ABSTRACT

BELLEZZA, SHANNON WEEMS. Teacher Efficacy for Behavior Management: An Examination of the Construct and its Predictors. (Under the direction of Dr. Edward Sabornie).

In a meta-analysis, Wang, Haertel, and Walberg (1993) found that out of 228 variables, classroom management had the greatest influence on student achievement. It is perplexing, then, that classroom management is consistently the one area in which teachers report the least expertise (Maag, 2001; Milner & Tenore, 2010; Ritter & Hancock, 2007; Sokal, Smith, & Mowat, 2003). The construct Classroom Management, however, is not uniformly defined and may mean different things to different people. It is important to understand the underlying construct so that teachers’ feelings of expertise for it can be measured in the most precise way in order to more effectively target intervention.

The purpose of this mixed-methods study was to do an in-depth examination of the construct efficacy for classroom management as it is measured on the Teachers’ Sense of Efficacy Scale, as well as to discern predictors for and group differentiators of this construct. Because efficacy is domain-dependent, whether the construct was composed of two sub-factors reflecting two different skill sets—Efficacy for Proactive Behavior Management and Efficacy for Reactive Behavior Management—was investigated. A total of 828 K-12 full-time public school teachers from North Carolina participated in this study. All participants completed an online survey that consisted of a demographic section, the Teachers’ Sense of Efficacy Scale, and an inventory of teachers’ confidence in using certain types of behavior management methods. In addition, 11 teachers also participated in one-on-one interviews to provide supplemental qualitative data. Exploratory factor analyses were conducted on the Teachers’ Sense of Efficacy Scale and the Behavior Management Confidence Scale.
Predictors and group differences examined included grade level, type of teaching degree, years of prior teaching experience, whether teachers held special education licensure, and whether teachers were in a school that had a Positive Behavioral Intervention and Support program, the latter two being of particular interest due to their hypothesized effect on efficacy for behavior management. Results showed that there was evidence of separation between Efficacy for Proactive Behavior Management and Efficacy for Reactive Behavior Management (which was called Efficacy for Management of Problematic Behavior), and that the only significant predictors and group differentiators were having a special education license and years of prior teaching experience. Additionally, these relationships were mediated by teachers’ confidence in using behavior management techniques. Qualitative data from the interviews provided both corroborating and explanatory evidence. Implications of the findings are discussed, particularly as they relate to recommendations for teacher training.
Teacher Efficacy for Behavior Management: An Examination of the Construct and its Predictors

by
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DEDICATION

To my father, Earl Weems, who raised me singlehandedly and worked tirelessly to afford to me every opportunity possible. You never let me think that anything less was expected of me or possible.
BIOGRAPHY

Shannon Weems Bellezza was born on April 19, 1978 in Morristown, New Jersey, though grew up in Salisbury, North Carolina. After graduating from West Rowan High School in 1995, Shannon attended UNC-Chapel Hill, earning a B.A. in Psychology in 1999. As a lateral-entry special education teacher, Shannon began work on her M.Ed. in Special Education at North Carolina State University (completed in 2006) where she met her husband, Sam Bellezza. It was also during this time that Shannon fell in love with the science of behavior management and was inspired to pursue a doctorate.

She lives in Raleigh, North Carolina with her husband, her son Paolo, and their three dogs. She enjoys running, traveling, live music, and volunteering at the SPCA with her son.
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CHAPTER 1

INTRODUCTION

Background

Currently considered, perhaps, the best way of measuring teachers’ feelings of expertise for classroom management is the Teachers’ Sense of Efficacy Scale (TSES) (Tschannen-Moran & Hoy, 2001). Based on years of past research, the TSES measures teacher efficacy in three areas for practicing teachers: instructional strategies, student engagement, and classroom management (Tschannen-Moran & Hoy). The theoretical underpinning of the TSES represents a unification of Bandura’s (1977) concept of self-efficacy and Rotter’s (1966) social learning theory. In short, teacher efficacy is a teacher’s belief that he or she can cause desirable outcomes in the classroom, such as student engagement and achievement (Tschannen-Moran & Hoy, 2001; Tschannen-Moran, Woolfolk-Hoy, & Hoy, 1998). Because efficacy is a construct that is domain-specific and thus subject to high intraindividual variability across contexts, it is important that measures of teacher efficacy account for specificity in order to provide a valid measurement (Bandura, 1997). It should be noted, however, that though self-efficacy beliefs are an estimation of one’s competence in a given situation, they are not necessarily reflective of actual competence (Tschannen-Moran, et al.). Despite this, teacher efficacy is important due to its correlations with positive student and teacher outcomes across all grade levels (Tschannen-Moran, et al.). The converse, however, is also true: low teacher efficacy is related to unfavorable teacher and student outcomes. For example, in a large meta-analysis, Aloe, Amo, and Shanahan (2013) found that low efficacy for classroom management is
significantly related to teacher burnout. At a time when teacher burnout is a considerable problem and when some states are seeing both high rates of teacher attrition and significantly fewer students enrolling in teacher education programs (Pucella, 2011), teacher efficacy—and in particular, teacher efficacy for classroom management—is an important area of study.

The research presented in this dissertation examined the construct of teacher efficacy for classroom management in depth, attempting to account for the appropriate amount of specificity and to discover whether it is useful to conceptualize the construct as multifaceted. Teacher-level predictors and group differences for management efficacy were examined, and several analyses assessed the relationship of management efficacy and management competence. Finally, data collected via qualitative inquiry were explored as a supplement to the quantitative results.

**Significance of the Study**

While there are many studies that have used data gathered from the TSES, there is a paucity of research that correlates those data with the types of behavior management methods that teachers feel confident in using. In addition, there is growing evidence that the factor of Efficacy for Classroom Management may be more accurately measured and conceptualized as comprised of the sub factors Efficacy for Proactive Behavior Management (i.e., rules, routines, procedures) and Efficacy for Reactive Behavior Management (i.e., what teachers do to deal with students when they have broken the rules). Analyses in the current study included the construct of efficacy for classroom management in terms of proactive and reactive behavior management. Although past research has not shown many significant results using demographic variables as predictors of teacher efficacy, no study has analyzed
differences in management efficacy between teacher licensure groups, particularly between those with and without special education licensure. Adding to extant research, the current study analyzed additional comparisons among teachers including education level as well as whether teachers as participants were in schools that use Positive Behavioral Intervention and Support programs. The mixed-methods design of this study also shed light on the phenomenon that efficacy is not necessarily correlated with actual competence—one would expect that teachers who are both truly efficacious and competent classroom managers would indicate that they are confident in using research-validated effective methods of behavior management. In addition, ratings on the other subscales of the TSES were compared to teachers’ ratings of Efficacy for Classroom Management—significantly lower classroom management ratings may be reflective of an incongruent perception of efficacy and competence because, as will be illustrated, effective classroom management is a prerequisite for effective student engagement and effective instructional strategies. Finally, qualitative data provided a supplement to the quantitative data in order to tell a more robust story about teachers’ experience of behavior management.

**Research Questions**

1. Is teacher Efficacy for Classroom Management a unitary construct or is it better conceptualized as the combination of two sub factors: Efficacy for Proactive Behavior Management and Efficacy for Reactive Behavior Management?

2. Are there any significant teacher-level predictors of teachers’ Efficacy for Classroom Management scores, particularly for licensure and in-school settings where Positive Behavioral Intervention and Support (PBIS) is used?
3. Are teachers’ ratings of efficacy reflective of competency?
   a. Do teachers’ ratings of Efficacy for Classroom Management predict their confidence in using effective methods associated with both Applied Behavior Analysis (ABA) and PBIS?
   b. Are teachers’ ratings for Efficacy for Classroom Management congruent with their ratings for Efficacy for Instructional Strategies and Efficacy for Student Engagement?

4. What are teachers’ experiences of behavior management? What can they tell us that the numbers cannot?

**Overview of Methodology**

This study utilized a mixed-methods design. Quantitative analyses were used to answer Research Questions 1 through 3 and included exploratory factor analysis to more closely examine the construct of efficacy for classroom management, and multivariate analyses designed to discern predictors of and differentiate groups based on Efficacy for Classroom Management scores. Qualitative data were collected via a semi-structured interview to answer Research Question 4 and provided supplementary information about the first three research questions that would not have been possible through quantitative analyses alone.

**Definition of Terms**

Within a majority of the literature, teacher efficacy is often referred to by the following interchangeable terms: teachers’ sense of efficacy, teacher efficacy, and teacher self-efficacy. Unless otherwise noted, the terms herein will be used interchangeably to refer
to the same construct. When referring to publications about the construct, the term(s) chosen by the original authors will be used.

Likewise, the term *evidence-based* is frequently used in reference to educational practices and has a specific legal meaning as per the No Child Left Behind Act of 2001. According to the U.S. Department of Education (2002), a practice is evidence-based if it is supported by “professional wisdom” or empirical research evidence. *Professional wisdom* can be attained through experience, consensus, or observation (U.S. Department of Education). *Empirical evidence* is defined as “scientifically-based research” from a social science field as well as “empirical data on performance used to compare, evaluate, and monitor progress” (U.S. Department of Education).

Several terms used within this study have a general meaning outside of ABA, but when used as ABA terminology can mean something very different and very specific. These terms are defined here (from Alberto & Troutman, 2013, unless otherwise noted):

**Reinforcement**—Any consequence following a behavior that strengthens, maintains, or increases the probability of occurrence of that behavior. Reinforcers can be primary (of biological importance and inherently motivating), such as edibles or sensory reinforcers; or secondary such as tangible rewards (stickers, toys, etc.), privilege or activity rewards (a homework pass, extra recess time), generalized reinforcers (tokens or points which may or may not be redeemable for another type of reinforcer), or social reinforcers (high five, verbal praise). Reinforcement may be naturally occurring within the environment (e.g., attention from classmates) or arranged. Oftentimes naturally-occurring reinforcers have a stronger effect on behavior than arranged reinforcers, particularly in school settings. Positive
reinforcement refers to anything that is added to the environment that increases, strengthens, or maintains a behavior. Negative reinforcement refers to anything that is withdrawn from the environment that increases, strengthens, or maintains a behavior.

**Punishment**—Any consequence following a behavior that decreases the probability or occurrence of that behavior. Positive punishment is anything that is added to the environment that decreases the probability of occurrence of a behavior such as anything that causes pain or discomfort (primary punishers) or conditioned punishers such as verbal reprimands or extra homework. Negative punishment is anything that is removed from the environment that decreases the probability of occurrence of a behavior such as time-out from positive reinforcement, response cost (removal or points or tokens that have been earned), or extinction (terminating positive reinforcement for a behavior).

**Differential reinforcement**—A process using a combination of punishment and reinforcement to teach replacement behaviors (Maag, 2004). An inappropriate behavior is punished (usually by withdrawing reinforcement) in some way while at least one alternative replacement behavior is reinforced (Maag).

**Functional Behavior Assessment**—The process of gathering data to determine the function of a behavior. Data are collected about a behavior’s antecedents (which may include the time of day, setting, and preceding events, among others), the behavior itself, and the events following the behavior. After enough data are collected, a hypothesis about the function of the behavior can be made.

**Functional Behavior Analysis**—A process that may be used if a hypothesis about a behavior’s function cannot be made following a functional behavior assessment or if the
relationship between antecedents, behavior, and consequences needs to be verified, clarified, or refined. In a functional behavior analysis, practitioners can alter the antecedents and consequences occasioning the target behavior and collect data on the occurrence of the behavior.
CHAPTER 2
REVIEW OF THE LITERATURE

Teacher Efficacy

Teacher efficacy is a construct that has evolved over the years and has proven to be a difficult construct to define and to measure (Tshannen-Moran & Hoy, 2001). Teacher self-efficacy is an important construct in educational research because it has been correlated with such student outcomes as achievement (Armor, et al., 1976; Kennedy & Shiel, 2010; Swackhamer, Koellner, Basile, & Kimbrough, 2009) and motivation (Midgley, Feldlaufer, & Eccles, 1989). In fact, it has been suggested that the level of collective teacher efficacy—the confidence teachers have that the entire faculty can achieve desirable goals related to student outcomes—within a school may be a stronger predictor of student achievement than the socioeconomic status of its students (Bandura, 1993; Goddard, Hoy, & Woolfolk Hoy, 2000). Teacher efficacy is also correlated with teacher characteristics including effort used in teaching, time spent on academic instruction (Gibson & Dembo, 1984), goal setting, level of aspiration, openness to new ideas, willingness to try out new methods in order to meet students’ needs, stress level, professional commitment and burnout (Brouwers & Tomic, 2000; Martin, Sass, & Schmitt, 2012), job satisfaction, and preference for use of positive strategies for classroom management (Emmer & Hickman, 1991; Moe, Pazzaglia, & Ronconi, 2010; Tschannen-Moran et al., 1998).

Factors That Influence Teacher Efficacy

Raudenbush, Rowan, and Cheong (1992) found several within-teacher predictors of efficacy. They had high school teachers complete a teacher efficacy questionnaire for each
class they taught as well as indicate characteristics of each class related to both the class and to themselves as teachers specific to each class. They found that teachers felt differentially efficacious for each class depending upon how prepared the teacher felt for a particular class period, which track-type a class was (honors vs. non-honors, academic vs. non-academic; honors and academic classes were associated with higher teacher efficacy), the grade level of a class (the higher the grade level, the higher a teacher’s efficacy), class size (the larger the class size, the more efficacious teachers rated themselves), and student engagement (the more engaged teachers rated the students in the class, the more efficacious they rated themselves to teach it).

Hoy and Spero (2005) found that, for beginning teachers, perceptions of efficacy change over time, rising during the preparation phase prior to practicum and into student teaching and then falling, somewhat dramatically, during the first year of teaching. Additionally, the more experience a teacher has, the more stable his or her perception of efficacy is likely to become (Tschannen-Moran et al., 1998). This change in efficacy, particularly the drop during the first year of teaching, has dramatic implications related to teacher burnout and attrition.

Between-teacher predictors of efficacy have been studied in more depth than within-teacher predictors. In general, novice teachers report lower levels of efficacy than experienced teachers (Tschannen-Moran & Hoy, 2007). Though several studies have found that demographic variables, such as teacher gender, race, and licensure are not predictive of teacher efficacy for either novice or experienced teachers (Raudenbush et al., 1992), other between-teacher predictors of efficacy have been found to vary depending upon whether
respondents were novice or experienced teachers (Tschannen-Moran & Hoy, 2007). For example, for novice teachers, high levels of resources and support (from colleagues, parents, and community) were more strongly correlated with efficacy than for experienced teachers, but grade level was more strongly (negatively) correlated with efficacy for experienced teachers than for novice teacher (Tschannen-Moran & Hoy, 2007). Interestingly, this study also showed that administrator support did not make a significant contribution to teacher efficacy for either novice or experienced teachers (Tschannen-Moran & Hoy, 2007).

The History of Teacher Efficacy as a Construct

Rotter’s social learning theory. Rotter’s (1966) social learning theory posits that people choose their behaviors based on both their expectancy that the behaviors will lead to particular outcomes and the desirability of those outcomes. Central to this theory is the notion of locus of control: people can be classified along a continuum as to whether they believe that achieving a particular outcome is a result of their own doing (internal locus of control) or something outside of their control, such as luck (external locus of control).

Armor et al. (1976) created the first instrument to measure teacher efficacy, consisting of only two items—one measuring a construct named “general teaching efficacy” and one measuring a construct named “personal teaching efficacy”—based on Rotter’s social learning theory. Depending upon their level of agreement with the two items, teachers were placed on the locus-of-control continuum: those who believed that environmental circumstances outweighed a teacher’s influence on student learning exhibited an external locus of control, according to researchers, whereas teachers who believed that they were capable enough to influence the learning of students despite environmental or external
obstacles exhibited an internal locus of control. Teachers who indicated that they were confident that their teaching would get positive results in student achievement despite environmental and other external obstacles (i.e., had an internal locus of control), were said to have high teacher efficacy. Subsequent studies using this instrument demonstrated positive correlations between teacher efficacy and student achievement, teachers’ goal achievement, and teachers’ use of innovative teaching methods during instructional time (Tschannen-Moran & Hoy, 2001).

**Bandura’s Self-Efficacy Theory.** According to Bandura (1994), self-efficacy is defined as, “people's beliefs about their capabilities to produce designated levels of performance that exercise influence over events that affect their lives” (p. 71). People with higher self-efficacy beliefs are more likely to try new or unfamiliar activities, undertake activities in unfamiliar settings, and are more likely to persist in difficult situations (Bandura, 1977). In a process known as *reciprocal determinism*, self-efficacy beliefs create a self-fulfilling prophecy: individuals with higher self-efficacy beliefs who persevere through adversity or in novel situations, and those with lower self-efficacy beliefs who do not attempt or who quit in unfamiliar situations, are reinforced that their assessments about themselves and their capabilities were correct, and thus bolster or weaken their perceived self-efficacy further (Tschannen-Moran & Hoy, 2007).

Bandura’s theory states that there are four sources of input for efficacy beliefs: (a) mastery experiences—performing an activity, (b) verbal persuasion—input or feedback from others, (c) vicarious experiences—seeing others perform a task, and (d) physiological arousal—interpreting one’s emotional and somatic states in anticipation or during the
performance of an activity (Bandura, 1994). Translated to teacher efficacy, the four sources of input are (a) actual teaching (mastery experiences), (b) input from colleagues, parents, administrators, students, or anyone else with regard to one’s teaching activities; information learned during teacher-education coursework including input from instructors, class discussions, or texts (verbal persuasion), (c) seeing others teach (vicarious experiences), and (d) physiological arousal. Mastery experiences provide the strongest contribution to teachers’ efficacy perceptions (Bandura, 1997). Experienced teachers have the most mastery-experience input whereas pre-service teachers rely most on verbal-persuasion input (Tschannen-Moran & Woolfolk Hoy, 2007).

Although the development of other teacher efficacy scales were guided by Bandura’s self-efficacy theory (e.g., Gibson & Dembo, 1984), Bandura developed a scale that was the first to take into account the finding that teachers’ sense of efficacy differs across situations and across skill sets (Bandura, 1997; Tschannen-Moran et al., 1998). For example, a teacher who feels highly efficacious teaching an advanced placement science course in a school with adequate resources and supportive parents may not feel as efficacious teaching a science course in a setting with students with disabilities, unsupportive parents, or in a school with inadequate instructional resources. A teacher who feels highly efficacious at crafting and executing lesson plans involving active learning, on the other hand, may not feel efficacious at direct instruction.

The notion that teacher efficacy is domain-specific is an important one: In order to validly measure teachers’ perceptions of efficacy, one must craft an instrument with the appropriate amount of specificity—a task that differs depending on the goals of the researcher.
Indeed, research and scale development in teacher efficacy has reflected this, as the construct of teacher efficacy has come to be understood as multi-dimensional. Of particular interest in the current study is the dimension of teacher efficacy for classroom management.

**Unified Definition and the Teachers’ Sense of Efficacy Scale.** The Teachers’ Sense of Efficacy Scale (TSES) (Tschannen-Moran & Hoy, 2001) was developed as a means of measuring teacher efficacy based on a definition that is a synthesis of Rotter’s and Bandura’s theories (Tschannen-Moran et al., 1998). The major theoretical foundation of the TSES is that general teacher-efficacy beliefs are most strongly affected by interpretation of Bandura’s (1997) four sources of efficacy antecedents (Tschannen-Moran et al.). Situational judgments about teacher efficacy are formed during the following processes: (a) the interaction between a teacher’s analysis of the teaching task (including their judgment about the desirability of the outcome), weighed against the assessment of resources available that facilitate or perceived obstacles that obstruct learning (external factors) and, (b) a teacher’s assessment of his or her own skills, competence, and personal traits weighed against his or her personal weaknesses (internal factors) (Tschannen-Moran et al.). The result of this interaction—a teacher’s judgment of efficacy—leads to performance or non-performance of the teaching task which then provides new sources of general teaching efficacy information (see Figure 1). This definition of teacher efficacy takes into account the distinction between a teacher’s perceived *ability* and a teacher’s perceived *capability*—the latter being the construct of interest. Ability refers only to internal factors; to a teacher’s competence in the absence of or across all contexts, whereas capability refers to the interaction between internal
and external factors; a teacher’s confidence to execute a course of action in a given context and includes a teacher’s assessment of their ability (Klassen, Tze, Betts, & Gordon, 2011). This distinction underscores the importance of specificity when measuring teacher efficacy.

The subject of extensive analysis, the TSES has been shown to have a three-factor structure for practicing teachers: Efficacy for Instructional Strategies, Efficacy for Classroom Management, and Efficacy for Student Engagement (Fives & Buehl, 2010; Heneman, Kimball, & Milanowski, 2006; Tschannen-Moran & Woolfolk-Hoy, 2001), and a one-factor structure for pre-service teachers (Fives & Buehl, 2010; Tschannen-Moran & Woolfolk-Hoy). The TSES has consistently been shown to have high reliability ($\alpha = .94$ for the whole scale, individual factor alphas range from .87-.91), and is considered to be a psychometrically-sound measurement of teacher efficacy (Tschannen-Moran & Hoy, 2001).

**The TSES in the Literature**

In addition to evaluating its psychometric properties, Heneman et al. (2006), found that the TSES was a good predictor of several teacher performance indices, including demonstration of content knowledge, differentiation to meet the needs of all students, maximizing student-engaged time, and evidence of planning and organization in lesson execution. Dixon, Yssel, McConnell, and Hardin (2014) used the TSES as one of two outcome measures and found that teachers who had had professional development in instructional differentiation felt more efficacious at it than teachers who had not.

