticed in the clothing types your teachers were wearing over the past few weeks? What about changes in your teacher's behavior?

2. How did it make you feel to see your teacher "dressed up" or "not being dressed up"?

3. How would you describe your class's reaction to seeing your teacher "dressed up" or "not being dressed up"?

4. Of the two weeks your teacher was either "dressed up" or "not being dressed up", how did it affect you taking the weekly math quiz?

5. How do you think teachers should dress and behave when teaching middle school students?

APPENDIX M

Parental Permission Form

UNIVERSITY OF GEORGIA
PARENTAL PERMMISSION FORM
INFLUENCE OF TEACHER PREFESSIONALISM IN ATTIRE ON MIDDLE SCHOOL STUDENTS

Researcher's Statement
We are asking your child to take part in a research study. Before you decide to allow your child to participate in this study, it is important that you understand why the research is being done and what it will involve. This form is designed to give you the information about the study so you can decide whether to allow your child to be in the study or not. Please take the time to read the following information carefully. Please ask the researcher if there is anything that is not clear or if you need more information. When all your questions have been answered, you can decide if you want to allow your child to be in the study or not. This process is called "informed consent." A copy of this form will be given to you.

Principal Investigator: Dr. John Mativo
Career and Informational Studies
jmativo@uga.edu
(706) 583-8107

Purpose of the Study
Teacher attire fluctuates from business professional to casual dress. The purpose of this study is to research the effects teacher dress has on student behavior and academic achievement in middle school students. Some de-identified student data will be collected but the student name will not be recorded as the data is an average of class math and discipline reports. You are being asked to allow your child to answer interview questions based on inclusion criteria of the study of behavior data and/or scores on math quizzes over a two-week period.

Study Procedures
Only one student per class will be randomly chosen to participate in the study. If you agree to allow your child to participate, your child will be asked to answer interview questions that will be given after two weeks of the teachers wearing business professional or casual dress. The questionnaire will consist of five questions about the study including observed behavior differences by the student and questions regarding scores received on math quiz assessment. This interview will take place during connections time and should only last approximately twenty minutes.

Risks and discomforts
We do not anticipate any risks from participating in this research.

Benefits
Benefits from this project may give insight on the effects of teacher professionalism on student behavior and academic achievement. Information may be used to help design teacher dress codes in local school systems and improve the image of teacher professionals.

Audio/Video Recording
Audio/Video recordings will not be used. Photographs of attire may be taken and used without identification of teacher participants only.

Privacy/Confidentiality
Data collected will not include personal information that could identify any participants directly or indirectly. The research team of Dr. John Mativo and Tonia Harbin will not release identifiable results of the study to anyone other than individuals working on the project without your written consent unless required by law.

Taking part is voluntary
Your child's involvement in the study is voluntary, and you may choose not to allow your child to participate or to stop your child's participation at any time without penalty or loss of benefits to which you or your child are otherwise entitled. Your decision to allow your child to participate or not will have no bearing on their grades or class standing.

If you decide to stop or withdraw your child from the study, the information/data collected from or about your child up to the point of your child's withdrawal will be kept as part of the study and may continue to be analyzed.

If you have questions
The main researchers conducting this study are Dr. John Mativo, a professor at the University of Georgia, and Tonia Harbin, a graduate student at the University of Georgia. Please ask any questions you have now. If you have questions later, you may contact Dr. John Mativo at jmativo@uga.edu or at (706) 583-8107. If you have any questions or concerns regarding your child's rights as a research participant in this study, you may contact the Institutional Review Board (IRB) Chairperson at 706.542.3199 or irb@uga.edu.

Research Subject's Consent to Participate in Research:
To voluntarily agree to allow your child to take part in this study, you must sign on the line below. Your signature below indicates that you have read or had read to you this entire consent form, and have had all of your questions answered.

Your Child's Name: _____

Your Signature: _____ Date _____

Your Printed Name: _____

Signature of Researcher: _____ Date _____

Printed Name of Researcher: **Dr. John Mativo**

Please sign both copies, keep one and return one to the researcher.

APPENDIX N

Minor Assent Form

Assent Script/Form for Participation in Research
INFLUENCE OF TEACHER PREFESSIONALISM IN ATTIRE ON MIDDLE SCHOOL STUDENTS

We are doing a research study to find out how children like you behave and learn when your teacher dresses a certain way. We are asking you to be in the study because you are in a class that had a teacher that dressed up some days and dressed sloppy on other days. If you agree to be in the study, you will be asked five questions about the week your teachers dressed up and the week your teacher did not dress up for school. Being in the study may help you understand why you do better on tests sometimes and why you get in to trouble sometimes. We also hope to learn something about reactions to teacher's clothing that will help other children in the future.