A good deal of research with the TSES has been devoted to pre-service teachers, including examinations of its factor structure, with general consensus that a one-factor solution is best (Duffin, French, & Helen, 2012). As an outcome variable, Larson and
Goebel (2008) found that including 15 hours of field experience for students enrolled in an Applied Behavior Analysis course could increase special education pre-service teachers’ efficacy based on pre- and post-test measures. Another popular avenue of inquiry has been student teachers’ efficacy measured with the TSES. Knoblauch and Hoy (2008) found that student teachers exhibited increased efficacy following student teaching, but less so for those whose assignments were in urban schools, and that cooperating teachers’ efficacy was predictive of student teacher efficacy. Putman (2012) found that experience was a predictor of efficacy, but that novice teachers’ (with 3 or fewer years of experience) and pre-service teachers’ scores did not differ significantly. To date, no study has used the TSES to examine differences in teacher efficacy as a result of licensure or PBIS status, nor has any study entertained the idea of rethinking the factor for efficacy for classroom management.

Classroom Management

Defining Classroom Management

The construct of classroom management is viewed in many ways depending upon one’s foci. Ritter and Hancock (2007) indicated that it is generally defined as “the full range of teacher efforts to oversee classroom activities, including learning, social interaction, and student behavior” (p. 1206). Evertson and Weinstein (2005) defined it as, “the actions teachers take to create an environment that supports and facilitates both academic and social-emotional learning. Wubbels et al. (2015) have added to Evertson and Weinstein’s (2005) definition to include teachers’ “cognition and attitudes” in addition to actions, with the caveat that effectiveness is dependent upon student interpretation and facilitated by teacher-student relationships. In other words, classroom management has two distinct purposes: “it not only
seeks to establish and sustain an orderly environment so students can engage in meaningful academic learning, it also aims to enhance students' social and moral growth" (Everson & Weinstein, p. 4). O’Neill and Stephenson (2011) provided another definition of the construct in general as “establishing and maintaining the learning environment by structuring and organizing events” (p. 261). The authors further subcategorize classroom management into such components as managing materials and resources; creating and enforcing classroom rules, routines, and expectations; keeping students engaged during instruction; ensuring appropriate socialization among students; and controlling disruptive behavior (O’Neill & Stephenson). Simonsen, Fairbanks, Briesch, Myers, and Sugai (2008) defined classroom management as a three-component construct consisting of maximizing instructional time, maximizing academic engagement and achievement, and managing student behavior. However, when measuring efficacy for classroom management, how can one be sure which or how many dimensions of it we are measuring?

Even though the specifics may differ, it seems one thing that most definitions and paradigms of classroom management have in common is the component of behavior management. As such, then, behavior management is a component of the more broadly defined construct of classroom management and will be defined as those methods a teacher uses to encourage appropriate behavior and discourage and correct inappropriate behavior. Herein, the terms behavior management and classroom management will refer to two distinct constructs (behavior management being a sub-construct of classroom management) and not interchangeable entities.
Classroom and Behavior Management as Prerequisites to Instruction and Engagement

Brophy’s (2006) definition of classroom management illustrates the major importance of classroom management: “actions taken to create and maintain a learning environment conducive to successful instruction” (p.17). As such, effective classroom management is a prerequisite for instruction to even occur (Freeman, Simonsen, Briere, & MacSuga-Gage, 2013). Effective classroom and behavior management that relies on evidence-based methodology is associated with improved student outcomes and contributes significantly to student learning and development (Freeman et al., 2013; Simonsen et al., 2008). Davis and Jordan (1994) found achievement of African-American males in middle school was correlated with their teachers’ ability to be an effective and efficient classroom manager. The authors suggest that this is likely because time spent on discipline is time taken away from instruction. As one might expect, more time spent on instruction during instructional time (as opposed to additional or extended time) is correlated with higher student achievement (Launor, 1984; Smith, 1979; as cited in Corey et al., 2012). Hill, Rowan, and Ball (2005) found that for each additional 14 minutes per day of math instruction during an instructional period (rather than in addition to the regular instructional period), third graders’ achievement in math increased significantly. Furthermore, in addition to maximizing instructional time, the way the time is used is even more strongly correlated with student achievement (Berliner, 1990; Karweit, 1983; as cited in Cory et al., 2012). According to Aronson, Zimmerman, and Carlos (1999) additional school time is only beneficial if it is used for engaged instructional time (which is different from general instructional time) which, if used effectively, creates academic learning time—the only kind of time that
improves student achievement. Disruptions in the classroom caused by misbehavior impact a
teacher’s use of classroom time negatively. A study by Pressly et al. (2009) supports this
finding as well—first grade literacy teachers who were the most effective (whose students
had the highest literacy achievement scores and had the most academic engaged time during
instruction) “were characterized by excellent classroom management based on positive
reinforcement and cooperation” (p. 36) and were effective in teaching their students self-
regulation, allowing these teachers to effectively and efficiently use their time for instruction.

The Importance of Training and Experience in Classroom and Behavior Management

Knowledge of and experience using effective behavioral and classroom management
methods are crucial skills for all teachers, especially for those who serve students with
disabilities or other challenging behaviors (Simonsen, Myers, & DeLuca, 2010) which
comprises most, if not all, teachers. According to the United States Department of Education
(2013), more than 80% (i.e., 81.6%) of students with disabilities spend between 40% and
100% of their time in regular education settings. Because more regular education teachers
are serving students with disabilities in their classrooms, they may find that behavior
management methods that worked for them in the past are no longer effective (Maag, 2001).

Specialized training for teachers in meeting non-academic needs (i.e., behavioral
needs, particularly for students with problem behaviors) is associated with higher
effectiveness in both classroom management and instructional strategies for children who
exhibit problem behaviors (Alvarez, 2007). Two studies put the percentage of students who
exhibit behavior problems bothersome enough to interrupt instruction between 20% and 58%
(Kamphaus, Huberty, DiStefano, & Petoskey, 1997; Langdon, 1997). Several studies have
demonstrated that when teachers receive specialized training in behavior management and implement it successfully, the result is both improvements in target students’ behavior and in the classroom environment as a whole (Allen & Blackston, 2003; Swinson & Cording, 2002). Sawka, McCurdy, and Mannella (2002) implemented a program in an urban school that utilized training and consultation for 64 of its teachers. The program was designed as a preventive measure targeting students with and at risk for emotional and behavioral disabilities and included two training modules on behavior management. Results showed a dramatic increase in academic engagement and a sharp decrease in disruptive behaviors for students in classrooms of teachers who had participated in the program. This study also demonstrated that the teachers were not able to implement the program effectively without the consultation component—the training alone was not enough. Similarly, Shapiro et al. (1999) found that, with training and consultation, implementation of a behavior management program resulted in students with emotional and behavioral disorders successfully spending more time in regular education settings. Furthermore, teachers reported using the strategies they learned in the program with students who were not originally targeted by the intervention but who demonstrated behaviors worthy of change and reported that the strategies were highly effective.

Boyd et al. (2008) found that exemplary teacher education programs provided teachers with ample opportunities to practice what they had learned in their coursework in a clinical setting. Others have found that teachers need not only a chance to practice, but feedback directed at their attempts and opportunities to retry (Darling-Hammond, 2010; Zeichner, 1993). Teachers who were given these opportunities had students with greater
achievement gains in their first year of teaching than teachers who had not (Boyd et al.). In addition, Darling-Hammond (2006) found that teachers who experienced the preparation as described above reported high teacher efficacy than those who did not. Aloe et al. (2013) recommended that student teaching programs be restructured to include ample opportunities for student teachers to gain knowledge of behavior management based on vicarious experiences (observing expert teachers), mastery experiences (clinical immersion with plentiful opportunities to practice), and verbal persuasion (forums for student teachers to discuss their behavior management experiences and concerns). In addition, they recommend that teacher education programs provide mentors exclusively in classroom management (Aloe et al.).

Conversely, teachers without behavior management training are more likely to utilize harsher consequences for students with problem behaviors as well as to utilize interventions that they view as less complex and easier to use, though not necessarily effective (Cunningham & Sugawara, 1988; Elliott et al., 1984). Alvarez (2007) replicated results found in Cunningham and Sugawara’s research that teachers without special training for effectively managing problem behaviors reported higher levels of stress, anger, feelings of low teacher efficacy, helplessness, irritation, hurt, and feeling offended—all characteristics associated with teacher burnout (Byrne, 1994; Friedman, 1995) than teachers who had such training. In addition, Martens and Witt (2004) found that teachers who use ineffective teaching practices, including ineffective behavior-management practices, increase the likelihood that struggling students will fall even further behind when compared to teachers who relied on effective practices. Brownell and Pajares (1999) found that higher levels of
efficacy were positively correlated with teachers having had quality in-service and pre-service training that addressed (a) the unique needs of students with disabilities, (b) curricular and instructional differentiation and adaptation for students with disabilities, and (c) behavior management methods for students with disabilities.

The issue of poor training in behavior management is problematic for students with disabilities. The use of aversive punishment and seclusion as behavior control are still prevalent and not well-regulated, especially with students with disabilities (U.S. Senate Committee on Health, Education, Labor, and Pensions, 2014). Evidence of this is clear: hundreds of cases of abuse—even death—have been reported as a result of teachers using seclusion and restraint with students with disabilities (Kutz & US Government Accountability Office, 2009). Additionally, students with disabilities disproportionately represent students suspended or expelled from school for misbehavior. In a large-scale analysis of secondary schools, Losen and Martinez (2013) found that students with disabilities were three times more likely to be suspended than their peers without disabilities. With the trend in education to move toward a more inclusive model of special education, it is important that teachers are able to effectively, judiciously, and safely manage behaviors of all students, including those with disabilities. There has been a renewed focus on the use of aversive punishment and seclusion with students with disabilities, and disabilities advocacy groups have rallied for more legislation on the use of seclusion and restraint. The Keeping All Student Safe Act (2013) was introduced in the House in May of 2013, and as of July 2013 has been referred to the Subcommittee on Early Childhood, Elementary, and Secondary Education. Until further federal action, legislation of restraint and seclusion is state-
controlled. (United States Department of Education, 2012). Unfortunately, many parents may be unaware that their child’s teacher may be relying on such methods until it is too late.

Being skillful in classroom and behavior management is also important for the successful inclusion of students with disabilities. Not only do teachers’ feelings of efficacy for classroom management contribute to their attitudes toward inclusion—a factor shown to be highly predictive for how successful inclusionary practices are (Worrell, 2008)—it affects students directly. General education teachers who report low efficacy or competence for behavior management are less likely than teachers with higher competence or efficacy to implement individualized behavior support plans for students who are identified with emotional and behavioral disorders, putting those students at risk for removal from the general education environment and placement into more restrictive environments (Oliver & Reschly, 2010). Because self-efficacy theory states that people are more likely to pursue things at which they feel competent and to avoid things at which they do not, it follows that teachers who have low self-efficacy teaching students with disabilities are more likely to be hostile and resistant to situations that require them to do so (Smith et al., 2003).

**Inadequate Classroom and Behavior Management Preparation**

The current trend in behavior management research is a focus on proactive behavior management—what teachers can do to prevent problem behavior—and what could be categorized as positive reactive behavior management—what teachers can do to teach replacement behaviors as a means to control problem behavior once it has occurred. Both of these components are vastly different from the traditional reactive punishment model with which most are familiar (i.e., a student misbehaves and is then punished). However, many
teacher-training and education programs do not provide in-depth coverage of behavior management techniques, particularly at the undergraduate level. Examining special education teacher education programs, Oliver and Reschly (2010) found that in an analysis of course syllabi from 26 special education teacher training programs, only 27% had coursework devoted to explicit instruction in behavior management. More recently, Freeman et al. (2013) conducted research investigating undergraduate teacher education programs and state requirements for programs to contain components of classroom management. While special education teacher education programs were required by 49 states to include content on classroom management, only 34 states required the content to be evidence-based. For non-special education licensure, there were even fewer states that required such coursework: 45 states required elementary licensure programs to cover classroom management content, 43 states required secondary-grades licensure programs to cover classroom management content, and only 28 states required that the content be evidence-based. Additionally, they found that while 29 states required special education programs to address research-validated ways for teachers to respond to appropriate behavior, only 3 states required elementary and secondary teacher training programs to do so. Similarly, 30 states required that special education programs include research-validated methods to respond to inappropriate behavior, whereas only 4 states required the same for non-special-education teacher education programs. Even more disheartening is that in reviewing syllabi for programs (submission was voluntary and likely reflected a bias toward programs that felt their content was exemplary), fewer than 50% of the teacher education programs that responded actually included specific evidence-based methodology. These results were supported in a study in
which teachers were asked to identify evidence-based and non-evidence-based practices from a survey with 11 evidence-based practices and four non-evidence-based practices (Stormont, Reinke, & Herman, 2011). Special educators were more likely than regular educators to correctly identify the methods as either evidence-based or non-evidence-based and also, as a group, rated themselves as having significantly higher confidence that the behavior management methods that they used in the classroom were effective (Stormont et al.).

Tillery, Varjas, Meyers, and Collins (2010) found that most teachers they interviewed had very little preparation when it came to behavior management, indicating that a few rudimentary principles of behavior management were briefly touched upon in their coursework. Most of the teachers in their study did not take a course that was specifically devoted to behavior management and the general sentiment among participants was that, “college is sorely lacking in behavior management” (p. 96). Further, most of the teachers indicated that behavior-management training from their employers only took place if there was an obvious need for it, and that it was neither effective nor comprehensive. Due to what is known about the necessity of consultative services in conjunction with training (Sawka, McCurdy, and Manella, 2002; Shapiro et al., 1999) and the financial realities of securing such services, it is no wonder that teachers find in-service training inadequate. However, even when consultative services are available, it can be difficult for the consultants in getting the teachers to buy in to the process, lending more support to the notion that the best place and time for teachers to receive training in behavior management is during their teacher education (Hershfeldt, Pell, Sechrest, Pas, & Bradshaw, 2012).
Many other studies document the lack of classroom management and behavioral instruction training in teacher education programs as well as the associated feelings of distress. Begeny and Martens (2006) surveyed 110 pre-service master’s-level elementary, secondary, and special education students in six different universities and found that respondents reported little training in behavioral-instruction techniques (such as Direct Instruction and Curriculum-Based Measurement) as well as general behavior-management methods such as punishment, shaping, reinforcement, and task analysis. Much of what is in textbooks on classroom management used by pre-service and in-service teachers is based on outdated research without an established evidence base (Simonsen et al., 2008). Chesley and Jordan (2012) found this sentiment echoed in a focus group of beginning teachers and mentors: participants reported that the little coursework they had in classroom management lacked a strong research base and was fairly useless when they were faced with the reality of actual classroom teaching.

Smart and Igo (2010) found that first-year elementary school teachers—none of whom had any coursework explicitly in behavior management—felt effective at managing mild misbehaviors such as attention-seeking behaviors, mild off-task behaviors, and rule-breaking, but ineffective when responding to severe misbehaviors such as aggression, defiance, and deviance (e.g., theft). The teachers in this study relied on their mastery experience input—student teaching experiences and current teaching experiences—in order to deal with mild misbehaviors. When it came to severe misbehaviors, however, teachers were unable to identify any source of input or strategy selection for dealing with the misbehavior, overwhelmingly reporting that when they did select a strategy it was applied
inconsistently, and that they only asked for assistance after feeling helpless and desperate. It is important to note that many of the severe misbehaviors the teachers in this study reported were dangerous not only to the teachers, but to the students in the classrooms as well.

Ritter and Hancock (2007) found that only after teachers had had years of experience did they feel more effective and skilled at managing student behavior, but this was only true for traditionally-certified teachers and not alternatively-licensed teachers (defined as teachers who have a bachelor’s degree in another field and teach while earning certification concurrently, such as lateral entry). A delay of several years is troubling because of the implications for the many students who are suffering during this gap while their teachers learn “on-the-fly” and for students whose alternatively-licensed teachers may never master behavior management.

Melnick and Meister (2008) found that, of a group of 42 teachers they interviewed, mild discipline issues were not nearly as concerning to the teachers as severe misbehaviors. These teachers were troubled that their university coursework dealing with behavior management was insulated and lacked any real-world application and also failed to adequately address behavior issues surrounding students with disabilities. In a survey administered to 494 teachers, 19% of beginning teachers and 7% of experienced teachers reported that they strongly disagreed or disagreed with the statement, “Student behavior is not a problem for me.” The percentages of teachers indicating that they strongly disagreed or disagreed with the statement, “I am able to deal with the behavior of special needs children,” was 13% of beginning teachers and 11% of experienced teachers. Reupert and Woodcock (2010) found that pre-service teachers overwhelmingly reported that the behavior
management strategies that they used frequently resulted in low success, yet they persisted in using them, and that the strategies they reported as highly successful they used infrequently. This study also showed that while teachers lacked the skills necessary to implement highly successful methods as well as lacked a wider repertoire of effective behavior management skills, they also reported, counterintuitively, feelings of high self-efficacy in their ability to use a wide variety of behavior management skills.

Not only is inadequate skill in classroom management a concern for teachers, it is a concern for administrators as well. Torff and Sessions (2009) examined 251 principals who rated the causes for teacher ineffectiveness from five indicators of teacher quality. Principals rated classroom management as the top contributor, followed by content knowledge, lesson-planning skills, lesson-implementation skills, and ability to establish rapport with children.

Maag (2001) concluded that, in the absence of better training, teachers are more likely to rely on punishment as their primary means of behavior management. The fact that teachers are not receiving instruction in other methods of behavior management in teacher education programs, and that punishment tends to produce quick—though short-lived—results with minimal effort makes punishment the preferred method of behavior management for many teachers. Truly effective, research-validated behavior management is very complex in nature and requires rigorous study and training. Techniques rooted in behaviorism such as differential reinforcement, functional behavior assessment and analysis, fading, extinction, and myriad applications of positive reinforcement are scientifically grounded, complex in nature, and highly effective, yet absent from many teacher training programs (Maag).
Also troubling is the finding that many students beginning coursework in education do not see teaching as a scientific endeavor to be undertaken by a skilled practitioner, and their university coursework does little to change this attitude (Fajet et al., 2005). Instead, they base their perceptions and identity of teaching and teachers on their years as a student spent in Kindergarten through high school. It is possible that this is another reason that teachers may be more likely to rely on punishment as a means of behavior management because it is what may be familiar or salient to new teachers based on their experiences as students.

Of increasing interest in the literature—and for good reason—is the emphasis on cultural responsiveness in teaching and its intersection with classroom management. Shifting demographics of the American student body and the propensity of teachers to over-refer minority students for special education due to behavior issues necessitate this emphasis (Raines et al., 2012). Teachers’ existing apprehension about classroom and behavior management can be intensified in urban placements due to the differences between teachers’ and students’ languages, experiences, races and ethnicities, and even religions (Milner & Tenore, 2010).

**Teacher Efficacy for Classroom and Behavior Management, Burnout, and Attrition**

Low efficacy for classroom management is a major contributor to teacher burnout, a phenomenon that usually paves the way for attrition. Burnout, which consists of emotional exhaustion, depersonalization (negative or excessively detached response to students and/or colleagues), and reduced personal accomplishment (negative self-appraisal and feelings related to teaching performance or teaching as a profession) (Maslach, 1993) is a
phenomenon that is common and costly in education (Brouwers & Tomic, 2000). Burnout usually precedes decreased motivation for teaching, decreased engagement with teaching (“positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption,” Hakanen et al., 2006, p. 498), decreased job satisfaction (Skaalvik & Skaalvik, 2010), and teacher attrition (Pucella, 2011), among other things. Burnout is also correlated with and may be preceded by low self-efficacy beliefs (Chwalisz, Altmaier, & Russell, 1992; Friedman, 2003; Greenglass & Burke, 1988; Schwarzer & Hallum, 2008; Skaalvik & Skaalvik, 2007, 2010). Some researchers have found a link between efficacy for classroom management and teacher burnout (Friedman & Farber, 1992). In a meta-analysis of 16 studies on the relationship between classroom management efficacy and burnout, a significant relationship was found between classroom management efficacy and all three dimensions of burnout (Aloe, Amo, & Shanahan, 2013). The correlation of the largest magnitude was found between classroom management efficacy and lowered personal accomplishment, followed by depersonalization and exhaustion (Aloe et al.). The authors explain this finding by proposing that teachers with low classroom management efficacy are more susceptible to the negative feelings associated with the three dimensions of burnout, and likely become entrenched into a dysfunctional pattern until they finally leave the profession altogether (Aloe et al.). Likewise, Brouwers and Tomic (2000) found that emotional exhaustion preceded decreased efficacy for classroom management which preceded depersonalization. Additionally, Chang (2009) suggested that the chief precursor to teacher burnout is the stress caused by student misbehavior in a cyclical mechanism similar to the ones described by Brouwers and Tomic and Aloe et al.: burnout causes teachers to
withdraw and their performance to suffer which decreases their efficacy. A hypothetical model proposed by Friedman (2003), who found that lower teacher efficacy was correlated with higher perceived burnout, does much to illustrate how these mechanisms may work (see Figure 2). Structurally similar to Tschannen-Moran and Woolfolk-Hoy’s (1998) model of teacher efficacy (see Figure 1), this model inserts burnout and hypothesizes that it occurs in the loop after a teacher performs a teaching task and sees unfavorable results. This, in turn, leads back into the loop by providing efficacy input and would serve to lower efficacy beliefs which, according to the figure, contributes to more burnout, stress, and poor coping (both of which also contribute to burnout). Looking at this model, it becomes clear that in order to prevent burnout, teachers would benefit from having a number of effective instructional tools in their repertoire to prevent the unfavorable outcomes that may trigger the burnout/low efficacy cycle. It makes sense, then, that student misbehavior is the leading contributor to teacher burnout: due to inadequate pre-service and in-service preparation in classroom and behavior management, we know that most teachers do not have such a repertoire of behavior management methods.

Evidence also shows that burnout can begin as early as student teaching and as such, is tied to efficacy (Fives, Hamman, & Olivarez, 2007). Student teachers with higher efficacy for classroom management were less likely to depersonalize their students at the beginning of their student teaching assignments. Toward the end of their student teaching, the magnitude of this correlation increased as did the magnitude of the correlation between emotional exhaustion and efficacy for classroom management (becoming significant), such that student
teachers with lower efficacy for classroom management were more likely to feel emotional exhaustion. In general, higher efficacy was correlated with lower rates of burnout symptoms. For the 2007-2008 school year, 8% of teachers left teaching altogether and 7.6% changed schools (U.S. Department of Education, National Center for Education Statistics, 2010). The attrition rate for beginning teachers (those with five or fewer years of experience) is estimated to be between 40-50% (Ingersoll & Smith, 2003) with less effective teachers leaving at higher rates than more effective teachers (Boyd et al., 2008). What’s more, though, is that for beginning teachers who do not leave the profession but transfer instead, the more effective teachers generally transfer to higher-performing schools. The result is a never-ending cycle of new teachers who are less effective, unprepared to manage student behaviors, more likely to burnout and leave, and a widening achievement gap between high-performing schools and low-performing schools (Boyd et al.; Jones, 2006).

**Approaches to Classroom Management**

There are myriad methods of classroom and behavior management, many of which can be classified into one or more general paradigms. There is often overlap between paradigms, and various methods and paradigms are differentially effective. Due to the broad and various definitions of classroom management, methods and styles cover quite a range and can look vastly different from each other. One of the major paradigms for classroom management, and of interest herein, is ABA which was borne from behaviorism. It could be argued that all other approaches to classroom and behavior management either evolved from behaviorism or arose as a reaction to behaviorism.
**Behaviorism.** The behavioral approach to classroom management is based on the tenet that behavior—overt, observable, and measurable phenomena—is either maintained or can be changed through environmental stimuli and consequences. More specifically, behaviors can be increased or maintained through reinforcement and decreased or extinguished by withholding reinforcement or with punishment (Brophy, 2006).

Behaviorism, as conceptualized by John Watson in the early 20th century (cited in Alberto & Troutman, 2013), takes into account only that which can be directly observed and dismisses psychological notions such as thought and emotion. This is the behavioral approach that many are familiar with as it is often covered in introductory psychology courses which, presumably, many pre-service teachers take during their undergraduate studies. It is, perhaps, for this reason that when many hear of a behavioral approach to classroom management that they automatically reject it. Behaviorism likely conjures mental images of animal torture (Skinner’s experiments with electro shock and rats) and the systematic mental scarring of small children (the Little Albert experiment carried out by Watson). It is no wonder that, in the absence of further instruction, teachers would be reluctant to embrace an approach to classroom management based on behaviorism. This is unfortunate, however, because ABA, which is based on behaviorism but is quite evolved from traditional Skinnerian and Watsonian theory, is a highly effective method for behavior management (Alberto & Troutman).

**Applied Behavior Analysis.** Applied Behavior Analysis is defined as, “Systematic application of behavioral principles to change socially significant behavior to a meaningful degree” (Alberto & Troutman, 2013, p. 403). What this means for practitioners is that
several conditions need to be met before attempting to change a behavior. The condition that distinguishes most between traditional behaviorism and ABA is that the behavior(s) selected for change must be socially valid. It would not be considered socially valid (and would now be considered unethical) to condition a child to fear white furry animals as what happened in Watson’s Little Albert experiment, or to use physical punishment to condition a child to push a lever, as Skinner did with rats. Another differentiating condition of ABA is that practitioners attempt to discern the function that a target behavior may serve. This is done so that practitioners can be aware of students’ needs and continue to meet them by teaching students functionally-similar appropriate behaviors with which to replace inappropriate behaviors (often known as the fair pair) (Alberto & Troutman). Likewise, practitioners can also employ ABA to strengthen, improve, and increase appropriate behavior (Alberto & Troutman). According to Alberto and Troutman:

Teachers who learn and practice the principles of applied behavior analysis can help their students master functional and academic skills in a systematic and efficient manner and can document their students’ progress for parents and other professionals. They can manage behavior positively so that their focus remains on learning. They can teach students to get along with peers and adults and to make good choices. By providing learning environments that are safe, joyful, and successful they can make enormous differences in students’ lives. (p. 20)

One might wonder why any teacher would not want to do this or why any teacher education program would not teach teachers to know how to do this, but very few teachers use ABA in their classrooms or are exposed to it in their teacher preparation (Loiacano & Valenti, 2010).
Literature searches with the keyword “Applied Behavior Analysis” result in papers almost entirely devoted to special education, supporting what Freeman et al. (2013) found: that evidence-based behavior management methods are primarily reserved for special education. Mastery of ABA requires much more than exposure—it requires in-depth training and supervised practice. In fact, many teachers are critical of ABA or anything resembling behaviorism, despite their unfamiliarity (Allen & Bowles, 2014).

**Methods in ABA.** At the crux of ABA in the classroom is understanding the functions of behaviors, knowing how to determine those functions, and knowing how to change, prevent, and/or increase and strengthen behaviors using the right combinations of reinforcement and punishment (Alberto & Troutman, 2013). There are a multitude of methods for changing behavior that are part of ABA based on the principles of reinforcement and punishment, and while most teachers are somewhat familiar with those concepts, a rudimentary understanding of reinforcement and punishment as non-technical terms is a weak base for behavior management skills but is the most that many teacher education programs provide (Tillery et al., 2010). Teachers need a deep understanding of the technical concepts of reinforcement and punishment and a large repertoire of behavior change methods, because methods work differentially depending upon the child, the environment, and the behavior (Alberto & Troutman, 2013). Additionally, teachers must know various ways of recording and measuring behavior and which recording and measurement methods are the best fit for the behavior under study (Alberto & Troutman). First and foremost, however, teachers must learn to appropriately define behavior in specific, observable, and measurable terms (Alberto & Troutman), a skill which many teachers are likely lacking.
Moreover, behavior must be conceptualized in a way that passes the “dead-man test” which states, very candidly, that if a dead man can do it then it is not considered behavior. For example, if one were to write a behavioral objective that a student should not hit, it fails the dead-man test—a dead man cannot hit. Not-hitting behavior cannot be replaced because it does not exist as behavior. It is common to see behavioral objectives and to hear teachers admonish students in ways that fail the dead-man test—in terms of what students should not do, and not what they should do instead. It is necessary for a behavioral objective to pass the dead-man test in order to meet the fair-pair criterion for behavior replacement: to punish and not replace will not get the results a teacher wants, but too often, this is likely what is occurring in classrooms. In fact, if the teacher does not teach a replacement behavior that meets the fair-pair criterion, the student, most likely, will engage in a new and possibly equally or even more inappropriate behavior that does meet his or her original need once the original behavior is punished (Maag, 2004). Applied behavior analysis will not work in pieces: A teacher must be knowledgeable and comfortable using all of its components in order to successfully and efficiently manage classroom behavior (Alberto & Troutman, 2013). The functional behavior assessment or analysis (FBA) is the process by which most teachers collect data about a behavior in order to determine its function and find an appropriate replacement behavior (Alberto & Troutman). Knowledge and skill in doing an FBA may be a good indicator of knowledge and skill in ABA (Dukes, Rosenberg, & Brady, 2008; McIntosh & Av-Gay, 2007).

**Positive Behavioral Intervention and Support.** A derivative of ABA and rooted in behaviorism, Positive Behavioral Intervention and Support (PBIS) is a schoolwide system of
behavior management that may provide some teachers with much needed guidance and support in behavior management. Positive Behavioral Intervention and Support is a schoolwide, proactive approach to discipline which emphasizes systemic reinforcement for appropriate social behaviors as well as environmental manipulation and the teaching of replacement behaviors (Fenning & Bohanon, 2006). Positive Behavioral Intervention and Support differs from ABA in several ways, but most notably, PBIS is generally a very superficial and incomplete version of ABA (Johnston, Foxx, Jacobson, Green, & Mulick, 2006). It has been given preferential status as the recommended system of discipline since the 1997 reauthorization of the Individuals with Disabilities Education Act (IDEA) (Chitiyo & Wheeler, 2009), yet its use is not widespread (Office of Special Education Programs (OSEP), 2012). A three-tiered system of prevention, PBIS consists of support systems at the whole-school (primary or first-tier) level, classroom or small-group (secondary or second-tier) level, and individual (tertiary or third-tier) level (Bradshaw, Koth, Bevans, & Ialongo, 2008). Typically, the primary level—also called the universal level—reaches about 80-90% of students, the secondary level reaches an additional 5-10% of students, and the tertiary level is used for the remaining 1-5% of students who do not respond to first- and second-tier interventions (Reinke, Splett, Robeson, & Offutt, 2008).

**Proactive behavior management and PBIS – The primary level.** The primary level of a PBIS system usually consists of three to five schoolwide rules established by a PBIS team, posted throughout the school, and explicitly taught to students throughout the year, as well as a system of rewards for students who follow the rules appropriately (Bradshaw et al., 2008). Generally, these rules include general behavioral expectations such as “Respect
yourself, others, and property” (OSEP, 2012). In addition, at the primary level there are schoolwide policies governing teachers’ responses to infractions so that consequences are consistent (Bradshaw et al.). Teachers may create individual classroom rules in addition to the schoolwide rules, and usually these rules consist of a few more specific behavioral objectives that are encompassed by each schoolwide rule (OSEP, 2012).

Reactive behavior management and PBIS – The secondary and tertiary levels.

Based on data collected on infractions at the primary level (office referrals, teacher discipline logs), students may be served at the secondary level within a PBIS system (OSEP, 2012). Though serving students at this level is called secondary prevention, this is actually a reactive measure as it targets students who have already broken the rules. Teachers can carry out secondary interventions with small groups of students, and these interventions usually include the teaching of appropriate behaviors with which to replace inappropriate behaviors, including teaching students self-management strategies (OSEP). Additionally, individual students can be targeted at the secondary level if the interventions required are not too intensive or individualized (which would call for intervention at the tertiary level) (OSEP).

For example, a teacher may find one student in one class period needing secondary-level intervention that may include rearranging the physical composition of the classroom or enacting a behavior contract. Such interventions, though targeting only one student, need not be highly intensive nor highly individualized.

Tertiary prevention (again, though called prevention this is generally a reactive measure) begins with a functional behavior assessment and targets students who are not reached by the primary and secondary levels, as well as students with disabilities with known
behavior issues (OSEP, 2012). Since they are based on functional behavior assessments and target behaviors considered more problematic, tertiary-level interventions are highly individualized and intensive (OSEP).

**Effectiveness of PBIS.** Though there is little longitudinal research at this time (widespread use of PBIS is still a relatively new), PBIS is showing promise. At least one randomized longitudinal study shows that PBIS was an effective means for increasing schools’ organizational health (Bradshaw et al., 2008), and several other studies demonstrate that schools that successfully implement PBIS show marked reductions in office referrals, suspensions, and problem behaviors during unstructured activities such as playground time (see Reinke et al., 2008). Muscott, Mann, and LeBrun (2008) found that after implementing PBIS programs, schools’ academic instructional time increased dramatically as time spent on discipline decreased and was associated with an increase in math achievement. These studies have also demonstrated, however, that certain conditions are necessary in order to see such results, particularly high fidelity of implementation (Reinke et al.). According to McIntosh, Horner, and Sugai (2009), in order to ensure high fidelity of implementation within a school, four conditions must be met: (a) priority—schools must place a priority on implementing a successful PBIS system and administrators must provide adequate support and resources for its use, (b) effectiveness—the practices put into place must be evidence-based and have a noticeable effect on student behavior, (c) adaptive—decisions must be made based on data and there must be consensus that most or all users of the PBIS system have adequate expertise in it, and (d) efficient—the system must be easy enough to use and include a protocol for dealing with any barriers to implementation. Of course, these conditions are not
always met. In fact, Chitiyo and Wheeler (2009) examined teachers and found that the most pressing barriers to implementation of a successful PBIS system included failing to meet these conditions in various ways, including lack of time (a failure to meet the condition of priority), lack of resources (a failure to meet the conditions of priority and efficient), lack of family-school collaboration (a failure to meet the condition of priority), lack of collaboration with other school staff (a failure to meet the conditions of priority, adaptive, and efficient), and lack of skills necessary to teach replacement behaviors (a failure to meet all four of the necessary conditions). When a PBIS system does not work effectively, teachers may be left without adequate support for discipline and behavior management.

According to the North Carolina Department of Public Instruction (C. McCamish, personal communication, April 30, 2015), as of the 2013-2014 school year in North Carolina there were 708 (26.4%) schools implementing a PBIS program and an additional 502 (18.7%) schools that were trained but not yet implementing a PBIS program, for a total of 1,210 (45.1%) schools participating in PBIS. According to the OSEP Technical Assistance Center on PBIS (2012), there are currently 16,232 schools utilizing a PBIS program. According to the National Center for Education Statistics (2012), as of the 2008-2009 school year (the most recent year for which data are available), there were 98,706 public schools in the United States. That means at least 82,474 schools are not using a PBIS system and teachers may be on their own when guessing how to control students’ behavior and may rely more heavily on traditional reactive—punitive—measures of behavior management (Maag, 2001). Indeed, teachers without adequate pre-or in-service behavior management training are more likely to utilize harsher consequences for students with problem behaviors as well
as to utilize interventions that they view as less complex but easier to use, though not necessarily effective (Cunningham & Sugawara, 1988; Elliott, Witt, Galvin, & Peterson, 1984). Many regular education teacher training programs do not provide explicit training in behavior management, yet behavior management is the skill set in which teachers consistently report they have the least confidence and for which they desire more training (Maag, 2001).

**Efficacy for Classroom Management: Bi-Dimensional Construct, Unitary Measures**

Though it is clear that classroom management is a construct composed of multiple components, one of which is behavior management which may be conceptualized as bi-dimensional (proactive and reactive behavior management), existing measures of classroom management efficacy do not reflect this. Without making this distinction when measuring efficacy, it becomes difficult to pinpoint what needs to be addressed in terms of teacher training and preparation. It would be more efficient to address the shortcomings in teacher training if programs could focus on what teachers are lacking, which might be indicated by a more specific measure of efficacy for behavior management. Before efficacy issues can be addressed, measurement issues must be addressed. In a review of 25 teacher efficacy measures, O’Neill and Stephenson (2011) found that the construct of teacher efficacy was either measured as a unitary construct or as a higher-order construct composed of sub-factors, one of which was sometimes classroom management. There are no instruments that currently exist to treat the construct of teacher efficacy for classroom management as anything other than a unitary construct. There is no published research that analyzes components of the construct of efficacy for classroom management even though it is agreed that the construct of
classroom management is multi-faceted. If teachers view behavior management as being composed of two different skill sets, if could be useful to measure efficacy as such.

**The Evolution of the Measurement of Efficacy for Classroom Management and Support for a Bi-Dimensional Model of Efficacy for Behavior Management**

Though not the most recent addition to the catalog of instruments measuring teacher efficacy, like most instruments, the TSES is characterized by adaptations of items from instruments that preceded it. By fine tuning items and response options, the authors of the TSES were able to craft an instrument that captures the construct of interest with a high level of precision.

O’Neill and Stephenson (2011) completed a comprehensive review of teacher efficacy instruments that included classroom management efficacy items. In order for an instrument to be included in their study, it had to have at least one unique classroom management efficacy item, regardless of whether the instrument purported to measure teacher efficacy as a unitary or multidimensional construct. The authors were able to, at face value (no factor analyses were performed), categorize each item they deemed to measure classroom management efficacy into one of six categories: (a) resource management, (b) rules, routines, procedure and expectations, (c) gaining, maintaining, monitoring attention or engagement in activities, (d) student socialization and cooperative behaviors, (e) maintaining order and control, and (f) general (not fitting into the previous categories) items. Because the construct of interest in the current study is conceptualized as a higher-order factor (efficacy for behavior management) composed of two sub factors (efficacy for dealing with problem behavior and efficacy for general classroom routines and procedures), it is worth exploring
some of the instruments examined by O’Neill and Stephenson. Instruments for which items were categorized in either one or both of the “rules, routines, procedures, and expectations” category (analogous to efficacy for general classroom routines and procedures/proactive behavior management) and the “maintaining order and control” category (analogous to efficacy for dealing with problem behavior/reactive behavior management) are considered below. Of the 24 instruments included in O’Neill and Stephenson’s analysis (one was excluded because of its format), eight have items falling into both categories, and 10 have items in the “maintaining order and control” category but not “rules, routines, procedure, and expectations” (there are no scales for which the reverse is true). Furthermore, a few items from some of the instruments categorized by O’Neill and Stephenson as “student socialization and cooperative behavior” seem better represented by one of the two categories of interest.

Following is a summary of instruments that preceded and were adapted for the TSES as well as a description of items from those instruments that are represented on the efficacy for classroom management scale of the TSES. These items have been categorized as either proactive or reactive behavior management based on O’Neill and Stephenson’s (2011) review. It is in chronological order of the publication dates of the instruments and will illustrate the progression instruments measuring teacher efficacy.

**Gibson and Dembo (1984).** In one of the first efforts to synthesize the theoretical underpinnings of both Rotter’s (1966) social learning theory and Bandura’s (1977) self-efficacy theory, Gibson and Dembo (1984) created the Teacher Efficacy Scale. Cited in nearly all subsequent teacher efficacy scales developed, the Gibson and Dembo instrument is
considered a seminal development within the field (Tschannen-Moran et al., 1998). Through four phases of development and analysis, the 30-item instrument was found to consist of 2 factors: personal teaching efficacy (“belief that one has the skills and abilities to bring about student learning” Gibson & Dembo, 1984, p. 573) and teacher’s sense of teaching efficacy (“belief that any teacher’s ability to bring about change is significantly limited by factors external to the teacher” p. 574). Since its development, issues with the original factor structure, such as frequent item crossloadings and inconsistencies in the underlying construct being measured have been found (Tschannen-Moran et al., 1998), but the instrument has served as a starting point in the development of many subsequent scales of teacher efficacy.

The Gibson and Dembo (1984) instrument has one item that O’Neill and Stephenson (2011) categorized as reactive behavior management: “If a student in my class becomes disruptive or noisy, I feel assured that I know some techniques to redirect him quickly” (Gibson & Dembo, 1984, p.573). This item is represented by item 15 on the TSES (see Appendix E). In Gibson and Dembo’s original analysis, this item loaded on the personal teaching efficacy factor.

**Emmer and Hickman (1991).** Guided by the theoretical underpinnings of Gibson and Dembo’s work in teacher efficacy, Emmer and Hickman (1991) created a 36-item instrument of teacher efficacy which was, after exploratory factor analysis (EFA), found to be comprised of 3 factors: (a) Classroom Management/Discipline, (b) External Influences, and (c) Personal Teaching Efficacy. Of the 36 items on the scale, the authors assigned 18 to the Classroom Management/Discipline factor. Of all 36 items, O’Neill and Stephenson (2011) categorized 5 as proactive behavior management, four of which are represented on the
TSES by items 5 (represented by two of Emmer & Hickman’s items), 8, and 13. Four items are categorized as reactive behavior management and are represented on the TSES by items 15, 16, 19, and 21. This was the first measure of teacher efficacy to find that efficacy for classroom management is its own factor (as a sub-factor of teacher efficacy).

**Brownell and Pajares (1999).** Based on Bandura’s (1977) theory of self-efficacy, Brownell and Pajares (1999) created a 46-item instrument to measure teachers’ self-efficacy exclusively pertaining to teaching students with learning and behavior disabilities in inclusive settings. Efficacy items on their instrument were derived from previously validated measures. In addition to efficacy items, they included items measuring known correlates with efficacy, such as administrative support, quality of pre-and in-service preparation, and special education support, among others. Participants were 128 second-grade teachers. There were a total of 11 efficacy items, 6 of which, according to O’Neill and Stephenson (2011), were classroom management efficacy items, though Brownell and Pajares did not make any further distinctions or categorizations or perform any subsequent analyses of those items beyond indicating that they measured teacher efficacy as a unitary construct. Of those six items, one was categorized as proactive behavior management and appears verbatim on the TSES (item 13). One item, categorized as reactive behavior management is represented by item 3 on the TSES. This instrument was the first to word item stems beginning with “How much can you do…” which is the wording used for the TSES.

**Tschannen-Moran and Woolfolk-Hoy (2001).** Developed by Tschannen-Moran and Woolfolk-Hoy (2001), the long form of the TSES (2001) has eight items on the *Efficacy in Classroom Management* scale (items 3, 5, 8, 13, 15, 16, 19, and 21). Of these, O’Neill and
Stephenson (2011) categorized three as proactive behavior management (items 5, 8, and 13). They categorize four items as reactive behavior management (O’Neill & Stephenson, 2011): items 3, 15, 19, and 21. O’Neill and Stephenson leave out one of the items on the efficacy for classroom management scale in their review (item 16), however, this item seems to be adapted from the Emmer and Hickman (1991) instrument which fell into the category of reactive behavior management.

**Summary**

Most teachers are comfortable setting classroom rules. Trouble occurs when students break those rules. Mounting evidence suggests that behavior management may be comprised of two skill-sets: Proactive behavior management, which is what teachers can do to prevent inappropriate behavior, and reactive behavior management, which includes what teachers can do to correct and prevent future inappropriate behavior once it has occurred. Ensuring appropriate behavior and minimizing inappropriate behavior are prerequisites to content learning, yet most teachers are graduating teacher-education programs without the skills and knowledge to do either. In order for teachers to be effective behavior managers, they need rigorous instruction with ample opportunities for practice and feedback in evidence-based behavior management methodologies. Applied behavior analysis has a decades-long history of research validation, but is oftentimes rejected outright by those who could benefit from learning it due to an inaccurate understanding based on misinformation or lack of information. Some teachers have the benefit of teaching in schools with PBIS programs and may get some support and training there, however, many PBIS programs are plagued by hurdles to successful implementation. Teachers with special education licensure are more
likely to receive evidence-based training in their teacher-education coursework, but more regular-education teachers are serving students with disabilities and behavior difficulties in their classrooms. The effects of teachers being and feeling ill-prepared to manage student behavior are seen in high burnout and attrition rates, especially among novice teachers. Higher rates of special-education referrals and suffering student achievement are also casualties of poor teacher preparation and subsequent feelings of low efficacy for behavior management. In the absence of training, teachers are likely to rely on punitive methods, apply methods inconsistently, and find that their attempts at behavior management are ineffective, creating a cycle of low efficacy which precedes the dimensions of burnout, until they finally leave the profession. The current study is proposed to gain a better understanding of teachers’ feelings of efficacy for classroom management and of the construct of efficacy for classroom management itself; to determine if it is better understood and interpreted as comprised of two skill-sets—thus allowing researchers and teacher education programs to pinpoint exactly what types of training teachers need—and to examine the types of teachers who exhibit different perceptions of efficacy for classroom management. The understanding and measurement of the construct of teacher efficacy has evolved since the beginning of its study, and the proposed study will investigate yet another way to understand and analyze it. It is hoped that a better understanding of teachers’ perceptions of efficacy for classroom management can be used to benefit teachers and students.