You do not have to say "yes" if you don't want to. No one, including your parents, will be mad at you if you say "no" now or if you change your mind later. We have also asked your parent's permission to do this. Even if your parent says "yes," you can still say "no." Remember, you can ask us to stop at any time. Your grades in school will not be affected whether you say "yes" or "no."

The information you give us will help us understand if you acted differently when your teachers dressed a certain way. This information will be used in a report with other student's information. No one will know how you answered the questions. We will not use your name on any papers that we write about this project so other people cannot tell who you are.

You can ask any questions that you have about this study. If you have a question later that you didn't think of now, you may contact Dr. John Mativo at jmativo@uga.edu or at (706) 583-8107 or talk with Mrs. Harbin at Bear Creek Middle School.

Name of Child: _____ **Parental Permission on File:** ☐ Yes ☐ No

(For Written Assent)
Signing here means that you have read this paper or had it read to you and that you are willing to be in this study. If you don't want to be in the study, don't sign.

Signature of Child: _____ **Date:** _____

(For Verbal Assent)
Indicate Child's Voluntary Response to Participation: ☐ Yes ☐ No

Signature of Researcher: _____ **Date:** _____

APPENDIX O

BEAR CREEK MIDDLE SCHOOL

School Uniforms

What can we wear?

ITEMS	FEMALES	MALES	COLORS
Shirts/Tops: No hoods Plain Colors Only School Logos Optional	Collared polo shirts: long-or short-sleeved Oxford type button up	Collared polo shirts: long-or short-sleeved Oxford type button up	Solid Colors: Black, White, Grey, Dark Green
Pants/Bottoms: No sweatpants No leggings/Yoga pants No denim color	Knee-length shorts Knee-length skirts Knee-length skorts Capri/Crop pants Khaki/black colored jeans Khaki/black corduroys	Knee-length shorts Khaki/black colored jeans Khaki/black corduroys Khaki/black cargo pants	Khaki Black
Tights:	Must cover foot No leggings	N/A	Solid Colors: Black, White, Grey, Dark Green
Belts:	Not required	Not required	
Shoes:	No flip-flops No slippers/house shoes	No flip-flops No slippers/house shoes	N/A
Socks:	Must be solid color	Must be solid color	Solid Colors: Black, Grey, White, Dark Green
Sweaters/Jackets: No Pullovers(sweatshirts) Hoods cannot be worn No Large Emblems or Logos	Cardigans Zip-up sweatshirt Vests	Cardigans Zip-up sweatshirt Vests	Solid Colors: Black, Grey, White, Dark Green
Scarves: Cannot be distracting	Must be school colors only	N/A	Black, Grey, White, Dark Green
Headgear:	Headgear is prohibited. No hats or bandanas. Sunglasses are not allowed. Earphones/earbuds should not be visible.		

Dress Code: The purpose of this dress code is to assist administrators, teachers, students, and parents in fulfilling the mission of Barrow County Schools to provide all students quality educational opportunities that enable them to become successful, responsible, and contributing citizens. To accomplish this mission, the learning environment must be one that is safe, disciplined, and free of distractions. Therefore, the dress code regulations are not designed to inhibit personal taste but to encourage learning, good behavior, and safety. If you come to school wearing clothing/jewelry that creates a disruption to the learning environment and/or is in violation of any of the rules, you will be asked to call your parent/guardian to bring appropriate clothes to wear. **Remember, always consider the outer layer of clothing for dress code compliance.**

APPENDIX P

Debriefing Form

UNIVERSITY OF GEORGIA
DEBRIEFING FORM

Influence of Teacher Professionalism in Attire on Middle School Students

Thank you for allowing your child to participate in this research study. For this study, it was important that we withhold some information from your child about some aspects of the study. Now that your child's participation is completed, we will describe the withheld information to you, why it was important, answer any of your questions, and provide you with the opportunity to make a decision on whether you would like to have your child's data included in this study.

What you should know about this study
Data was collected on behavior and scores from the weekly math quiz using unidentifiable markers. Students could not be informed of the study as it may have skewed the results. Student perceptions about teacher attire must be natural which may have been compromised if students were aware of the study. The study included manipulating the attire worn by teachers of middle school students in the sixth grade. Although not directly involving the students, teachers were dressed either professionally or casually to research student perceptions and behavior resulting from teacher attire. Selected students answered brief interview questions after data was collected, also using unidentifiable markers.