This review demonstrated the need for the current study by highlighting the problems associated with teachers’ preparation in and efficacy for classroom management. In addition
to discussions of the constructs of teacher efficacy and classroom management, this chapter reviewed studies that investigated teacher characteristics and student outcomes associated with teacher efficacy as well as the progression of instruments used to measure teacher efficacy. Behavior management methods associated with ABA and PBIS were highlighted due to their long history of research-validated effectiveness.
CHAPTER 3

METHODS

This mixed-methods study is comprised of four major research questions, all of which were examined using the following instruments and data collection procedures: The Teacher’s Sense of Efficacy Scale (TSES; Tschannen-Moran & Hoy, 2001), a demographic survey, an adapted behavior-management methods confidence inventory, and a semi-structured interview protocol. Participants in this study were drawn from the population of K-12 teachers currently employed full-time in public schools in North Carolina. This chapter will first discuss the mixed-methods design, followed by the instrumentation that was used to gather data, the procedures by which data were collected, and a description of the data analysis procedures associated with each research question.

Mixed Methods

Mixed methods research is a research design that employs both quantitative and qualitative data that is mixed in a specified way (Creswell & Clark, 2011). The purpose of collecting both quantitative and qualitative data is to provide a better and more complete answer to one’s research questions than would have been possible with the analysis of one type of data alone (Creswell & Clark). As such, it is important to understand that the mixing of data types should proceed systematically so that one type of data supports the other (Creswell & Clark). This is the major advantage of the mixed methods approach: Each type of data can counteract the weaknesses of the other (Creswell & Clark). For example, qualitative data can provide process-level information that quantitative data may miss and answer questions that quantitative data cannot, but quantitative data can provide evidence for
generalization and inference that qualitative data cannot (Creswell, & Clark). In this way, a more thorough picture is presented by a mixed methods approach making it a valuable research methodology (Creswell & Clark).

**Philosophical Assumptions**

This study was a mixture of both postpositivist and constructivist worldviews. Postpositivism is concerned with finding answers and absolutes; espousing a top-down approach such that *a priori* hypotheses are confirmed or rejected based on numerical data (Creswell & Clark). In contrast, constructivism is a bottom-up approach that allows for multiple realities and interpretations, thus well-suited to capture data where perceptions can differ from reality (Creswell & Clark). Post-positivism is, in theory, bias-free whereas constructivism allows for researcher bias. As such, a statement of bias is below. The majority of the data came from quantitative sources, aligning with postpositivism—hypotheses were tested (ontology) and informed from the current body of literature (methodology), data were collected anonymously and confidentially (epistemology) which allowed it to be bias-free (axiology), and the results presented in a formal style (rhetoric) (Creswell & Clark, 2011). The qualitative data, providing supplementary explanatory evidence, aligned more with constructivism: Different perspectives and multiple realities were expected (ontology) from data gathered through in-person and over-the-phone interviews (epistemology) which were used in an inductive methodology to function as descriptive and explanatory support (Creswell & Clark). Although the pragmatist worldview is generally used in mixed methods studies (Creswell & Clark) and does encompass some of what was espoused in the current study, the fact that pragmatism is often seen as a
compromise between competing philosophical stances (such as postpositivism and constructivism) (Johnson & Onwuegbuzie, 2004) excluded it as a worldview in the current study. Because of the dual nature that efficacy can encompass (reality vs. perception), the duality of postpositivism and constructivism was necessary for this study, not something to be attenuated. Additionally, this research made use of the explanatory design of mixed methods research, which, according to Creswell and Clark, generally assumes a postpositivist worldview due to its emphasis on quantitative methods.

**Statement of Bias**

All research is subject to researcher bias, and while attempts can be made to minimize it, one cannot fully separate oneself from one’s own experiences and values (Bogdan & Biklen, 2007). The first step a researcher can take in an effort to minimize bias is to recognize that it exists (Bogdan & Biklen). Bias is present from the very beginning: in the development phase of research, bias guides research question formulation and data collection techniques. Later, bias can influence interpretation.

I recognize that this study was influenced by my personal biases. As a former teacher with special education licensure and a student of ABA, I cannot deny that I held beliefs, *a priori*, about their relationships with efficacy for classroom management. The interview and survey questions were designed to capture data to inform these relationships.

The possibility of introduction of bias in quantitative data collection ended with finalizing the draft of the survey. The possibility of introduction of bias in qualitative data collection, however, existed during data collection as well as data analysis. In order to minimize the effect of bias during interviews, I bracketed the idea of “behavior
management.” Though consensus is lacking on the definition of bracketing, in this study, to bracket meant to suspend my biases for the duration of data collection and analysis (Tufford & Newman, 2010). There were several ways this was accomplished. To begin, although the interview was composed of questions designed to capture teachers’ use of ABA methods, the questions were general enough to capture other management methods as well (and, in fact, that is what happened). Further, though quantitative and qualitative data were collected concurrently, quantitative data were analyzed after all qualitative data, to minimize its influence over qualitative data interpretation. During interviews, while participants were responding, I made a concerted effort not to interject or communicate in any way that I thought a response was finished, instead leaving it up to the participants. I allowed a pause of several seconds in between participant responses and subsequent questions. In addition, qualitative data were not analyzed until all interviews had been completed. This prevented introduction of bias in interviews in the form of spontaneous questions that could sway participants in their responses. Finally, during qualitative data analysis, I maintained openness to finding data that were unexpected or that did not fit with my preconceptions of behavior management. I approached the qualitative data analysis with a mindset of “what can I learn from these data?” rather than “what can I confirm from these data?”

**Design**

The study employed the follow-up-explanations-model-with-a-quantitative-emphasis explanatory design (Creswell & Clark, 2011). From the quantitative data collected, certain findings benefited from additional qualitative explanation, which defines this type of design (Creswell & Clark).
Instrumentation

Teachers’ Sense of Efficacy Scale

The long form of the TSES (Tschannen-Moran & Hoy, 2001) (See Appendix E) is a 24-item survey that, for practicing teachers, measures educators’ perceptions of efficacy for classroom management, student engagement, and instructional strategies (Tschannen-Moran & Hoy). On a nine-point Likert scale, teachers were asked to indicate “how much can you do” (Tschannen-Moran & Hoy) with a range from “nothing” to “a great deal” in response to various item stems describing common classroom occurrences. The authors have granted permission for researchers to use this instrument (see Appendix D) but have cautioned that factor analyses should be performed for each group of participants to verify the factor structure, which was done in this study.

Demographic Survey

A demographic survey (see Appendix F) was administered to all participants in order to gather data about sample characteristics as well as to be used as predictor variables and designate group differences. In addition to general demographic information (age, years teaching, sex, grade levels taught, among others), participants were asked about the disability types of the students they serve, the status of their school in terms of Positive Behavioral Intervention and Support (including questions about the quality of their PBIS program, some adapted from the SUBSIST checklist by McIntosh, Doolittle, Vincent, Horner, & Ervin, 2013), their teacher licensure and degree, and about certain school and student characteristics (Title 1 status, percentage of students receiving free and reduced lunch, setting of their school). This survey consisted of a combination of forced-choice and open-ended responses.
Behavior Management Confidence Inventory

A behavior management confidence inventory (BMCI) (see Appendix G) was also given to teachers. Consisting of 16 items, teachers were asked to indicate their confidence in using each of the methods listed. The instructions and response options were adapted from the Behavior Management Strategies Scale (BMSS) (O’Neill & Stephenson, 2012) which asked participants to rate their confidence in using 56 behavior management strategies. The BMSS is a rather new instrument with limited psychometric data, currently believed to consist of only one factor. This scale was chosen for adaptation largely in part due to the response options: participants could indicate not only their confidence on a 4-point scale from “not confident” to “very confident,” but there was also an option for participants to indicate that they were not familiar with a particular method. One item was also adapted from the BMSS as an aggregate of several of the items, and two items were adapted from Kaff, Zabel, and Milham (2007), but most comprised critical classroom ABA and PBIS methods and were self-written (see Table 4). Items were chosen to represent a combination of easy behavior management methods and more difficult behavior management methods. The easy items were chosen due to their expected universal recognition. The more difficult and complex management methods included methods characteristic of ABA, with which teachers should largely be expected to be unfamiliar, unless they had received specific instruction in those methods. In this way, the BMCI not only indicated teachers with a larger and more scientific repertoire of behavior management methods, but also provided identification evidence of which teachers have received at least some instruction in behavior management or ABA.
Semi-Structured Interview Protocol

The interview protocol was a semi-structured format—a set of questions was specified but there was an allowance for spontaneous questions to arise, and in several cases they did. Some of the interview questions were taken from a previously published study by Tillery, Varjas, Meyers, and Collins (2010), and some were self-written (see Appendix H). In capturing teachers’ experiences of behavior management, it was important to give them opportunities to name specific methods, and several of the adapted questions do just that. Another area of interest was training in behavior management, and there was a question on the Tillery et al. interview that was taken verbatim pertaining to that. Additional questions that were self-written addressed teachers’ assessment of the adequacy of their behavior management training, teachers’ assessment of the effectiveness of the behavior management methods they use, influences to use the methods they do, a question about their TSES responses if they linked their survey to their interview, and general questions about their feelings about behavior management in the classroom. It was important to gather data related to specifics but also to give teachers a chance to freely express any feelings they had on the topic of behavior management.

Reliability. In qualitative research, reliability refers more to the accurate representation of events by data and is ensured not by evaluating inter-observer consistency but rather by ensuring that the data gathered are both complete and correct (Bogdan & Biklen, 2007). By audio recording the interviews, a reliable record was created. Reliability was also ensured by the validity procedures, described below.
Validity. Trustworthiness was established through member checking. Participants were given an opportunity to review the transcripts of their interviews before data analysis occurred to make sure the data recorded were accurate and reflective of their general experiences with behavior management. Transcripts reflected a discrepancy between data that were collected and data that were recorded for several reasons, and participants were given these reasons and instructed to pay close attention to the edited portions. Details that may have compromised confidentiality and anonymity were redacted or reworded. Participants were also asked to indicate if they wished for anything else to be redacted, for any reason, and to make sure they did not see anything that needed redacting for the sake of confidentiality and anonymity. In many cases, clarification was needed, either to make sure that interpretations were accurate or because the audio recordings were unclear in spots. For example, some participants described interactions with their students that, without context, would seem disturbing. However, with the correct context provided, such as a bracketed word describing the speaker’s tone or indicating that they were saying something “jokingly,” these descriptions made more sense. These context clues were left to me to determine based on the recorded interviews, and it was critical to check with participants to be sure interpretations were accurate. Participants were also made aware that interviews were being transcribed in a denaturalized format (Oliver, Serovich, & Mason, 2005), which meant that many of the filler words and phrases (Um, like, you know?, etc.) were left out. They were told that this decision was made because interviews were going to be analyzed for content and themes rather than speech patterns. Another expert in the field reviewed coded interviews to establish interrater agreement. This person was chosen due to their experience
in teaching and knowledge of ABA. Color-coded interview transcripts, along with code categories (but no indication of how to match themes with colors), were given to him, and he made notes with questions as well as his assigned codes. We discussed any discrepancies, of which there were few, and addressed questions that both he and I had until full agreement was reached between both of us. Data analysis did not begin until all data collection was complete in order to minimize observer bias.

Generalizability of qualitative data was not a goal of this study. The goal of collecting qualitative data was not to generalize or make any inferences about others, but to provide an explanatory account of some of the current participants as well as to make connections with the quantitative data.

Sample and Procedures

A total of 828 participants completed surveys, and participant characteristics as well as comparisons to the total state population are displayed in Table 1. Participants were recruited via email (invitation displayed in Appendix I). The Qualtrics (2014) survey emailer was used to distribute a survey request with a link to the online survey, which consisted of a demographic survey, followed by the TSES, followed by the BMCI, and was administered through Qualtrics (2014). Teachers’ email addresses were gathered by going to school websites and finding publicly available email addresses. Approximately 30,000 survey solicitations were sent out. Criteria for participation, which were stated in the survey request email as well as in the informed consent documents (displayed in Appendices B and C), were K-12 teachers who were employed full-time (at 100%) in public schools in North Carolina. Student teachers were not eligible to participate. While there is no way to be sure that only
teachers meeting these requirements completed surveys, it is doubtful that anyone but those who met the criteria would have taken the time to complete a survey, especially given the low return rate (approximately .028%). Also, using teachers’ work email addresses minimized the possibility that non-teachers would receive the survey link. No compensation for survey participation was offered.

Several precautions were taken to ensure participants’ anonymity and confidentiality. Both within the email and survey, teachers were instructed to complete the survey from a computer and network not associated with their place of employment or teacher education. The survey would terminate if teachers indicated that they were not meeting these criteria. The link to complete the survey was an anonymous link, and no identifying information was requested within the survey and no digital identifiers were collected. Instructions indicated that participants could decline to answer any questions they chose.

Some of the emails sent also contained a request for an interview (see Appendix J). Teachers were offered a $20 gift card for participating in a one-on-one interview and were instructed to indicate interest with a phone call or an email from an account not associated with their place of employment or education. A total of 11 teachers were interviewed either in person or over the phone (see Table 2 for a list of interview participant characteristics). In-person interviews took place at locations of the interviewees’ choosing (though they were instructed to choose a place relatively quiet where they would feel comfortable speaking freely and not their place of employment or education). Phone interviews were conducted in the author’s home office in private. Interview participants were drawn from survey participants and were given the option to link their survey using a 4-digit number, though
cautioned that survey anonymity (but not confidentiality) would be waived in choosing to do so. Interviews with participants who linked their surveys included a question about their responses on the TSES (see appendix E). Although the interview sample was a convenience sample, due to the higher than anticipated interest in interview participation, a somewhat evenly distributed sample across grade levels was attained. In total, 8 women and 3 men; 3 elementary teachers, 3 middle school teachers, and 5 high school teachers were interviewed. Pseudonyms were used in all interview data reporting.

Data Analysis

Quantitative

Factor analyses. Exploratory factor analyses (EFA) were used to determine the factor structure of the TSES (addressing Research Question 1) with the current sample as well as the factor structure of the BMCI. Exploratory factor analysis is a quantitative process that makes latent constructs mathematically measurable. The outcome variables for many subsequent analyses were derived from these EFAs.

Principal axis factoring (PAF) was the extraction method used for both EFAs. This extraction method was chosen, in contrast to principal components analysis (PCA), because PAF analyzes only reliable shared variance whereas PCA includes error variance in analyses (Osborne, Costello, & Kellow, 2008).

Cattell’s (1966) scree criterion, which specifies that there are as many factors worth retaining as there are data points above the point of inflection on the scree plot, rather than Kaiser’s (1960) criterion, which specifies that only factors with Eigenvalues above 1 be retained, was used to determine the number of factors for each scale. In general, the scree
test is a better indicator of factors extracted as the Kaiser criterion tends to result in too many factors retained and is considered the most inaccurate method of discerning factors (Osborne et al., 2008). Various factoring options regarding rotation and factor retention were used in analyses to attempt to find the factor structures that made the most sense theoretically as well as numerically. For both scales, the most interpretable solutions used Promax rotation, an oblique rotation that allows factors to correlate (Field, 2013).

**Regression and ANOVA.** Linear regression analysis was performed to determine which variables significantly predicted teacher efficacy for the TSES factor of interest. Included in the initial analysis were the following predictors: Special Education licensure (dichotomous, dummy coded as 0 or 1), PBIS program at school (dichotomous, dummy coded as 0 or 1), years of experience (continuous), teaching or education degree (none, Bachelor’s, advanced; dummy coded), and grade level (K-2, 3-5, 6-8, 9-12; dummy coded). Advanced degree referred to either a Master’s degree or a doctorate. Because there were only 8 participants that held doctoral degrees, the single aggregated category of “advanced degree” was more useful than one variable for each type of advanced degree. The inclusion of the variable “teaching degree” as a predictor, however, gave rise to several complications, and a section within chapter 4 is dedicated to discussing the issues that arose. Analysis of variance was conducted with significant predictor variables to determine significant group differences to answer Research Question 2.

These predictor variables were chosen based on previous research or theoretical judgments. Efficacy changes over time with experience (Hoy & Spero, 2005; Tschannen-Moran, et al., 1998), thus prior years of teaching were included as a predictor variable.
Grade level has been shown to predict efficacy (Tschannen-Moran & Hoy, 2007), thus its inclusion as a predictor. Theoretically, it seemed that level of education degree would be useful to add as a predictor variable, because one would suppose that teachers with advanced degrees may have had instruction in behavioral management. The fact that over 50% of teachers in this sample had advanced licensure also made it seem like a useful variable to examine. Positive behavioral intervention and support status was of interest due to the fact that schools with PBIS programming usually provide additional behavior management support through PBIS training.

**Mediation analyses.** Mediation analyses were examined via the PROCESS (Hayes, 2012) and MEDIATE (Hayes & Preacher, 2014) modeling tools. Results from these analyses provided evidence for Research Questions 2 and 3.

**Repeated measures ANOVA.** Repeated measures ANOVAs comparing differences between each subscale of the TSES were conducted in order to answer Research Question 3. Unexpected results from these analyses necessitated an ANCOVA to provide an explanation.

**Qualitative**

Data were analyzed via qualitative content analysis, which is a broad and general analysis method employing inductive coding of informational content (Forman & Damschroder, 2008). Categories of data were not predetermined, as is typical with qualitative content analysis (Forman & Damschroder). The qualitative portion of this study utilized this approach in order to make sense of teachers’ experiences of behavior management utilizing the constructivist approach. This portion of the research was necessary due to the nature of self-efficacy: a highly subjective self-judgment not necessarily based on
actual skill or ability. Thus, what one reports on a ratings scale may have nothing to do with actual performance. A semi-structured interview was conducted with 11 participants in order to gain a better understanding of teachers’ experiences of behavior management. The qualitative analyses answered Research Question 4 and provided a supplement to the quantitative data, even corroborating it in several instances.
CHAPTER 4

RESULTS

Quantitative Data

Factor Analyses

**Teachers’ Sense of Efficacy Scale.** A factor structure meeting both theoretical and scree plot criteria emerged with a three-factor solution. The factor structure achieved in the current study differs somewhat from that of other research and the original authors (see Table 3). In the present study, Factor 1 (Eigenvalue = 10.55, $\alpha = .90$) was named Efficacy for Instructional Strategies (the same as the original authors) and was composed of 10 items. Factor 2 (Eigenvalue = 1.55, $\alpha = .92$) was named Efficacy for Management of Problematic Behaviors (differing from the original authors) and consisted of 7 items. Factor 3 (Eigenvalue = .86, $\alpha = .87$) was named Efficacy for Student Engagement (the same as the original authors) and consisted of 7 items. Cronbach’s alpha for the entire scale was .95. Although one item loaded on two factors, it was retained and analyzed as part of the factor on which it loaded the highest, a judgment based on alpha-if-deleted diagnostics.

Scale scores for each factor were computed by taking the unweighted means of the items in each factor, according to the directions specified by the instruments’ authors (Tschannen-Moran & Hoy, n.d.). Only cases with complete data for a factor were included in scale score calculations.

Research Question 1 sought to investigate the factor structure of the TSES more in depth, particularly the factor of Efficacy for Classroom Management. The hypothesis that teachers viewed proactive behavior management strategies (related to rules and routines) as a
different skill set from reactive behavior strategies (what teachers do once students have misbehaved) was mostly confirmed in the variation in the current factor structure from that of the original authors. Two items that usually load on the classroom management factor instead loaded with instructional strategies: (a) To what extent can you make your expectations clear about student behavior, and (b) How well can you establish routines to keep activities running smoothly. These were two out of the three items that O’Neill and Stephenson (2012) classified as proactive strategies from the classroom management factor. Additionally, one item that would be expected to fall into the student engagement factor—How much can you do to get through to the most difficult students?—clustered with the remaining management items in the current study. The result is that in the current study, Factor 2 is comprised of mostly management items, and items pertaining to dealing with difficult students and difficult behaviors—reactive behavior management. This would seem to suggest that teachers do view general, proactive classroom management as a separate skill set from reactively managing problem behaviors and difficult students, thus answering Research Question 1.

Because teacher predictors of and group differences in efficacy for behavior management was the outcome variable of interest in subsequent research questions in this study, Factor 2—efficacy for management of problematic behavior—is used as the outcome variable in those inquiries.

**Behavior Management Confidence Inventory.** Analysis of the BMCI revealed a two-factor structure. Factor 1 (Eigenvalue = 6.92, \( \alpha = .89 \)) was named Basic Behavior Management and consisted of 7 items, and Factor 2 (Eigenvalue = 1.29, \( \alpha = .89 \)) was named
Complex Behavior Management and was composed of 8 items (see Table 4). The item regarding time-out was deleted as it did not load on either factor and was also excluded from analyses examining the entire BMCI without affecting the scale’s alpha value. Scale scores were computed by calculating the unweighted means of each factor as well as for the entire scale. Only cases with complete data for a factor were included in this calculation. Cronbach’s alpha for the entire 15-item scale was .92.

**Teacher Predictors of and Group Differences for Efficacy for Management of Problematic Behavior**

Linear regression analysis showed that the only significant predictors of higher efficacy for management of problematic behaviors were teaching in grades 3-5, having special education licensure, and years of prior teaching experience (the more experience, the higher the efficacy). A three-way ANOVA, however, failed to show that grade level was a significant variable, and so was excluded from subsequent analyses. A two-way ANOVA identified significant group differences for years of prior teaching experience and special education licensure. The distribution of the dependent variable of efficacy for management of problematic behavior was inspected for normality, and found to meet this assumption with a skewness of -.68 and a kurtosis of .39. Skew values between -.80 and .80, and kurtosis values close to zero are considered acceptable (Osborne, 2013). The variable “years of prior teaching experience” was recoded as a categorical variable (0-5, 6-10, 11-20, more than 21) for this analysis. The cut points for the categories of teacher experience were chosen based on several considerations: (a) within the literature, the term “novice teacher” generally refers to teachers with anywhere between 0-5 years of prior experience (Ingersoll & Smith, 2003),
(b) analyses with the current sample indicated group differences only after 5 years of prior
teaching experience, and (c) cut points for the remaining categories were determined as based
on a combination of trying to reflect the state’s actual teacher make-up (Henry et al., 2010)
and including enough variability to try to explain as much variance as possible. The
assumption of equality of error variance was violated \([F(7, 710) = 2.17, p = .04]\). To account
for this, post-hoc multiple comparisons for prior teaching experience were interpreted using
the Games-Howell p-values and are presented in Table 5. Games-Howell was chosen due to
its accuracy with unequal sample sizes, as was the case in this analysis (Field, 2013).
Results indicated significant main effects for special education licensure, \(F(1, 710) = 14.71,
p<.0001, \eta^2_{\text{partial}} = .02\), and years of prior teaching experience, \(F(3, 710) = 4.70, p = .003,\
\eta^2_{\text{partial}} = .02\), but no significant interaction effect. Teachers with special education
licensure indicated significantly higher efficacy for management of problematic behavior
than teachers without special education licensure (see Table 6). Teachers with 0-5 years of
prior teaching experience indicated significantly lower levels of efficacy for management of
problematic behavior than all other teachers. There were no significant differences between
teachers with more than 5 years of prior teaching experience. These results are summarized
in Table 6.

The relationships between efficacy for management of problematic behaviors,
licensure, and years of prior teaching experience were explained by the mediating effects of
the BMCI. The relationship between special education licensure and efficacy for
management of problematic behavior was mediated by confidence in using behavior
management methods as indicated by scores on the entire BMCI. Figure 3 illustrates that the
standardized regression coefficients between special education licensure and ratings on the entire BMCI, and between ratings on the BMCI and efficacy in management of problematic behavior were statistically significant. The standardized indirect effect was \((.66)(1.09) = .72\). The significance of the indirect effect was tested using bootstrapping procedures. Unstandardized indirect effects were computed for each of 10,000 bootstrapped samples, and the 95% confidence interval was computed by determining the indirect effects at the 2.5th and 97.5th percentiles. The bootstrapped unstandardized indirect effect was .72, and the 95% confidence interval ranged from .56 to .89. Thus, the indirect effect was statistically significant. Teachers with special education licensure indicated significantly higher confidence on all BMCI items than teachers without special education licensure (Table 7). Table 8 presents the differences in percentages between teachers with and without special education licensure who rated items on the BMCI as either confident or very confident.

A mediation effect of the Basic Behavior Management scale of the BMCI on the relationship between years of prior teaching experience (as a categorical variable) greater than five years and efficacy for managing problematic behaviors was also significant. As illustrated in Figure 4, the unstandardized regression coefficients for the relationship between having six or more years of prior teaching experience and ratings on the basic behavior management scale of the BMCI, and between the basic behavior management scale of the BMCI and efficacy for management of problematic behavior were statistically significant. Indirect effects were computed for each of 10,000 bootstrapped samples, and the 95% confidence intervals were computed by determining the indirect effects at the 2.5th and
97.5th percentiles. Table 9 presents the unstandardized indirect effects and confidence intervals.

Because teachers with special education licensure have higher efficacy for management of problematic behavior mediated by their higher confidence in using both basic and complex behavior management methods, it is likely that they have a more accurate sense of efficacy based on competence, addressing part one of Research Question 3.

**Teaching degree.** Using “teaching degree” as an independent variable in analyses proved problematic. Theoretically, the level of teaching degree a teacher has attained would be expected to have some effect on teachers’ efficacy. In the current sample, however, it was extremely rare for a teacher with special education licensure to have greater than six years of experience and not have at least a Master’s degree. Data examination showed that small cells were an issue: There were only six teachers with 21 or more years of experience licensed in special education with a Bachelor’s degree. The same issue arose even when looking at teachers without special education licensure. Because this state allows teachers to hold provisional licenses via lateral entry, and because lateral entry teachers must earn at least a bachelor’s degree in teaching or education within three years to retain their licensure (North Carolina Department of Public Instruction, 2014), it is extremely rare to find a teacher without a teaching degree with more than five years of experience. Additionally, many teachers earn advanced degrees while they are teaching and after they have prior experience.

To try to account for these issues, another regression, using the continuous variable of prior years of experience and education degree as predictors was performed, but only participants without special education licensure were included. The results were the same:
education degree did not significantly predict efficacy for management of problematic behaviors, but years of experience still did. Diagnostics did not indicate collinearity. Despite the fact that the null hypothesis was not rejected for teaching degree, this is an important finding because it provides more evidence for special education licensure as being the best predictor of efficacy.

Differences Between TSES Scale Scores by Group Membership

A repeated-measures ANOVA was conducted in order to determine if there were differences between teachers’ ratings on each subscale of the TSES by group (teachers with special education licensure and teachers without). Mauchly’s test indicated that the assumption of sphericity had been violated \( \chi^2 (2) = 14.49, p = .001 \). Degrees of freedom were corrected using Greenhouse-Geisser estimates of sphericity \( (\epsilon = .98) \). The Greenhouse-Geisser estimate was used because it generally provides a more conservative estimate of effect (Field, 2013), minimizing the chance of a Type I error. In this analysis, the within-subjects factors were each TSES subscale, and the between-subjects factor was licensure group (special education or not). Each scale was determined to meet the criterion for normality (see Table 10). There was a significant scale by licensure group interaction \[ F(1.96, 1351.86) = 5.57, p = .004, \eta^2 = .008 \], and as can be seen in Figure 5, post-hoc analysis of this interaction revealed that differences between mean scale scores were dependent upon licensure group. All teachers scored significantly higher on instructional strategies than management of problematic behavior, but only teachers with special education licensure also scored significantly higher on management of problematic behavior than on student engagement: for teachers without special education licensure, student engagement
was lower, but not significantly so. Initially, it was hypothesized that efficacy for behavior management should precede efficacy for instructional strategies and student engagement. However, since efficacy for instructional strategies with the current sample includes proactive management items, it makes sense that that factor would be rated as higher for all teachers, because where teachers consistently demonstrate and report difficulty is with problematic behaviors. This, then, would suggest congruence between perceptions of efficacy and actual competence for all teachers, addressing part 2 of Research Question 3.

**Qualitative Data**

Qualitative data were collected via semi-structured interviews with teachers. The purpose of adding a qualitative piece to this study was to find out teachers’ lived experiences of behavior management in the classroom; to gain some insight about what the quantitative data would not be able to disclose. Interviews were conducted either over the phone or in person and were audio recorded. Recordings were then transcribed. The transcripts of the semi-structured interviews were analyzed using inductive coding, but only after all interviews had been completed and transcribed. The transcription process provided an opportunity to become very familiar with each interview—it involved rewinding and relistening to the interviews multiple times, followed by multiple re-readings for correcting errors, formatting, editing to protect confidentiality, and finding portions where clarification from the participants was needed. Having listened to and read each interview many times, several themes became obvious immediately. All interviews were initially read and coded for one theme at a time. While coding for specific themes, lists of subordinate themes were listed in the author’s code notes. With each pass through the interviews, more and more
themes stood out. While analyzing the themes, superordinate themes emerged. All themes and their classifications can be seen in Figure 6.

Most of the interview questions asked teachers to name specific behavior management methods. Question 1 asked in a broad sense while questions 4-9 asked for specific methods used in specific situations with specific goals. Teachers were also asked about what influenced the use of the methods they named, and their training—and evaluation of that training—in behavior management. Participants who linked their surveys were asked about their responses to the hypothesized proactive and reactive items on the TSES—about the discrepancy between or level of their ratings. Finally, a broad question was posed to teachers giving them an opportunity to say anything they wanted about behavior management. Several teachers had much to say in response to this final question.

The Art of Behavior Management

**Relationships.** The first theme that emerged from the data was that of relationships. Every teacher interviewed said something about the importance of building relationships with their students as a method of behavior management. Teachers spoke of getting to know their students. Rachel, a high school teacher, gave her students a survey on their first day “to try to get to know what’s life like outside of school for them.” Catherine, also a high school teacher, gave her students “little projects where they can shine and feel good about themselves,” including a “Who Am I” project for all of her seniors. Sarah, a middle school teacher, reported that she is always trying to be proactive and build relationships with students at the beginning of the year—getting to know them, their families—and that seems to work because you
have to have relationships with them. If something’s going on, I can usually talk to them and we avoid some conflicts.

She was not the only teacher to characterize relationship building as “proactive” or as a means of prevention. Jeff, a high school teacher, said, “I try to be proactive and build a relationship with a student and their parents before behaviors get bad.” Many of the teachers said that by knowing their students they were able to identify their students’ triggers for bad behavior, and intervene appropriately. Several of the high school teachers spoke about acting as a mediator to allow students in conflict to find resolution, and credited the rapport they had built with their students as allowing them to do this. Being able to read their students and know when something was wrong was important, too. Brandon, an elementary school teacher, encompassed the way that relationships can be a means of prevention when he said,

I think the better rapport you have with the students, the less issues you have. I think most of the time any behavior issue can kind of be boiled down to a simpler issue. And if you know the kids really well, the kids will want to talk with you—and sometimes it’s a misunderstanding, sometimes there’s something that’s going on at home, or an issue they just had with their buddy. So all these are easily solved, but if I didn’t know my students; if I didn’t talk with them, [if] I just didn’t even try to communicate, I just wouldn’t know any of that stuff, and I would maybe assume the worst.

**Personality.** Several teachers also mentioned how their personalities come into play, both as a tool for behavior management in and of itself, and also as a facilitator for building relationships. Catherine, who described herself as “fun” and as having “a cartoon mind,” as
well as Rachel both use humor to diffuse situations that have the potential to escalate.

Brandon, who described himself as “a positive person in general,” spoke about how he uses his personality to motivate his students:

> When I see them in the hallway; when I see them in the cafeteria, I’m always making an effort to say ‘Hello’ [to my students] and use their names, and that shows them that I do care and want to see the best from them.

Conversely, Patricia, an elementary teacher, spoke about how she can be limited by her personality. She described herself (partly in jest) as “a big softy and [the students] know it…. [Behavior management methods are] only as effective as I use them. I’m limited by my own warm, fuzzy, non-conflict personality.”

**The Science of Behavior Management**

**Positive reinforcement as motivation.** The second-most prevalent theme within the interviews was the prevalent use of positive reinforcement. Teachers named both specific and general ways in which they use positive reinforcement to manage behavior. Many teachers were at schools with PBIS programs and had learned a great deal from and were very influenced by their training in PBIS, as well as the general positive climate within the schools as a result of the program. Sarah, who is working on her Master’s degree in special education, spoke highly of the PBIS program at her school. Repeatedly, she spoke of how important she feels using positive reinforcement is: “I make sure to constantly reinforce…pointing out a lot of good behavior when I see it to make [the students] aware of it….like I said, we’re all about PBIS and the positive.” Catherine said that she, “know[s] the power of positive stuff. If a class is going well, I’m good about praising a kid.” Not only did
teachers have an overwhelming preference for using positive reinforcement as a motivator, but many also recognized and made note of the importance of immediate and specific reinforcement. Rachel said, “I do try to use a lot of positive feedback, like when they do something, I’ll tell them, ‘I’m really proud of you guys, you did a great job with X, Y, and Z,’” or “I try to offer something positive, like, ‘You know, I really love it when you participate in class because you have so much to say.’” Margaret, who used to teach at a PBIS school, said that she still relies on the methods she had learned as part of her previous school’s PBIS program, and admits that though initially she did not think “catching kids being good” before her PBIS training was something that would be effective or worthwhile for high school students, she has seen how well it works and makes a point to do so “rather than just pointing out times at which they need to improve.” Lisa, an elementary teacher, uses an app where “the kids can earn points for different things like being responsible, or teamwork, or kind words.” Jason, who primarily works with students he described as “the students that just really don’t care,” has been successful at getting his students to do their homework by rewarding his students with homework slips that get turned in and drawn out of a bucket for “extra credit or just a piece of candy.” Patricia has a similar system where students get to sign a grid for good behavior, and when the grid gets filled up, she draws from a bag a few sets of grid coordinates and the students with their names in the corresponding blocks get a small reward. Jeff uses a game in his class where students who earn enough points for good behavior get to roll dice for a prize, and works such that the more students who reach the points threshold, the better their odds are for winning.
**Expectations and procedures.** Another prevalent theme was expectations and procedures. Included in this theme are structure, consequences, and the use of negatives to try to change behavior. Stephanie, a middle school teacher who’s teaching setting is best described as a hybrid of pull-out (students spend some, but not most of their time in her classroom) and self-contained classrooms (students spend most or all of their time in her classroom), mentioned several times the importance of structure and “a set agenda” for class as a means to support desirable behavior as well as to discourage bad behavior. Similarly, Sarah said that she has “a routine and a procedure for everything, so students know what to expect, and I think this helps to avoid a lot of issues because there are not a lot of surprises. It’s very structured.” Jason also cited structure and routine as behavior management.

Most teachers mentioned consequences for bad behavior as well. In Patricia’s class, students must take home a slip of paper for inappropriate behavior that notifies their parents of their infraction. Many teachers call or email home to notify parents of bad behavior. A few mentioned using seating changes as a way to stop bad behavior. Catherine relied on natural consequences for her high school students because she felt this was reflective of the real world of which her students would soon be a part. For example, when a student had missed several classes and not attempted to get make-up work or notes and scored a 15 (out of 100) on a test as a result, Catherine’s response to the student, who asked for a re-test, was, “‘You did nothing. You’re taking the test and you’ll keep that grade.’ And I wrote a note on [the test] saying ‘You made your choice. Keep it.’” She went on to say that “I tell them, ‘If you fail a test, the remedy is you study for the next one.’ Done.”
**Complex behavior management/Applied Behavior Analysis.** The theme of complex behavior management methods based on Applied Behavior Analysis includes methods such as differential reinforcement and using a variable-ratio schedule of reinforcement. In fact, several teachers did use some methods based in ABA, but they didn’t realize it, or used them incompletely. One exception was Jeff, who has a Master’s degree in special education, who devised his dice game because he was aware that the variable-ratio schedule of reinforcement produces strong rates of responding and even built a group contingency component into it. Jason and Patricia each use variable-ratio schedules of reinforcement for their drawings. I asked each of them why they chose those methods for behavior management, but neither mentioned the reinforcement schedule. Jason knew that his system worked well and that I really don’t have to give them much at all. The homework slip means a lot to these kids. I mean really, I draw three names out of 60 [or more] slips. So they’re not [understanding] the probability that I’m really only giving away three things, so they think it’s a big deal. So I’m getting a whole lot of positive for not giving much out. Patricia had learned the grid system that she uses at a staff development. Another exception was Sarah, who is currently working on a Master’s degree in special education. She prefaced several of her descriptions of the methods she used to decrease bad behaviors by mentioning the functions of the inappropriate behaviors. In fact, she described using differential reinforcement, vicarious reinforcement, and extinction as well: I’m thinking about [a girl previously described as “constantly seeking attention”] and how when she would call out, I ignored her, but as soon as I saw her raise her hand I
would immediately call on her. And I made sure that everyone else I called on had their hand up and I would make a point to say, ‘Thank you so much for raising your hand.’ And so she dropped calling out because she wasn’t getting what she wanted—which was my attention—and so she started to raise her hand. So I think that stopped the negative and also taught her the appropriate behavior as well.

Further, Sarah had this to say:

Once I’ve noticed a behavior going on, I will sit down with our team and see if it’s happening cross classrooms; if it’s happening at different times of day; just find out exactly when it’s happening and identify the function: are they trying to gain something or escape.

Though Sarah did not mention these behavior management methods by name, she mentioned the functions of the behaviors, using vicarious reinforcement, using specific and immediate reinforcement, extinction, and was clearly describing differential reinforcement. As a contrast, Brandon described a nearly identical situation, but did not mention the function of the inappropriate behavior and spoke about his intervention in a less deliberate way:

What worked for [a student who was calling out rather than raising his hand] was he finally was understanding that the behavior was raising your hand, waiting to be called on, and if he did that I would always call on him. So he was getting that instant gratification because he got to speak but he was also doing it in an appropriate manner.

Sarah explicitly mentioned teaching and reinforcement of an appropriate replacement behavior that met the function of the original inappropriate behavior as well as
simultaneously using extinction, but Brandon described the way his situation resolved as more of a coincidence or luck. Several teachers also mentioned using vicarious reinforcement methods, though not by name. Lisa said that in her class, “If [the students] hear you Praising someone else, you can see the little ripple effect, and everyone sort of follows suit.” Additionally, several of the teachers mentioned using verbal, visual, and proximity cues, though not by name.

Sources of Knowledge

Informal learning. For the most part, the teachers interviewed had learned about behavior management through some form of unstructured or informal learning, including collaboration and experience. Most of the teachers said that they collaborated with other school staff for behavior management input. Teachers frequently cited guidance counselors and special education staff as those to whom they could go to for help or collaboration. Teachers also mentioned learning through observation or very informally from their peers. When she began teaching in her current classroom, Patricia adopted a behavior management system based on an acronym that indicates behavioral directives that was used by the other teachers in the same grade. Lisa discovered the behavior management app that she uses (which is now school mandated) because a colleague had recommended it.

Most of the teachers also mentioned the role that experience has played in their development as teachers in terms of behavior management. For some, the process was one of trial and error, but for others, it was a process of trial by fire, such as Jason. When I asked him if the training in behavior management he received in college was adequate, he replied,
No! No. That first year of teaching, [I] was thrown into the fire. Just trying to see what worked, what didn’t. I’m not going to lie; I got in a couple of yelling matches with the kids. That doesn’t work….I was getting cussed out just for a seating chart: [the students would say to me] ‘I’m not going to sit over there, I don’t effing like this. Eff you, eff this.’ I was just like, [in an exasperated tone] ‘Okay.’

**Formal learning.** Two questions in the interview dealt specifically with formal training in behavior management. Participants were asked what formal training they had, and if it had been adequate. Overwhelmingly, the teachers had received little to no formal training in behavior management. When asked what training she had in behavior management, Rachel said, “Not much, really. I mean, we talk a little bit about it, but we really haven’t been trained in it.” Catherine’s response was “None.” Jason said that in his content-area undergraduate coursework, professors would mention things or model things here and there, but not in any kind of deliberate way, rather in an offhanded way. When I asked Patricia if she had gotten any instruction in behavior management in her teacher education program, she responded, “Not to my memory—it’s a long time ago. But no. And I often thought, ‘Why don’t they teach about management?’”

Several of the teachers had received training only through staff development, such as Brandon, who had attended sessions on PBIS and using a behavior management app. Patricia attended a three-day workshop that covered “classroom basics and tips and tricks of the trade to the last day of the workshop was doing an FBA and a BIP.” When asked if any and all of her training had been adequate, her answer was simply, “No.” Stephanie spoke of staff meetings and in-service trainings with “some [behavior management instruction]
speckled in there. But other than that…none.” She, too, evaluated her training as inadequate. Kayla had mixed feelings about the adequacy staff developments regarding behavior management she’d had, saying that some were adequate, but others were too overwhelming and lacked focus to be effective. Margaret, who’d had no training in behavior management in her teacher education program, had only had PBIS training, but did not find it effective or adequate for working with high school students. Conversely, even though Lisa said that she’d had little training in behavior management, she rated the PBIS training she’d had as adequate, but also thought that additional training on a schoolwide basis was needed.

Again, Jeff and Sarah stood out from the rest of the interview participants in terms of behavior management training. Sarah cited teacher education courses that focused at least somewhat on behavior management and had also attended several workshops. She did find the training adequate but only because she followed up with the instructors and asked for help with specific students and behaviors. Jeff, who’s Master’s degree has a concentration in behavior disorders and who works solely with students with behavior disorders, is the only teacher who had coursework devoted entirely to behavior management. He has found his training adequate.

Necessities and Facilitators for Effective Behavior Management

Consistency. Some teachers also discussed consistency—within themselves, between teachers, and within schools. Lisa noticed a positive change, especially during transitions, since her entire school adopted use of the behavior management app she had been using. Brandon, who also uses a schoolwide-mandated behavior management mobile electronic application, was glad to have “everyone on the same page,” especially since he
works with several groups of students throughout the day. He made note of the positive impact that resulted from the entire school having consistent expectations and measurement. Patricia said that “the more I follow through and ask them to take slips home or ask them to sign the grid; it’s more effective, and the less I do that…it’s less effective.”