Right to withdraw data
You may choose to withdraw the data your child provided prior to debriefing, without penalty or loss of benefits to which you are otherwise entitled. Please initial below if you do, or do not, give permission to have your child's data included in the study:

_____I give permission for the data collected from or about my child to be included in the study.

_____I DO NOT give permission for the data collected from or about my child to be included in the study.

If you have questions
The main researcher conducting this study is Dr. John Mativo, a professor at the University of Georgia's Department of Career and Informational Studies and Tonia Harbin, a graduate student at the University of Georgia. Please ask any questions you have now. If you have questions later, you may contact Dr. John Mativo at jmativo@uga.edu or at 706-583-8107. If you have any questions or concerns regarding your rights as a research participant in this study, you may contact the Institutional Review Board (IRB) Chairperson at 706.542.3199 or irb@uga.edu.

Your signature below indicates that you have been debriefed, and have had all of your questions answered.

Dr. John Mativo	_____	_____
Name of Researcher	Signature	Date
_____	_____	_____
Name of Participant	Signature	Date

Please sign both copies, keep one and return one to the researcher.

APPENDIX Q

Field Notes on Teacher Attire

Week 1 Teacher Attire Field Notes

Week 1	Team 1: Casual		Team 2: Professional	
	Teacher/Subject	Attire	Teacher/Subject	Attire
Monday	1-1 /Math	Gray T-shirt Stretch Pants Tennis Shoes	1-2 /Math	Black Slacks Blouse Dress Jacket Dress Flats
	2-1 /Science	Jeans Western Boots L/S UGA T-shirt	2-2 /Science	Grey Polo Khaki Slacks Wallaby Shoes
	3-1 /Language Arts	Jeans Black L/S T-shirt Toms Shoes	3-2 /Language Arts	Twill Slacks Blouse Brown Blazer Dress Boots
	2-1 /Social Studies	Gray Jogging Suit Tennis Shoes	4-2 /Social Studies	Black Skirt Black Tights/Heels Purple Sweater

Week 1	Team 1: Casual		Team 2: Professional	
	Teacher/Subject	Attire	Teacher/Subject	Attire
Tuesday	1-1 /Math	Stretch Pants Baseball Jersey Tennis Shoes	1-2 /Math	Black Pants Dress Jacket Blouse Dress Flats
	2-1 /Science	Jeans Western Boots L/S Rodeo T-shirt	2-2 /Science	Green Button-Down Shirt Brown Slacks Wallaby Shoes
	3-1 /Language Arts	Jeans Black Stretch Top Toms Shoes	3-2 /Language Arts	Red Pants Black Dress Jacket Black Flats
	4-1 /Social Studies	Black Jogging Suit Orange Polo Tennis Shoes	4-2 /Social Studies	Black Skirt Gray Sweater Black Heels

Week 1	Team 1: Casual		Team 2: Professional	
	Teacher/Subject	Attire	Teacher/Subject	Attire
Wednesday	1-1/Math	Mixed Color Shirt Jeans Tennis Shoes	1-2/Math	Striped Dress Gray Tights Dress Shoes
	2-1/Science	Jeans Western Boots L/S Horse T-shirt	2-2/Science	Purple Button-Down Shirt Blue Slacks Wallaby Shoes
	3-1/Language Arts	Jeans Red L/S T-shirt Tennis Shoes	3-2/Language Arts	Dress Dress Jacket Heels
	4-1/Social Studies	Black Jogging Suit Blue Polo Tennis Shoes	4-2/Social Studies	Black Skirt Gray Turtleneck Sweater Dress Shoes

Week 1	Team 1: Casual		Team 2: Professional	
	Teacher/Subject	Attire	Teacher/Subject	Attire
Thursday	1-1/Math	Baseball Jersey Jeans Black Tennis Shoes	1-2/Math	Colored Top Brown Slacks Dress Shoes Bead Necklace
	2-1/Science	Black Jogging Pants Red L/S T-shirt Tennis Shoes	2-2/Science	Plaid Button-Down Shirt Khaki Slacks Wallaby Shoes
	3-1/Language Arts	Jeans T-shirt Toms Shoes	3-2/Language Arts	Navy Slacks Blue Blouse Jean Jacket Navy Shoes
	4-1/Social Studies	Jogging Suit White Falcons Polo Tennis Shoes	4-2/Social Studies	Black Pants Striped Jacket Blouse Dress Shoes

Week 1	Team 1: Casual		Team 2: Professional	
	Teacher/Subject	Attire	Teacher/Subject	Attire
Friday	1-1 /Math	*Jeans Blue Sweater Tennis Shoes	1-2 /Math	Black Pants Bl Dot Blouse Grn Cardigan Black Dress Shoes
	2-1 /Science	Gray Yoga Pants Green T-shirt Green Hoodie Tennis Shoes	2-2 /Science	Plaid Button-down Shirt Tie Khaki Pants Wallaby Shoes
	3-1 /Language Arts	Black Sweatshirt Blk Jog Pants Tennis Shoes	3-2 /Language Arts	Black Slacks Grn Dr Shirt Bl Cardigan Dress Boots
	4-1 /Social Studies	Sweat suit Green Polo Tennis Shoes	4-2 /Social Studies	Cropped Pants White Sweater Dress Shoes