**Support.** The final theme that was found in the interviews was that of support—or lack of support—corroborating findings that have shown the importance of school climate and administrative support, particularly the ability of principals to allow teachers flexibility, autonomy, and to shield them from menial tasks that detract from their ability to teach (Hoy & Woolfolk, 1993; Tschannen-Moran, Woolfolk Hoy, & Hoy, 1998). Some teachers had quite a bit to say about the role that lack of support played in their experiences of behavior management. Catherine, a veteran teacher with over 20 years of experience, told me that she was retiring early. I asked her if it was appropriate to share that, and she told me that not only was it fine, but that she wanted it known that she was retiring early because she was fed up with the lack of support for behavior management that she received from her school’s administration. She talked at length about how her job had changed over the years—how the increase in her workload had made it impossible for her to actually teach her students like she should and wanted. Her planning had been taken almost completely away; teachers had been relegated the task of logging discipline infractions during their planning periods:

When I started [at this school], English teachers had two planning periods. And we had to show that we taught, that we gave 30 essays per kid, per year, and they had to be in certain categories. It was a really fabulous writing program. It was so much work for us, but with two back-to-back plannings, you had and hour and a half [and
so] you could really get going with it. Now I only have half of the planning because of all of the discipline stuff, and I’ve got 170 kids [45 more than the maximum was set at]. I give them three essays a year.

Catherine also talked about how the administration at her school does not provide even the most basic support for behavior management:

But when things go really bad…there’s no help to be had. You used to be able to send kids to a [separate but supervised room when their behavior was such that they needed to be removed]. Yeah, that doesn’t exist [anymore]. We’re supposed to call the office [for help]; usually you can’t get through, you get a machine, and then [they say] they’ll send somebody—nobody comes. Or if they do come it’s so long after chaos, it’s just chaos and…There’s nothing. A kid can say, ‘Fuck you,’ and ‘Get back in your room lady,’ and you have no recourse.

Later in the interview, about the administration, she said, “They don’t listen. They don’t pay attention to what we say. We’ve told them repeatedly, ‘We need [the supervised separate room], we need help when we need help.’ [Their reply is] ‘Tough. Tough.’”

Patricia voiced some frustrations as well:

One frustration I’ve had with classroom management is that last year, the state instituted [a specific reading assessment] which for [my] grade means doing text reading, comprehension assessments one-on-one. Those start…the window opens the first week of school—three days in. And I feel there is a lot of pressure on us to get those done in that timeframe. They’re brand new children, they don’t have procedures down, we don’t know them yet, and yet we’re asking them to
independently go read for 20, 30 minutes or do something at their seats to we can start assessing one-on-one right away. And I think that’s detrimental to classroom management….those first few weeks are critical to establishing these routines and things and really letting them know us and what we expect, and we’ve just pushed it all aside to get the testing done. [The new reading assessment procedure] takes a long time, and it takes away from setting up our classroom management.

In a qualitative study, Webb and Ashton (1987) interviewed teachers and found that teacher efficacy suffered when teachers were compensated inadequately and when the workload was excessive. Stephanie compared her experience as a teacher in North Carolina to a different state where she had previously taught, and echoed the conclusions of Webb and Ashton, whose findings, it should be noted, are nearly 30 years old, yet still go unheeded. In Stephanie’s estimation, North Carolina came up short in several areas, including salary. Currently, Stephanie described her salary as enough to force one to live “paycheck to paycheck” whereas in her former state she felt “the pay was reasonable and you feel like you’re paid for what you put into it.” The state in which she used to teach provided adequate staff so that undue tasks weren’t relegated to teachers, and teachers were able to have planning and time for collaboration. In addition, she reported that discipline was handled quickly and effectively, with plenty of administrative support. She ended her interview by saying the following about the status of teacher support and behavior management in North Carolina: “Yeah, it’s just broken. It could be a lot better.”
Not all teachers lacked administrative support. Those who had adequate support said little about it, other than that it was available and that it was a facilitator to effective behavior management for which they were grateful.

**Qualitative Summary**

The primary aim of the qualitative portion of this study was to learn what the quantitative data could not show; to provide supplemental information. Many of the responses to my recruitment emails were from teachers who expressed that they were glad that someone was doing this research; that they felt strongly about behavior management; that they wanted to talk and to be heard, even without compensation (however, all interview participants were compensated). During the course of a few of the interviews, I learned the frustrations that teachers face. They face daily and overwhelming barriers, not only to being effective behavior managers, but effective teachers. Two of the teachers whom I interviewed did not initially receive a recruitment email for an interview, but had taken the survey and contacted me with very passionate feedback. In addition to addressing their feedback, I asked these passionate teachers if they would agree to be interviewed. Fortunately, they did agree, and I was able to hear their stories of their lived experiences with behavior management. What the survey could not capture were the feelings—the raw emotions—that some of these teachers shared with me. As Catherine said, very passionately and pointedly, about her administration, “They don’t hear you.” And though I cannot communicate those feelings adequately in written form, I can report that I heard them and that I understood their need to talk and be heard.
Integration of Quantitative and Qualitative Data

Quantitative data showed that aside from having at least 21 years of prior teaching experience, special education licensure was the surest way to feel high efficacy for behavior management. Further, the association between special education licensure and efficacy for management of problematic behaviors was mediated by confidence in using certain behavior management methods, including some of the more complex methods associated with ABA. The qualitative data echoed this finding: The teachers who reported adequate training were the two who either had or were working on special education licensure and were familiar with ABA methodology to some extent. Furthermore, Sarah and Jeff were the only two teachers who reported coursework in behavior management. This could explain why special education licensure is such a strong predictor of efficacy for management of problematic behavior.

All of the teachers interviewed spoke a great deal about the art of behavior management—building relationships, using their personalities. All of the teachers interviewed spoke in varying degrees about the science of behavior management, but seemingly without an awareness of the science behind what they were talking about, except for Jeff and Sarah. Those two were the most aware of the science of behavior management and spoke about it in a knowledgeable and deliberate way. This is likely due to their coursework in behavior management. No amount of teaching experience, without specific and explicit instruction, will teach teachers how to effectively utilize the complex science of behavior management. This would also explain why the Basic behavior management subscale was a mediator for experience on efficacy for management of problem behavior.
The management methods included in that subscale are more readily learned via unstructured opportunities, including experience, and in less in-depth formal learning opportunities such as staff developments, which were the only learning opportunities most of the teachers reported. When teachers have not been taught the science of behavior management or are not even aware that it exists, they will rely on the art of behavior management, which is neither sufficient for efficacy alone nor for congruent assessments of competence.

While the importance of appropriate training—supported overwhelmingly by both the quantitative and qualitative data—cannot be overlooked, the qualitative data showed that without support (administrative or otherwise), training might not be sufficient for effective behavior management. Because efficacy judgments are made by taking into account internal strengths and external obstacles, support becomes important. Several teachers indicated in their interviews that lack of support had become or was becoming an obstacle too large to overcome.

Interestingly, though the quantitative data did not support the existence of a PBIS program within teachers’ schools as a predictor of efficacy for management of problematic behavior, the qualitative data indicated that PBIS programs were quite influential in shaping teachers’ behavior management styles. Several of the teachers were able to speak about their teaching before and after PBIS training, and indicated that their behavior management became more effective after PBIS implementation. In fact, the positive reinforcement that the teachers received as a result of the effects of positive reinforcement on their students’ behavior resulted in quick buy-in for teachers. The qualitative data were highly skewed in that all but one participant who had a PBIS program spoke positively about it, though even
the teacher that did not indicated that she did continue to use many of the methods in her current school that did not have a PBIS program. A quantitative examination into PBIS program quality could shed light on these discrepant findings.

Although the quantitative data were able to show the effects of teacher training via efficacy and confidence ratings, the qualitative data were able to reveal deeper information. Not only did teachers predominantly indicate that they had not received adequate behavior management training, most had strong feelings when reporting it to me, ranging from angry to dumbfounded by the absurdity of the it. While there are plenty of quantitative data and research indicating that teachers need and want more training in classroom and behavior management, the qualitative data in this study revealed that teachers’ feelings regarding lack of training are quite strong.

Summary of Findings

Factor Structure of the Teachers’ Sense of Efficacy Scale

An exploratory factor analysis with extraction method of Principal Axis Factoring and Promax rotation yielded a 3-factor structure for the TSES with the sample used in this study. Item loadings generally confirmed that efficacy for rules, routines, and procedures is viewed differently from efficacy for managing problem behavior.

Factor Structure of the Behavior Management Confidence Inventory

An exploratory factor analysis with extraction method of Principal Axis Factoring and Promax rotation yielded a 2-factor structure for the BMCI. Factor 1 was named basic behavior management and factor 2 was named complex behavior management.
Relationships Between Teacher Variables, Efficacy, and Behavior Management

Confidence

Regression analysis indicated that out of several predictors, only three variables significantly predicted teacher efficacy for management of problematic behavior: Special education licensure, teaching grades 3-5, and years of prior teaching experience. Although teaching in grades 3-5 was not found to be significant in a subsequent ANOVA analysis, significant group differences for the other two variables were found via a two-way ANOVA. Teachers with special education licensure had significantly higher efficacy for management of problematic behaviors than teachers without special education licensure. The ANOVA also showed that the efficacy for management of problematic behavior for teachers’ with five or fewer years of prior teaching experience was significantly lower than teachers with six or more years of experience. After this threshold, there were no significant differences in efficacy for management of problematic behaviors demonstrated. Confidence in using certain behavior management methods, measured with the BMCI, was found to be a mediator for each of these paths. Confidence in using both basic and complex behavior management methods mediated the relationship between licensure and efficacy—teachers with special education licensure had higher efficacy for management of problematic behaviors due to higher confidence in using basic and complex behavior management techniques. Confidence in using basic behavior management methods mediated the relationship between years of prior teaching experience and efficacy for management of problematic behaviors—teachers with six or more years of teaching experience had higher efficacy due to more confidence in using a set of basic behavior management methods.
**Relationship Between Efficacy and Competence**

Repeated measure ANOVA showed that for teachers without special education licensure, efficacy for instructional strategies was significantly higher than efficacy for management of problematic behavior, which was also significantly higher than efficacy for student engagement. Teachers with special education licensure not only had significantly higher ratings of efficacy on all subscales than teachers without, but the only significant differences between subscale scores was between instructional strategies and behavior management. This finding, in addition to the mediation effects, provides evidence that teachers with special education licensure likely have a more congruent perception of efficacy based on actual competence.

**Teachers’ Lived Experiences of Behavior Management in the Classroom**

Qualitative data analysis supported and supplemented the quantitative data in several ways, including the finding that teachers with or working on special education licensure had more familiarity and confidence in using complex behavior management methods. The interviews also captured the struggles that some teachers face in light of behavior management, and were able to give those teachers a voice where they otherwise did not feel heard.
CHAPTER 5

DISCUSSION

Study Overview

The purpose of this mixed-methods study was to explore the construct of teacher efficacy for classroom management as measured with the TSES in greater depth to address measurement issues related to specificity, as well as to answer questions about teacher predictors of efficacy. Additionally, the relationship between competence and efficacy for behavior management was explored. Finally, teachers’ lived experiences with behavior management in the classroom was investigated via qualitative inquiry.

Discussion of Findings

Perhaps the most striking finding of this study was that special education licensure—above all else—was the strongest predictor of higher efficacy for management of problematic behavior. Neither experience, grade level, PBIS status, nor level of teaching degree could match the power of special education licensure to predict a higher level of efficacy, and indeed, results showed that one would need at least 21 years of prior teaching experience to feel as efficacious at management of problematic behavior as a teacher with special education licensure. Because the association between licensure and efficacy was mediated by confidence in using both basic and complex behavior management methods, this effect is most likely due to the specific instruction in behavior management that teachers with special education are likely to receive.

For teachers with special education licensure, the cycle of efficacy is most likely addressed at the step where teachers must analyze the task and make an assessment of
competence (see Figure 7). During this step, teachers with special education licensure are more likely to be able to choose a method to manage problematic behavior (analysis of the task) and feel competent to carry out the intervention due to their training (assessment of competence). In fact, the qualitative data supported this assumption—the two teachers who either had or were working on Master’s degrees in special education were clearly aware of and had at their disposal the science of behavior management, learned during the courses of their Master’s programs. These findings, in light of the cyclical nature of teacher efficacy, explain why teachers with special education licensure would have a more congruent view of their efficacy based on competence. It is unclear exactly how this process works for teachers without special education licensure, but a possibility is that, because they rely more on the art of behavior management, they are not able to perform the task analysis step. Task analysis would involve identifying concrete goals and courses of action, but neither personality nor relationships are amenable to doing so. This is through no fault of the teachers, though, but indicative of failings of both teacher preparation programs and school systems. Rather than having a repertoire of effective but complex behavior management on which to confidently rely, teachers are left without it. These findings support what was found by Cunningham and Sugawara (1988) and Elliott, Witt, Galvin, and Peterson (1984), that without training, teachers are more likely to rely on behavior management methods that are less complex but less effective. While many of those teachers do end up using some components of the more complex behavior management methods, without a true understanding of the science behind them, it is likely that the results they will see will be short-lived and inconsistent at best, as those methods do not work in pieces (Alberto & Troutman, 2013).
Not only were teachers with special education licensure more efficacious at management of problematic behavior, they were also significantly more efficacious than other teachers at instructional strategies and student engagement. Since the proactive behavior management items loaded on the instructional strategies factor, which was rated by all teachers as significantly higher than the reactive factor, this provides more evidence that proactive and reactive behavior management may be viewed as different skill sets for which it would be most informative to measure separately.

The word “proactive” was used quite a few times by the teachers interviewed. The teachers described building relationships with their students as a proactive behavior management method. According to the teachers, relationship building was a means to create a safe environment characterized by trust, respect, and open communication. The results of the factor analysis of the TSES reflect this: The items in the non-behavior management subscales deal with such things as effective communication (crafting good questions for students, providing alternative explanations, gauging student comprehension, responding to difficult questions, making expectations clear, improving the understanding of a failing student, working with students’ families), knowing one’s students (providing appropriate challenges for students, implementing alternative strategies, adjusting lessons for students), and having good rapport with students (motivating students, getting students to believe they can do well, helping students to value learning). These teachers’ conceptualizations of classroom and behavior management support the Wubbels et al. (2015) definition of classroom management, describing rapport with students as a gateway through which teachers are granted access to effectively apply behavior management methods.
As far as the contribution of experience to efficacy for management of problematic behavior, after five years of experience, no significant differences were found. In fact, when creating categorical variables for years of prior teaching experience, the cutoff at five years was determined by performing analyses with various ranges of experience (beginning with 0) until a difference was found. Interestingly, this cutoff at five years corresponds to the cutoff for when the highest rate of teacher attrition is seen. This builds upon Ritter and Hancock’s (2007) finding that teachers need to amass several years of experience before feeling efficacious at behavior management which, based on the findings in this study, come as a result of knowledge of simple behavior management methods gained through informal learning opportunities.

It was somewhat surprising that there was no effect of PBIS programs on efficacy for management of problematic behavior. Although uniform implementation is a hallmark of PBIS, it is possible that there may be variability in execution of programs from school to school, and even from teacher to teacher within the same school. Additionally, PBIS programs focus largely on prevention. The outcome variable measured in this study was composed of items primarily concerned with intervention.

**Implications for Practice**

**Teacher Education**

The findings in this study not only underscore the need for teachers to receive training in behavior management during their college training, but it also pinpoints the type of training that would benefit teachers: Training in complex behavior management methods associated with ABA. Because teachers view management of problem behaviors and
students as a separate skill set from establishing rules, routines, and procedures, and because teachers with special education licensure have much higher efficacy for management of problematic behaviors via higher confidence in using methods based in ABA, it is clear that teacher training programs for regular education teachers should include instruction in behavior management similar to that in special education programs. Teachers must understand and feel confident utilizing the science of behavior management. The cyclical nature of teacher efficacy must be addressed at the step where teachers assess their competence, and based on the findings presented here, it is likely that an understanding of the science of behavior management is the best way to do that.

**PBIS**

Though the presence of a PBIS program was not a significant predictor or group differentiator of efficacy for management of problem behavior, interview data showed how influential PBIS programs were for teachers. One critical component of introducing paradigm changes to schools and teachers is teacher “buy in” (Hershfeldt, et al., 2012). If PBIS programs and associated training could be expanded to include ABA-based methods that address management of problematic behaviors, perhaps teachers’ efficacy and competence could be improved.

**Attrition**

Beginning teachers are most at-risk for attrition (Ingersoll & Smith, 2003). Based on the results in the current study, there may be two possible explanations for the significant rise in efficacy that was seen after five years of prior teaching experience: Only the most efficacious teachers made it past five years, thereby influencing the mean of the ratings
toward the higher end; or it takes at least five years to feel efficacious in behavior management (regardless of whether a teacher actually is efficacious). Either way, these possibilities are not good outcomes.

**Future Research**

It would be beneficial for future research to focus on mechanisms by which to raise teacher efficacy for management of problematic behavior. An investigation of the effects of implementing training in the science of behavior management in teacher education programs, in expanded PBIS or other in-service programs, via specialized training during the teacher induction period, or in other forms could answer questions about how such training is best delivered. Other variables worthy of examination in such studies would include the longevity of gains in efficacy (if any were found), amount of teacher buy-in for such programs, effects on teacher attrition, and effects on student performance.

An in-depth examination of efficacy for behavior management of teachers with only special education licensure is needed as well. A larger sample size would allow researchers to partial out sources of variance within that population. Results from such a study could guide instruction for all teachers.

A more thorough look at the effect of PBIS programs on efficacy for behavior management is warranted as well. This study did not take into account the quality of PBIS programs when looking at any effects it may have on efficacy. A scale that already has proven technical adequacy could be used to take PBIS program quality into account and perhaps determine if a significant relationship exists between PBIS programs of various qualities and efficacy for behavior management.
Examination of factors associated with teachers’ perception of administrative support for behavior management is necessary as well. It is possible that lack of knowledge about behavior management could contribute to lack of administrator support; thus, giving a similar survey as the one used in the current study to school administrators could be a useful avenue of inquiry.

**Limitations**

**Sampling Issues**

The major contributors of limited ability to generalize the results from this study stem from reliance on self-reporting and self-selection. Self-reporting can lead to bias (Schwarz, 1999). The method of participant recruitment involved sending email requests to tens of thousands of teachers, and the 828 who responded do not constitute a random sample. In addition, due to the necessity of anonymity, there is no way to know if participants met all of the participation criteria, or if participants took the survey only once. Additionally, participants were all drawn from one state, limiting the generalizability of the results beyond that state. Limited, unavailable, or incomplete data about the population from which the sample was drawn make it impossible to discern if the sample was representative of the population across any of the demographic variables considered in this study.

**Instrumentation Issues**

The BMCI was adapted from the BMSS (O’Neill & Stephenson, 2012), which has limited psychometric data. The BMCI, however, has no psychometric data preceding what was found in the current study.
Missing Data

Participants were allowed to decline to respond to any item. Scale scores were computed only on cases for which all responses associated with a factor were present. This resulted in numerous cases being excluded from analyses.

Conclusions

Teacher efficacy has been a construct of interest in the literature due to its association with favorable teacher and student outcomes. Unlike many psychological constructs, however, it has proven difficult to measure, largely in part due to its context-specific nature. This study investigated the construct of efficacy for classroom management as measured with the TSES, and found that, with the current sample, teachers differentiated between efficacy for proactive and reactive behavior management. Because one of the most often-cited reasons for teacher attrition is teachers’ inability to adequately address student misbehavior, it is a particularly important finding that the teachers in this study viewed management of problematic behaviors as a separate skill set from enforcing rules, routines, and procedures. The implications of the results of the data analyses in this study shed some light on how this problem can be tackled. The major finding was that teachers with special education licensure feel significantly more efficacious at managing problematic behaviors due to their higher confidence in using both basic and complex behavior management methods. This is important because it can guide teacher education, both pre- and in-service, to counteract attrition due to low efficacy for behavior management. Not only do we know for which skills teachers are feeling low efficacy, we know how to address them: prepare all teachers,
not just those seeking special education licensure, by teaching them the science of behavior management.
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Tables
Table 1

Sample Characteristics ($n = 828$)

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<tr>
<th>Characteristic</th>
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<td><strong>Sex</strong></td>
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<td>31-40</td>
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<td>51 and older</td>
<td>146</td>
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Table 2

*Interview Participant Characteristics*

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<tr>
<th>Pseudonym</th>
<th>Grade Level</th>
<th>Years of Prior Teaching Experience</th>
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<td>Brandon</td>
<td>Elementary School</td>
<td>0-5</td>
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<td>Catherine</td>
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</tr>
<tr>
<td>Jason</td>
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<td>0-5</td>
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<tr>
<td>Jeff</td>
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<td>11-20</td>
</tr>
<tr>
<td>Kayla</td>
<td>Middle School</td>
<td>0-5</td>
</tr>
<tr>
<td>Lisa</td>
<td>Elementary School</td>
<td>0-5</td>
</tr>
<tr>
<td>Margaret</td>
<td>High School</td>
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<tr>
<td>Patricia</td>
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</tr>
<tr>
<td>Rachel</td>
<td>High School</td>
<td>6-10</td>
</tr>
<tr>
<td>Sarah</td>
<td>Middle School</td>
<td>0-5</td>
</tr>
<tr>
<td>Stephanie</td>
<td>Middle School</td>
<td>0-5</td>
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Table 3

*Factor Loadings for Exploratory Factor Analysis with Promax Rotation of the Teachers’ Sense of Efficacy Scale*

<table>
<thead>
<tr>
<th>Item (Original Factor)</th>
<th>Instructional Strategies</th>
<th>Problematic Behaviors</th>
<th>Student Engagement</th>
</tr>
</thead>
<tbody>
<tr>
<td>To what extent can you craft good questions for your students?</td>
<td>.81</td>
<td>-.17</td>
<td>.06</td>
</tr>
<tr>
<td>(Instructional Strategies)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>How much can you use a variety of assessment strategies? (Instructional Strategies)</td>
<td>.78</td>
<td>-.01</td>
<td>-.05</td>
</tr>
<tr>
<td>To what extent can you provide an alternative explanation or example when students are confused? (Instructional Strategies)</td>
<td>.76</td>
<td>.14</td>
<td>-.18</td>
</tr>
<tr>
<td>How well can you provide appropriate challenges for very capable students? (Instructional Strategies)</td>
<td>.65</td>
<td>-.04</td>
<td>.08</td>
</tr>
<tr>
<td>How much can you gauge student comprehension of what you have taught? (Instructional Strategies)</td>
<td>.63</td>
<td>-.09</td>
<td>.16</td>
</tr>
<tr>
<td>Item (Original Factor)</td>
<td>Instructional Strategies</td>
<td>Problematic Behavior</td>
<td>Student Engagement</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------------------</td>
<td>--------------------------</td>
<td>----------------------</td>
<td>--------------------</td>
</tr>
<tr>
<td>How well can you implement alternative strategies in your classroom?</td>
<td>.58</td>
<td>.11</td>
<td>.19</td>
</tr>
<tr>
<td>(Instructional Strategies)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>How well can you respond to difficult questions from your students?</td>
<td>.56</td>
<td>.05</td>
<td>.01</td>
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<tr>
<td>(Instructional Strategies)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How much can you do to adjust your lessons to the proper level for individual students?</td>
<td>.54</td>
<td>.13</td>
<td>.10</td>
</tr>
<tr>
<td>(Instructional Strategies)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>To what extent can you make your expectations clear about student behavior?</td>
<td>.49</td>
<td>.17</td>
<td>.02</td>
</tr>
<tr>
<td>(Classroom Management)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How well can you establish routines to keep activities running smoothly?</td>
<td>.42</td>
<td>.39</td>
<td>-.11</td>
</tr>
<tr>
<td>(Classroom Management)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 3, continued

<table>
<thead>
<tr>
<th>Item (Original Factor)</th>
<th>Instructional Strategies</th>
<th>Problematic Behavior</th>
<th>Student Engagement</th>
</tr>
</thead>
<tbody>
<tr>
<td>How much can you do to control disruptive behavior in the classroom? (Classroom Management)</td>
<td>-.15</td>
<td>.84</td>
<td>.05</td>
</tr>
<tr>
<td>How much can you do to calm a student who is disruptive or noisy? (Classroom Management)</td>
<td>-.04</td>
<td>.84</td>
<td>.07</td>
</tr>
<tr>
<td>How well can you keep a few problem students from ruining an entire lesson? (Classroom Management)</td>
<td>.15</td>
<td>.73</td>
<td>-.04</td>
</tr>
<tr>
<td>How much can you do to get children to follow classroom rules? (Classroom Management)</td>
<td>.05</td>
<td>.72</td>
<td>.08</td>
</tr>
<tr>
<td>How well can you establish a classroom management system with each group of students? (Classroom Management)</td>
<td>.28</td>
<td>.62</td>
<td>-.002</td>
</tr>
<tr>
<td>How well can you respond to defiant students? (Classroom Management)</td>
<td>.22</td>
<td>.60</td>
<td>.03</td>
</tr>
</tbody>
</table>
Table 3, continued

<table>
<thead>
<tr>
<th>Item (Original Factor)</th>
<th>Instructional Strategies</th>
<th>Problematic Behavior</th>
<th>Student Engagement</th>
</tr>
</thead>
<tbody>
<tr>
<td>How much can you do to get through to the most difficult students?</td>
<td>-.24</td>
<td>.51</td>
<td>.41</td>
</tr>
<tr>
<td>(Student Engagement)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How much can you do to motivate students who show low interest in school work? (Student Engagement)</td>
<td>-.17</td>
<td>.22</td>
<td>.78</td>
</tr>
<tr>
<td>How much can you do to get students to believe they can do well in school? (Student Engagement)</td>
<td>.02</td>
<td>.08</td>
<td>.70</td>
</tr>
<tr>
<td>How much can you do to help your students value learning? (Student Engagement)</td>
<td>.008</td>
<td>.10</td>
<td>.67</td>
</tr>
<tr>
<td>How much can you do to improve the understanding of a student who is failing? (Student Engagement)</td>
<td>.11</td>
<td>.09</td>
<td>.62</td>
</tr>
</tbody>
</table>
Table 3, continued

<table>
<thead>
<tr>
<th>Item (Original Factor)</th>
<th>Management of</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Instructional</td>
<td>Problematic</td>
<td>Student</td>
<td>Engagement</td>
</tr>
<tr>
<td>How much can you do to help your students think critically? (Student Engagement)</td>
<td>.29</td>
<td>-.07</td>
<td></td>
<td>.52</td>
</tr>
<tr>
<td>How much can you assist families in helping their children do well in school? (Student Engagement)</td>
<td>.23</td>
<td>-.03</td>
<td></td>
<td>.46</td>
</tr>
<tr>
<td>How much can you do to foster student creativity? (Student Engagement)</td>
<td>.37</td>
<td>-.15</td>
<td></td>
<td>.45</td>
</tr>
<tr>
<td>Percentage of Variance Explained (Cumulative Percentage)</td>
<td>43.96</td>
<td>6.46 (50.42)</td>
<td>3.57 (53.99)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(43.96)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note.* Factor loadings > .40 are in boldface.
### Table 4

*Factor Loadings for Exploratory Factor Analysis with Promax Rotation of the Behavior Management Confidence Scale*

<table>
<thead>
<tr>
<th>Item</th>
<th>Basic Behavior Management</th>
<th>Complex Behavior Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increasing or strengthening appropriate behaviors (aggregate of BMSS items)</td>
<td>.89</td>
<td>-.11</td>
</tr>
<tr>
<td>Structuring expectations that link behaviors to consequences (adapted from Kaff, Zabel, &amp; Milham, 2007)</td>
<td>.88</td>
<td>-.14</td>
</tr>
<tr>
<td>Enforcing classroom rules and routines (adapted from Kaff, Zabel, &amp; Milham, 2007)</td>
<td>.81</td>
<td>-.20</td>
</tr>
<tr>
<td>Teaching students appropriate behaviors with which to replace inappropriate behaviors (self-written)</td>
<td>.75</td>
<td>.08</td>
</tr>
<tr>
<td>Using positive reinforcement to reward rule-abiding behavior, i.e., “catching kids being good” (self-written)</td>
<td>.67</td>
<td>-.03</td>
</tr>
<tr>
<td>Decreasing or reducing inappropriate behaviors (self-written)</td>
<td>.66</td>
<td>.19</td>
</tr>
<tr>
<td>Item</td>
<td>Basic Behavior Management</td>
<td>Complex Behavior Management</td>
</tr>
<tr>
<td>---------------------------------------------------------------------</td>
<td>---------------------------</td>
<td>-----------------------------</td>
</tr>
<tr>
<td>Writing behavioral objectives in observable and measurable terms (self-written)</td>
<td>.48</td>
<td>.24</td>
</tr>
<tr>
<td>Observing the “dead man” rule for writing behavioral objectives (self-written)</td>
<td>-.28</td>
<td>.82</td>
</tr>
<tr>
<td>Using the “fair pair” rule to reduce inappropriate behavior (self-written)</td>
<td>-.25</td>
<td>.82</td>
</tr>
<tr>
<td>Basing behavioral interventions on the hypothesized function of an inappropriate behavior (self-written)</td>
<td>.09</td>
<td>.73</td>
</tr>
<tr>
<td>Using differential reinforcement to reduce and replace inappropriate behaviors (self-written)</td>
<td>.18</td>
<td>.67</td>
</tr>
<tr>
<td>Functional behavior assessment or analysis (self-written)</td>
<td>.17</td>
<td>.62</td>
</tr>
<tr>
<td>Determining the function of an inappropriate behavior (self-written)</td>
<td>.19</td>
<td>.60</td>
</tr>
<tr>
<td>Determining alternative replacement behaviors to teach (self-written)</td>
<td>.39</td>
<td>.45</td>
</tr>
</tbody>
</table>
Table 4, continued

<table>
<thead>
<tr>
<th>Item</th>
<th>Basic Behavior Management</th>
<th>Complex Behavior Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creating and/or using Behavior Intervention or Support Plans (BIP or BSP) (self-written)</td>
<td>.28</td>
<td>.45</td>
</tr>
<tr>
<td>Percentage of Variance Explained (Cumulative Percentage)</td>
<td>46.14 (46.14)</td>
<td>8.62 (54.76)</td>
</tr>
</tbody>
</table>

*Note.* Factor loadings > .40 are in boldface.
Table 5

Games-Howell Comparisons for Years of Prior Teaching Experience on Efficacy for Management of Problematic Behavior

<table>
<thead>
<tr>
<th>Comparisons</th>
<th>Mean Score Difference</th>
<th>SE</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-5 vs. 6-10</td>
<td>-.44</td>
<td>.13</td>
<td>.006</td>
</tr>
<tr>
<td>0-5 vs. 11-20</td>
<td>-.47</td>
<td>.13</td>
<td>.001</td>
</tr>
<tr>
<td>0-5 vs. 21+</td>
<td>-.50</td>
<td>.16</td>
<td>.01</td>
</tr>
</tbody>
</table>
Table 6

Summary of Means and Standard Errors for Teachers’ Efficacy for Management of Problematic Behavior by Group

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>M</th>
<th>SE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Licensure</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-Special Education</td>
<td>596</td>
<td>6.65</td>
<td>.06</td>
</tr>
<tr>
<td>Special Education</td>
<td>122</td>
<td>7.17</td>
<td>.13</td>
</tr>
<tr>
<td>Years Prior Experience</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0-5</td>
<td>224</td>
<td>6.50</td>
<td>.12</td>
</tr>
<tr>
<td>6-10</td>
<td>144</td>
<td>6.97</td>
<td>.14</td>
</tr>
<tr>
<td>11-20</td>
<td>222</td>
<td>6.98</td>
<td>.11</td>
</tr>
<tr>
<td>21+</td>
<td>128</td>
<td>7.18</td>
<td>.17</td>
</tr>
</tbody>
</table>
Table 7

Summary of MANOVA for BMCI Items, Grouped by Subscale, for Teachers With and Without Special Education Licensure

<table>
<thead>
<tr>
<th>Scale/Item</th>
<th>Special Education</th>
<th>Non-Special Education</th>
<th>F(1, 700)</th>
<th>d</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enforcing classroom rules and routines</td>
<td>4.55 .62</td>
<td>4.42 .67</td>
<td>3.65*</td>
<td>.20</td>
</tr>
<tr>
<td>Using positive reinforcement to reward rule-abiding behavior, i.e., “catching kids being good”</td>
<td>4.55 .58</td>
<td>4.19 .77</td>
<td>23.86**</td>
<td>.53</td>
</tr>
<tr>
<td>Writing behavioral objectives in observable and measurable terms</td>
<td>4.39 .78</td>
<td>3.64 .98</td>
<td>62.65**</td>
<td>.85</td>
</tr>
<tr>
<td>Increasing or strengthening appropriate behaviors</td>
<td>4.33 .67</td>
<td>3.98 .77</td>
<td>22.28**</td>
<td>.48</td>
</tr>
<tr>
<td>Structuring expectations that link behaviors to consequences</td>
<td>4.35 .66</td>
<td>3.98 .84</td>
<td>20.27**</td>
<td>.49</td>
</tr>
</tbody>
</table>
Table 7, continued

<table>
<thead>
<tr>
<th>Scale/Item</th>
<th>M</th>
<th>SD</th>
<th>M</th>
<th>SD</th>
<th>F(1, 700)</th>
<th>d</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching students appropriate behaviors with which to replace inappropriate behaviors</td>
<td>4.26</td>
<td>.76</td>
<td>3.93</td>
<td>.88</td>
<td>21.04***</td>
<td>.40</td>
</tr>
<tr>
<td>Decreasing or reducing inappropriate behaviors</td>
<td>4.16</td>
<td>.78</td>
<td>3.74</td>
<td>.87</td>
<td>24.00***</td>
<td>.51</td>
</tr>
<tr>
<td>Complex Behavior Management</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Functional behavior assessment or analysis</td>
<td>3.94</td>
<td>.96</td>
<td>2.99</td>
<td>1.21</td>
<td>64.66***</td>
<td>.87</td>
</tr>
<tr>
<td>Using the “fair pair” rule to reduce inappropriate behavior</td>
<td>2.74</td>
<td>1.55</td>
<td>2.08</td>
<td>1.31</td>
<td>23.65***</td>
<td>.46</td>
</tr>
<tr>
<td>Determining the function of an inappropriate behavior</td>
<td>4.16</td>
<td>.84</td>
<td>3.29</td>
<td>1.03</td>
<td>74.83***</td>
<td>.42</td>
</tr>
<tr>
<td>Scale/Item</td>
<td>Licensure</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---------------------------------------------------------------------------</td>
<td>----------------------------------</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Special Education</td>
<td>Non-Special Education</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(n=120)</td>
<td>(n=582)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Observing the “dead man” rule for writing behavioral objectives</td>
<td>2.57 (1.61)</td>
<td>1.75 (1.13)</td>
<td>44.71** .59</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Determining alternative replacement behaviors to teach</td>
<td>4.13 (.85)</td>
<td>3.30 (1.13)</td>
<td>57.31** .83</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Creating and/or using behavior intervention or support plans (BIP or BSP)</td>
<td>4.09 (.91)</td>
<td>3.10 (1.22)</td>
<td>71.08** .92</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Basing behavioral interventions on the hypothesized function of a behavior</td>
<td>3.83 (1.14)</td>
<td>2.79 (1.29)</td>
<td>70.14** .85</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 7, continued

<table>
<thead>
<tr>
<th>Scale/Item</th>
<th>Licensure</th>
<th></th>
<th></th>
<th>F(1, 700)</th>
<th>d</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Special Education</td>
<td>Non-Special Education</td>
<td>(n=120)</td>
<td>(n=582)</td>
<td></td>
</tr>
<tr>
<td>Using differential reinforcement to reduce and</td>
<td>3.87</td>
<td>1.15</td>
<td>2.92</td>
<td>1.31</td>
<td>53.56**</td>
</tr>
<tr>
<td>replace inappropriate behaviors</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scales</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Basic Behavior Management</td>
<td>4.37</td>
<td>.55</td>
<td>3.97</td>
<td>.63</td>
<td>40.78**</td>
</tr>
<tr>
<td>Complex Behavior Management</td>
<td>3.66</td>
<td>.82</td>
<td>2.78</td>
<td>.88</td>
<td>103.87**</td>
</tr>
<tr>
<td>Entire Scale</td>
<td>3.99</td>
<td>.65</td>
<td>3.34</td>
<td>.69</td>
<td>92.02**</td>
</tr>
</tbody>
</table>

* p = .06

** p < .001
Table 8

Differences by Percentages Between Teachers With and Without Special Education Licensure Who Rated BMCI Items as Confident or Very Confident

<table>
<thead>
<tr>
<th>Item/Scale</th>
<th>Special Education Licensure</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Basic Behavior Management</strong></td>
<td></td>
</tr>
<tr>
<td>Increasing or strengthening appropriate behaviors</td>
<td>91</td>
</tr>
<tr>
<td>Structuring expectations that link behaviors to consequences</td>
<td>92</td>
</tr>
<tr>
<td>Enforcing classroom rules and routines</td>
<td>94</td>
</tr>
<tr>
<td>Teaching students appropriate behaviors with which to replace inappropriate behaviors</td>
<td>83</td>
</tr>
<tr>
<td>Using positive reinforcement to reward rule-abiding behavior, i.e., “catching kids being good”</td>
<td>95</td>
</tr>
<tr>
<td>Decreasing or reducing inappropriate behaviors</td>
<td>81</td>
</tr>
<tr>
<td>Writing behavioral objectives in observable and measurable terms</td>
<td>87</td>
</tr>
<tr>
<td><strong>Complex Behavior Management</strong></td>
<td></td>
</tr>
<tr>
<td>Observing the “dead man” rule</td>
<td>33</td>
</tr>
</tbody>
</table>
Table 8, continued

<table>
<thead>
<tr>
<th>Item/Scale</th>
<th>Special Education Licensure</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Using the “fair pair” rule to reduce inappropriate behavior</td>
<td>35</td>
</tr>
<tr>
<td>Basing behavioral interventions on the hypothesized function of an inappropriate behavior</td>
<td>65</td>
</tr>
<tr>
<td>Using differential reinforcement to reduce and replace inappropriate behaviors</td>
<td>68</td>
</tr>
<tr>
<td>Functional behavior assessment or analysis</td>
<td>65</td>
</tr>
<tr>
<td>Determining the function of an inappropriate behavior</td>
<td>80</td>
</tr>
<tr>
<td>Determining alternative replacement behaviors to teach</td>
<td>78</td>
</tr>
<tr>
<td>Creating and/or using Behavior Intervention or Support Plans (BIP or BSP)</td>
<td>73</td>
</tr>
</tbody>
</table>
Table 9

*Bootstrapped Unstandardized Regression Coefficients, Standard Errors, and 95% Confidence Intervals for Indirect Effects of Prior Years of Teaching Greater than Five Years on Efficacy for Management of Problematic Behavior*

<table>
<thead>
<tr>
<th>Years of Prior Teaching Experience</th>
<th>Effect</th>
<th>SE</th>
<th>Lower Level CI</th>
<th>Upper Level CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>6-10</td>
<td>.37</td>
<td>.07</td>
<td>.23</td>
<td>.52</td>
</tr>
<tr>
<td>11-20</td>
<td>.03</td>
<td>.08</td>
<td>-.13</td>
<td>.20</td>
</tr>
<tr>
<td>21+</td>
<td>.15</td>
<td>.10</td>
<td>-.04</td>
<td>.34</td>
</tr>
<tr>
<td>Omnibus</td>
<td>.05</td>
<td>.02</td>
<td>.01</td>
<td>.09</td>
</tr>
</tbody>
</table>
Table 10

*Normality Diagnostics for Dependent Scale Variables by Instrument for Whole Sample*

<table>
<thead>
<tr>
<th>Scale</th>
<th>Skewness (SE)</th>
<th>Kurtosis (SE)</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TSES</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Efficacy for Instructional Strategies</td>
<td>-.58 (.09)</td>
<td>.14 (.18)</td>
<td>705</td>
</tr>
<tr>
<td>Efficacy for Management of Problematic Behavior</td>
<td>-.68 (.09)</td>
<td>.38 (.19)</td>
<td>726</td>
</tr>
<tr>
<td>Efficacy for Student Engagement</td>
<td>-.34 (.09)</td>
<td>-.04 (.18)</td>
<td>705</td>
</tr>
<tr>
<td><strong>BMCS - Whole</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Basic Behavior Management</td>
<td>-.34 (.09)</td>
<td>-.51 (.18)</td>
<td>703</td>
</tr>
<tr>
<td>Complex Behavior Management</td>
<td>.13 (.09)</td>
<td>-.69 (.18)a</td>
<td>703</td>
</tr>
</tbody>
</table>
Figures
Sources of Efficacy Information
Verbal Persuasion
Vicarious Experience
Physiological Arousal
Mastery Experience

---

New Sources of Efficacy Information

Cognitive Processing

Analysis of Teaching Task

Assessment of Personal Teaching Competence

Teacher Efficacy

Consequences of Teacher Efficacy
Goals, effort, persistence, etc.

Performance

Figure 1: Graphic representation of the unified definition of teacher efficacy, including its components and cyclical nature, from Tschannen-Moran et al., 1998.
Figure 2: Causal model of teacher efficacy on burnout with correlation directions indicated, from Friedman, 2003.
Figure 3. Unstandardized regression coefficients for the relationship between licensure and efficacy for management of problematic behavior as mediated by confidence in using behavior management strategies. The standardized regression coefficient for the direct effect of licensure on efficacy for management of problematic behavior is in parentheses. *p < .0004
Figure 4. Unstandardized regression coefficients for the direct (solid arrows) and indirect (dashed arrows) relationships between years of prior teaching experience beyond 5 years and efficacy for management of problematic behavior mediated by confidence in using basic behavior management strategies.

* $p < .0001$

** Significant within a 95% confidence interval
Figure 5. Mean scores and standard errors (in parentheses) for teach TSES subscale by special education licensure status.
Figure 6. Coding hierarchy for qualitative data.
The Art of Behavior Management

Personality

Relationships

Between teachers and students

Between students

Openness

Trust

Respect

Knowing students

Interactions with students

Being accessible

Open communication between students

Open communication between students and teachers

As motivation

As prevention
The Science of Behavior Management

Complex/ABA
  - Differential reinforcement
  - FBA/identifying behavior causes and needs
  - BIPs/BSPs
  - Group contingencies
  - Cuing

Motivation through positive reinforcement
  - PBIS
  - Positive reinforcement
  - Structure
  - Consequences
  - Negatives and Punishment

Expectations and Procedures
  - Verbal
  - Physical
  - Proximity
  - Direct
  - Vicarious
  - Specific
  - Immediate
Sources of Knowledge

Informal learning
- From others
- From experience
- Coursework
- Staff development/in-service training

Formal learning
- Observation
- Collaboration
- Trial and error
- Trial by fire
Necessities and Facilitators for Effective Behavior Management

Consistency
- Within teachers
- Between teachers
- Within schools
- Administration
- Recourse
- Resources
- Institutional climate
- Society, community, parents

Support
Sources of Efficacy Information
Verbal Persuasion
Vicarious Experience
Physiological Arousal
Mastery Experience

New Sources of Efficacy Information

Cognitive Processing

Analysis of Teaching Task:
What is the problem, and what method(s) would best address this problem?

Assessment of Personal Teaching Competence:
I know of and am confident in using a method to address this.

Consequences of Teacher Efficacy
Goals, effort, persistence, etc.