*Substitute Teacher

Week 2 Teacher Attire Field Notes

Week 2	Team 1: Professional		Team 2: Casual	
	Teacher/Subject	Attire	Teacher/Subject	Attire
Monday	1-1 /Math	Long Blk Skirt Blouse Blue Jacket Thong Sandals	1-2 /Math	Blue Jersey Jeans Tennis Shoes
	2-1 /Science	Green L/S Blouse Black Skirt Black Pumps	2-2 /Science	Gray Thermal Henley Shirt Cargo Pants Tennis Shoes
	3-1 /Language Arts	Black Slacks White Sweater Chevron Top Black Flats	3-2 /Language Arts	Gray Polo Shirt Athletic Jacket Jeans Tennis Shoes
	4-1 /Social Studies	White Dr Shirt Tie Black Slacks Black Dr Shoes	4-2 /Social Studies	Jeans Blue Cardigan Str Blue Shirt Dress Shoes

Week 2	Team 1: Professional		Team 2: Casual	
	Teacher/Subject	Attire	Teacher/Subject	Attire
Tuesday	1-1 /Math	Long Black Skirt Leopard Blouse Thong Sandals	1-2 /Math	Jersey Shirt Jeans Converse Tennis Shoes
	2-1 /Science	White Blouse Black Slacks Blazer Black Heels	2-2 /Science	Cargo Pants Rust T-shirt Bl Athl Jacket Tennis Shoes
	3-1 /Language Arts	Khaki Pants Green Striped Blouse Dress Shoes	3-2 /Language Arts	Jeans Tennis Shoes Athletic Jacket White T-shirt
	4-1 /Social Studies	Blue Button-Down Shirt/Tie Khaki Slacks Dress Shoes	4-2 /Social Studies	Jeans Red Shirt Scarf Casual Flats

Week 2	Team 1: Professional		Team 2: Casual	
	Teacher/Subject	Attire	Teacher/Subject	Attire
Wednesday	1-1 /Math	Long Black Skirt Colorful Top Thong Sandals	1-2 /Math	Braves Jersey Jeans Red Converse Tennis Shoes
	2-1 /Science	Blue/Blk Skirt Black Blazer Black Sweater Black Pumps	2-2 /Science	L/S T-shirt Brown Cargo Pants Wallaby Shoes
	3-1 /Language Arts	Grey Knit Shirt White Cardigan Black Pants Dress Shoes	3-2 /Language Arts	Jeans Athletic Jacket White T-shirt Tennis Shoes
	4-1 /Social Studies	Black Slacks Gray Button-Down Shirt/Tie Gray Dr Pants	4-2 /Social Studies	Jeans Braves T-shirt Tennis Shoes Jeans

Week 2	Team 1: Professional		Team 2: Casual	
	Teacher/Subject	Attire	Teacher/Subject	Attire
Thursday	1-1 /Math	Black Slacks Multi Top Black Blazer Black Dr Shoes	1-2 /Math	Bulldog Jersey Blk Yoga Pants Red Converse Tennis Shoes
	2-1 /Science	Burgundy Lace Dress Gray Blazer Gray Pumps	2-2 /Science	Black T-shirt Cargo Pants Wallaby Shoes
	3-1 /Language Arts	Khaki Dr Pants White Cardigan Chev Blouse Dress Shoes	3-2 /Language Arts	Black/Gray Jersey Jeans Tennis Shoes
	4-1 /Social Studies	White Button-Down Shirt/Tie Gray Dr Slacks Blk Dr Shoes	4-2 /Social Studies	White L/S T-shirt Jeans Tennis Shoes

Week 2	Team 1: Professional		Team 2: Casual	
	Teacher/Subject	Attire	Teacher/Subject	Attire
Friday	1-1 /Math	Long Blk Skirt Aqua Paisley Top Thong Sandals	1-2 /Math	Green T-shirt Jeans Tennis Shoes
	2-1 /Science	Blk Skirt Blk Twd Blazer Blouse Black Pumps	2-2 /Science	Black/Gray T-shirt Jeans Wallaby Shoes
	3-1 /Language Arts	Gray Top Black Pants Black Sandals	3-2 /Language Arts	Black L/S T-Shirt Jeans Tennis Shoes
	4-1 /Social Studies	Aqua Blue But-Down Shirt Tie Khaki Slacks Dress Shoes	4-2 /Social Studies	Jeans Flat Shoes L/S Black T-shirt