Performance

Teacher Efficacy

Figure 7: Graphic representation of how having knowledge of behavior management methods works in the cycle of teacher efficacy.
Appendix
Appendix A

IRB Approval Letter

North Carolina State University is a land-grant university and a constituent institution of the University of North Carolina

Office of Research and Innovation
Division of Research Administration

Office of Research and Innovation
Division of Research Administration

Campus Box 7514
Raleigh, North Carolina 27695-7514
919.515.2444 (phone)
919.515.7721 (fax)

From: Deb Paxton, IRB Administrator
North Carolina State University
Institutional Review Board

Date: August 19, 2014

Title: Teachers and Behavior Management

IRB#: 4177

Dear Shannon Bellezza,

The project listed above has been reviewed by the NC State Institutional Review Board for the Use of Human Subjects in Research, and is approved for one year. This protocol will expire on 8/17/15 and will need continuing review before that date.

NOTE:

1. You must use the attached consent forms which have the approval and expiration dates of your study.

2. This board complies with requirements found in Title 45 part 46 of The Code of Federal Regulations. For NCSU the Assurance Number is: FWA00003429.

3. Any changes to the protocol and supporting documents must be submitted and approved by the IRB prior to implementation.

4. If any unanticipated problems occur, they must be reported to the IRB office within 5 business days by completing and submitting the unanticipated problem form on the IRB website.

5. Your approval for this study lasts for one year from the review date. If your study extends beyond that time, including data analysis, you must obtain continuing review from the IRB.

Sincerely,

Deb Paxton
NC State IRB
Appendix B

Informed Consent Document for Survey Only

North Carolina State University
INFORMED CONSENT FORM for RESEARCH
Title of Study: Teachers and Behavior Management – Survey

Principal Investigator: Shannon W. Bellezza, M.Ed.
Faculty Sponsor: Edward Sabornie, Ph.D.

What are some general things you should know about research studies?
You are being asked to take part in a research study. Your participation in this study is voluntary. You have the right to be a part of this study, to choose not to participate or to stop participating at any time. The purpose of research studies is to gain a better understanding of a certain topic or issue. You are not guaranteed any personal benefits from being in a study. Research studies also may pose risks to those that participate. In this consent form you will find specific details about the research in which you are being asked to participate. If you do not understand something in this form it is your right to ask the researcher for clarification or more information. You may print a copy of this consent form to keep. If at any time you have questions about your participation, do not hesitate to contact the researcher(s) named above.

Eligibility
In order to be eligible for participation in this study, you must be a K-12 full-time teacher (have a teaching assignment at 100%) in a public school who is currently teaching. Teachers who are tracked out, retired, or not currently teaching are not eligible to participate. Student teachers are not eligible to participate.

What is the purpose of this study?
This goal of this research project is to gain information about teachers’ feelings about and perceptions of behavior management.

What will happen if you take part in the study?
If you agree to participate in this study, you will be asked to complete an online survey, the goal of which is to gain a better understanding of teachers and behavior management. Survey completion may take from 10 to 20 minutes. Surveys will be completed online.

Risks
Because you will be asked to rate and indicate your feelings about behavior management in your current teaching assignment, participants must complete this survey at a location other than your current place of employment or teacher education and on a computer and network.
not associated with your employment or place of teacher education.

Benefits
By gaining a better understanding of teachers and behavior management, professional development and teacher education programming can be designed to enhance teachers’ expertise with a range of effective behavioral management strategies.

Confidentiality/Anonymity
Participation in this study is completely anonymous. You will not be required to give your name or asked for any identifying information within this survey. Information about your IP address or other forms of digital identifiers will not be collected.

The information gathered in this research will be kept confidential to the full extent allowed by the law. The information gathered from this study will not be shared with anyone in such a way that could cause you to be identified. No reference will be made in oral or written reports which could link you to the study. Data will be stored securely on a password-protected computer.

Compensation
There is no compensation for participation.

What if you have questions about this study?
If you have questions at any time about the study or the procedures, you may contact the researcher, Shannon Bellezza at slweems@ncsu.edu or 919-449-8345.

What if you have questions about your rights as a research participant?
If you feel you have not been treated according to the descriptions in this form, or your rights as a participant in research have been violated during the course of this project, you may contact Deb Paxton, Regulatory Compliance Administrator, Box 7514, NCSU Campus (919-515-4514).

Consent To Participate
“I have read and understand the above information. I have received a copy of this form or have had the opportunity to print a copy of this form for my records. I agree to participate in this study with the understanding that I may choose not to participate or to stop participating at any time without penalty or loss of benefits to which I am otherwise entitled.”
Appendix C

Informed Consent Document for Survey and Interview

North Carolina State University
INFORMED CONSENT FORM for RESEARCH
Title of Study: Teachers and Behavior Management – Survey, Interview

Principal Investigator: Shannon W. Bellezza, M.Ed.
Faculty Sponsor: Edward Sabornie, Ph.D.

What are some general things you should know about research studies?
You are being asked to take part in a research study. Your participation in this study is voluntary. You have the right to be a part of this study, to choose not to participate or to stop participating at any time. The purpose of research studies is to gain a better understanding of a certain topic or issue. You are not guaranteed any personal benefits from being in a study. Research studies also may pose risks to those that participate. In this consent form you will find specific details about the research in which you are being asked to participate. If you do not understand something in this form it is your right to ask the researcher for clarification or more information. A copy of this consent form will be provided to you. If at any time you have questions about your participation, do not hesitate to contact the researcher(s) named above.

Eligibility
In order to be eligible for participation in this study, you must be a K-12 full-time teacher (have a teaching assignment at 100%) in a public school who is currently teaching. Teachers who are tracked out, retired, or not currently teaching are not eligible to participate. Student teachers are not eligible to participate. In order to participate in an interview, you must first complete a survey via the link sent to you by the principal investigator. If you wish to participate in an in-person interview, you must be willing to meet at a location within a 100-mile driving radius of Raleigh, NC.

What is the purpose of this study?
This goal of this research project is to gain information about teachers’ feelings about and experiences of behavior management.

What will happen if you take part in the study?
If you agree to participate in this study, you will be asked to complete an online survey, the goal of which is to gain a better understanding of teachers and behavior management. Survey completion may take from 10 to 20 minutes. Following survey completion, you will participate in a one-on-one interview with the principal investigator either in person, over-the-phone, or via video conference (Skype or
Google Hangouts, for example). Interviews will be audio-recorded to ensure accuracy; however, identifying information will not be requested to be exchanged during the audio recording. Shortly after completion of the interview, a transcript of the interview will be emailed to you to look over in order to ensure accuracy or to provide clarification or correction, if necessary.

**Risks**
Because you will be asked to rate and indicate your feelings about behavior management in your current teaching assignment, participants must complete the survey at a location other than your current place of employment or teacher education and on a computer and network not associated with your employment or place of teacher education. Because you will be asked to discuss and indicate your feelings about and experiences with behavior management, participants must participate in this interview at a location other than their current place of employment or teacher education and on a computer and network or phone not associated with your employment or place of teacher education.

**Benefits**
By gaining a better understanding of teachers’ feelings about and experiences of behavior management, professional development and teacher education programming can be designed to enhance teachers’ expertise with a range of effective behavioral management strategies.

**Compensation**
Upon completion of participation you will receive a $20 virtual gift card to amazon.com.

**Confidentiality/Anonymity**
You have the option to link your survey responses with your interview. Though it would provide helpful information, it is not required. Doing so will waive the anonymity—but not confidentiality—of your survey responses. If you choose not to link your survey responses to your interview, your survey responses will be both anonymous and confidential. You will not be required to give your name or asked for any identifying information within the survey. Information about your IP address or other forms of digital identifiers will not be collected.

The information gathered in this research will be kept confidential to the full extent allowed by the law. The information gathered from this study will not be shared with anyone in such a way that could cause you to be identified. No reference will be made in oral or written reports which could link you to the study. Data will be stored securely on a password-protected computer. Though the interviews will not be conducted anonymously, the information gathered in this research will be kept confidential to the full extent allowed by the law. Only the principal investigator will have access to identifying information associated with this interview. This information will not be shared with anyone in such a way that could cause you to be identified.
No reference will be made in oral or written reports which could link you to the study. Data (transcripts and digital audio recordings) will be stored securely on a password-protected computer without identifying information attached. Once compensation has been transferred, all contact and identifying information, including emails, will be deleted. Upon publication of this research, all audio recordings will be deleted.

**What if you have questions about this study?**
If you have questions at any time about the study or the procedures, you may contact the researcher, Shannon Bellezza at slweems@ncsu.edu or 919-449-8345.

**What if you have questions about your rights as a research participant?**
If you feel you have not been treated according to the descriptions in this form, or your rights as a participant in research have been violated during the course of this project, you may contact Deb Paxton, Regulatory Compliance Administrator, Box 7514, NCSU Campus (919-515-4514).

**Consent To Participate**
“I have read and understand the above information. I have received a copy of this form. I agree to participate in this study with the understanding that I may choose not to participate or to stop participating at any time without penalty or loss of benefits to which I am otherwise entitled.”
Appendix D

Permission to use the Teacher’s Sense of Efficacy Scale

Dear

You have my permission to use the Teachers’ Sense of Efficacy Scale in your research. A copy of both the long and short forms of the instrument as well as scoring instructions can be found at:

http://www.coe.ohio-state.edu/ahoy/researchinstruments.htm

Best wishes in your work,

Anita Woolfolk Hoy, Ph.D.
Professor
### Appendix E

The Teacher’s Self Efficacy Scale, Long Form (Tschannen-Moran & Hoy, 2001)

#### Teachers’ Sense of Efficacy Scale (long form)

<table>
<thead>
<tr>
<th>Teacher Beliefs</th>
<th>How much can you do?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Directions:</strong> The questionnaire is designed to help us gain a better understanding of the kinds of things that create difficulties for teachers in their school activities. Please indicate your opinion about each of the statements below. Your answers are confidential.</td>
<td></td>
</tr>
<tr>
<td>1. How much can you do to get through to the most difficult students?</td>
<td>(1) (2) (3) (4) (5) (6) (7) (8) (9)</td>
</tr>
<tr>
<td>2. How much can you do to help your students think critically?</td>
<td>(1) (2) (3) (4) (5) (6) (7) (8) (9)</td>
</tr>
<tr>
<td>3. How much can you do to control disruptive behavior in the classroom?</td>
<td>(1) (2) (3) (4) (5) (6) (7) (8) (9)</td>
</tr>
<tr>
<td>4. How much can you do to motivate students who show low interest in school work?</td>
<td>(1) (2) (3) (4) (5) (6) (7) (8) (9)</td>
</tr>
<tr>
<td>5. To what extent can you make your expectations clear about student behavior?</td>
<td>(1) (2) (3) (4) (5) (6) (7) (8) (9)</td>
</tr>
<tr>
<td>6. How much can you do to get students to believe they can do well in school work?</td>
<td>(1) (2) (3) (4) (5) (6) (7) (8) (9)</td>
</tr>
<tr>
<td>7. How well can you respond to difficult questions from your students?</td>
<td>(1) (2) (3) (4) (5) (6) (7) (8) (9)</td>
</tr>
<tr>
<td>8. How well can you establish routines to keep activities running smoothly?</td>
<td>(1) (2) (3) (4) (5) (6) (7) (8) (9)</td>
</tr>
<tr>
<td>9. How much can you do to help your students value learning?</td>
<td>(1) (2) (3) (4) (5) (6) (7) (8) (9)</td>
</tr>
<tr>
<td>10. How much can you gauge student comprehension of what you have taught?</td>
<td>(1) (2) (3) (4) (5) (6) (7) (8) (9)</td>
</tr>
<tr>
<td>11. To what extent can you craft good questions for your students?</td>
<td>(1) (2) (3) (4) (5) (6) (7) (8) (9)</td>
</tr>
<tr>
<td>12. How much can you do to foster student creativity?</td>
<td>(1) (2) (3) (4) (5) (6) (7) (8) (9)</td>
</tr>
<tr>
<td>13. How much can you do to get children to follow classroom rules?</td>
<td>(1) (2) (3) (4) (5) (6) (7) (8) (9)</td>
</tr>
<tr>
<td>14. How much can you do to improve the understanding of a student who is failing?</td>
<td>(1) (2) (3) (4) (5) (6) (7) (8) (9)</td>
</tr>
<tr>
<td>15. How much can you do to calm a student who is disruptive or noisy?</td>
<td>(1) (2) (3) (4) (5) (6) (7) (8) (9)</td>
</tr>
<tr>
<td>16. How well can you establish a classroom management system with each group of students?</td>
<td>(1) (2) (3) (4) (5) (6) (7) (8) (9)</td>
</tr>
<tr>
<td>17. How much can you do to adjust your lessons to the proper level for individual students?</td>
<td>(1) (2) (3) (4) (5) (6) (7) (8) (9)</td>
</tr>
<tr>
<td>18. How much can you use a variety of assessment strategies?</td>
<td>(1) (2) (3) (4) (5) (6) (7) (8) (9)</td>
</tr>
<tr>
<td>19. How well can you keep a few problem students form ruining an entire lesson?</td>
<td>(1) (2) (3) (4) (5) (6) (7) (8) (9)</td>
</tr>
<tr>
<td>20. To what extent can you provide an alternative explanation or example when students are confused?</td>
<td>(1) (2) (3) (4) (5) (6) (7) (8) (9)</td>
</tr>
<tr>
<td>21. How well can you respond to defiant students?</td>
<td>(1) (2) (3) (4) (5) (6) (7) (8) (9)</td>
</tr>
<tr>
<td>22. How much can you assist families in helping their children do well in school?</td>
<td>(1) (2) (3) (4) (5) (6) (7) (8) (9)</td>
</tr>
<tr>
<td>23. How well can you implement alternative strategies in your classroom?</td>
<td>(1) (2) (3) (4) (5) (6) (7) (8) (9)</td>
</tr>
<tr>
<td>24. How well can you provide appropriate challenges for very capable students?</td>
<td>(1) (2) (3) (4) (5) (6) (7) (8) (9)</td>
</tr>
</tbody>
</table>
Appendix F

Demographic Survey

Demographic information

Directions: Please answer these questions to the best of your knowledge about the current school year. If you are unsure of or do not wish to answer a question, you may leave it blank.

1. What is your gender?  Male  Female
2. How many years, not including this year, have you been teaching?  ______
3. What grade level(s) do you teach? Please circle all that apply.
   K  1st  2nd  3rd  4th  5th  6th  7th  8th  9th  10th  11th  12th
4. What types of disabilities do the students on your caseload have? Please circle all that apply.
   a. Autism
   b. Deaf/Hard of hearing
   c. Visual impairment
   d. Developmental delay
   e. Educable/mild intellectual disability
   f. Trainable/moderate intellectual disability
   g. Severe/profound intellectual disability
   h. Multiple disabilities
   i. Other health impairment: ADD/ADHD
   j. Other health impairment: Not specified
   k. Orthopedic impairment
   l. Emotional and behavioral disability
   m. Learning disability
   n. Traumatic brain injury
   o. Other (please indicate) ______________________
5. What setting best describes your classroom environment?
   a. Regular education classroom
   b. Resource classroom
   c. Separate/self-contained classroom
   d. Separate school
   e. Residential school
   f. Hospital/homebound services
6. How many students with documented disabilities that have IEPs are on your caseload? _____
7. How many students without disabilities are on your caseload? _____
8. Do you have any teaching assistants? Yes no
   a. If so, how many? _____
9. What grade levels and subject areas are you currently licensed to teach?
10. Do you hold special education licensure?
11. Is your teaching license provisional?
12. How old are you?
13. What percentage of students in your school receives free/reduced lunch?
   0-20% 21-40% 41-60% 61-80% 81-100% unknown
14. Is your school a Title I school? Yes No Unknown
15. How is the location of your school best described?
   a. Inner city/Urban
   b. Suburb
   c. Rural
16. What is the highest teaching or education degree you have?
   Bachelor’s Master’s Doctorate My degree is not in teaching or education
17. What is the highest non-teaching or non-education degree you have?
   Bachelor’s Master’s Doctorate I only have a degree in teaching or education
18. Are you currently in school pursuing a teaching or education degree? Yes no
19. If so, which degree?
   Bachelor’s Master’s Doctorate
20. Is this degree related in content to your current teaching position? Yes no
21. Does your school have a PBIS program? Yes (please answer the remaining questions) no (end survey here)
22. Has your school’s PBIS program earned any type of recognition? No Green Ribbon (NC only) Model School (NC only) Exemplar School (NC only) Yes (outside of NC) Not sure
23. How would you rate its implementation? Poor Average Good Excellent
24. How would you rate the level of support you get to implement it, including the availability of resources for its implementation? Poor Average Good Excellent
25. How would you rate the PBIS program’s effect on student behavior? Poor Average Good Excellent
26. How would you rate the level of expertise of those who serve as PBIS leadership in your school?
   Poor   Average   Good   Excellent
27. How would you rate your level of expertise in implementing your school’s PBIS system?
   Poor   Average   Good   Excellent
28. Overall, how would you rate the level of expertise of teachers in your school using PBIS?
   Poor   Average   Good   Excellent
29. If you were to have difficulty with the PBIS program, how would you rate the quality of the help you could seek within your school or school system?
   Poor   Average   Good   Excellent
30. How would you cooperation among colleagues for your school’s PBIS system?
   Poor   Average   Good   Excellent
31. How would you characterize the integration of PBIS into your school’s daily operations (as opposed to its being viewed as an add-on system)?
   Poor   Average   Good   Excellent
Appendix G

Behavior Management Confidence Inventory

This portion of the inventory will ask you to think about the strategies you use as a teacher to manage student behavior. Your individual responses will not be given to your school or school system and any demographic information will be kept confidential and is being collected anonymously, so please answer each question honestly. Your participation in this survey is valuable as we attempt to better understand teachers’ use of behavior management strategies.

The following questions aim to explore your confidence using a range of classroom behavior management strategies.

Please rate your confidence with the following:

<table>
<thead>
<tr>
<th>Enforcing classroom rules and routines</th>
<th>Unfamiliar with</th>
<th>Not confident at all</th>
<th>Somewhat confident</th>
<th>Confident</th>
<th>Very confident</th>
</tr>
</thead>
<tbody>
<tr>
<td>Using positive reinforcement to reward rule-abiding behavior, i.e., “catching kids being good”</td>
<td></td>
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<tr>
<td>Writing behavioral objectives in observable and measurable terms</td>
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<tr>
<td>Increasing or strengthening appropriate behaviors</td>
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<tr>
<td>Structuring expectations that link behaviors to consequences</td>
<td></td>
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<tr>
<td>Teaching students appropriate behaviors with which to replace inappropriate behaviors</td>
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<tr>
<td>Functional behavior assessment or analysis</td>
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<tr>
<td>Using the “fair pair” rule to reduce inappropriate behavior</td>
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<tr>
<td>Determining the function of an inappropriate behavior</td>
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<td></td>
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<tr>
<td>-----------------------------------------------------</td>
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<td></td>
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</tr>
<tr>
<td>Observing the “dead man” rule for writing behavioral objectives</td>
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<tr>
<td>Using “time out” with a student</td>
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<tr>
<td>Determining alternative replacement behaviors to teach</td>
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<tr>
<td>Decreasing or reducing inappropriate behaviors</td>
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<tr>
<td>Creating and/or using Behavior Intervention or Support Plans (BIP or BSP)</td>
<td></td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>Basing behavioral interventions on the hypothesized function of an inappropriate behavior</td>
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<tr>
<td>Using differential reinforcement to reduce and replace inappropriate behaviors</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>
Appendix H

Semi-Structured Interview Protocol

1. What types of behavior management methods do you use in your classroom?
2. How effective do you find those methods?
3. What influences your decision to use certain behavior management methods?
4. What do you do to support and encourage desirable behavior in the classroom?
5. Describe a specific situation you can recall and tell me what you did.
6. What do you do to discourage or prevent bad behavior?
7. Describe a specific situation you can recall and tell me what you did.
8. How do you intervene to stop bad behaviors?
9. Describe a specific situation you can recall and tell me what you did.
10. Tell me about your classroom management system.
11. What kinds of training have you received in behavior management?
12. Have you found this training adequate?
13. (If they provided contact information that allowed their survey to be linked) On the survey you completed for me, you rated yourself as (level(s) of efficacy) at (each representation of the construct of behavior management). Tell me about that.
14. What else would you like to tell me about your experiences with or feelings about behavior management in the classroom?

Note. Questions 4-11 are adapted from Tillery, Varjas, Meyers, and Collins (2010).
Appendix I

Survey Recruitment Email

Dear Teacher,

I am a graduate student in Curriculum & Instruction at North Carolina State University. I am seeking North Carolina teachers to complete an anonymous and confidential online survey for my dissertation. My focus of study is teachers’ perceptions of behavior management. Please consider completing this survey <survey link here> if you are a full-time K-12 teacher in a public school. Surveys must be completed on a computer and network NOT associated with your place of employment or teacher education.

This survey should take about 10-20 minutes to complete and will help create a better understanding of teachers and behavior management.

This study, IRB#4177, has received approval from the North Carolina State University Institutional Review Board.

Thank you so much,

Shannon W. Bellezza, M.Ed.
Appendix J

Survey and Interview Recruitment Email

Dear Teacher,

I am a graduate student in Curriculum & Instruction at North Carolina State University. I am seeking North Carolina teachers to complete an anonymous and confidential online survey for my dissertation. My focus of study is teachers’ perceptions of behavior management. Please consider completing this survey <survey link here> if you are a full-time K-12 teacher in a public school. Surveys must be completed on a computer and network NOT associated with your place of employment or teacher education.

This survey should take about 10-20 minutes to complete and will help create a better understanding of teachers and behavior management.

In addition, I am offering $20 gift cards for teachers who participate in an individual interview with me in addition to completing a survey as part of my research. If you wish to be considered for interview participation, please email me at slweems@ncsu.edu before completing the survey from an email address, device, and network not associated with your place of employment or your place of teacher education.

This study, IRB#4177, has received approval from the North Carolina State University Institutional Review Board.

Thank you so much,

Shannon W. Bellezza, M.Ed.