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The effects of a personal accountability and personal responsibility model on urban elementary student positive social and off-task behaviors

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THE EFFECTS OF A PERSONAL ACCOUNTABILITY AND PERSONAL
RESPONSIBILITY MODEL ON URBAN ELEMENTARY STUDENT
POSITIVE SOCIAL AND OFF-TASK BEHAVIORS

by

Daniel Wesley Balderson

Bachelor of Arts
University of Lethbridge
2001

Bachelor of Education
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2001

A thesis submitted in partial fulfillment of the
requirements for the

**Master of Science Degree in Educational Leadership
Department of Educational Leadership
College of Education**

**Graduate College
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The Effects of a Personal Accountability and Personal Responsibility

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is approved in partial fulfillment of the requirements for the degree of

Master of Science in Educational Leadership

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ABSTRACT

**The Effects of a Personal Accountability and Personal
Responsibility Model on Urban Elementary Student
Positive Social and Off-Task Behaviors**

by

Daniel Wesley Balderson

Dr. Tom Sharpe, Examination Committee Chair
Professor of Sports Education and Leadership
University of Nevada, Las Vegas

In the past few decades, the challenge of violent and disruptive behaviors among our children and youth has been on the rise. This study provides one intervention model focused on personal accountability and personal responsibility designed to reduce off-task and disruptive behavior in school settings, and designed to increase positive social behaviors among children and youth. A multiple treatment ABAD, ACAD, ADA, control behavior analysis design was implemented across four distinct elementary physical education classes matched for participant and setting similarity. Measures included number of occurrence and percentage of class time across Teacher Management, Student Leadership, Passive and Disruptive Student Off-Task, Positive Social Behavior, and

Student Conflict and Student Conflict Resolution Behaviors. Results indicated that both Personal Accountability and Personal Responsibility treatments were effective in changing all behavioral measures in the desired direction, with Personal Responsibility particularly effective with more complex behaviors such as Positive Social Behavior and Student Conflict Resolution. Given the short duration of this study, recommendations include studying the long range and generalized effect of physical education-based treatments for children and youth in need of social skill instruction.

TABLE OF CONTENTS

ABSTRACT	iii
LIST OF FIGURES	vii
ACKNOWLEDGEMENTS	viii
CHAPTER 1 INTRODUCTION	1
Accountability	10
Responsibility	13
The Problem	16
Study Purpose	17
Guiding Hypotheses	18
Significance	19
Limiting Factors	19
Scope	19
Assumptions	19
Limitations	20
Operational Definitions	20
CHAPTER 2 METHODS	22
Participants and Setting	22
Design	25
General Procedures	27
Treatment Procedures	28
Baseline Conditions	34
Measures ..	36
Data Collection Procedures	38
Reliability	39
Data Analyses	42
Summary	43
CHAPTER 3 RESULTS	46
Reliability	46
Treatment Fidelity Data	47

Teacher Behaviors	48
Student Behaviors	54
Conflict and Conflict Resolution Behaviors	60
CHAPTER 4 DISCUSSION AND IMPLICATIONS	63
REFERENCES	71
APPENDIX I LITERATURE REVIEW	91
The Discipline and Management Literature	91
Personal Accountability and Personal Responsibility...	101
Personal Accountability	103
Personal Responsibility	110
Applied Behavior Analysis as an Appealing	
Scientific Method	114
Summary	121
APPENDIX II DEFINITION OF TERMS	124
APPENDIX III INFORMED CONSENT	128
Appendix IV EXAMPLE SUBJECT MATTER CONTENT LESSON PLAN	134
APPENDIX V DIRECT OBSERVATION CATEGORY SYSTEM	136
VITA	142

LIST OF FIGURES

Figure 1	Teacher Behaviors Across Experimental Phases ...	84
Figure 2	Teacher Behaviors Across Experimental Phases ...	85
Figure 3	Student Behaviors Across Experimental Phases ...	86
Figure 4	Student Behaviors Across Experimental Phases ...	87
Figure 5	Conflict and Conflict Resolution Occurrences Across Experimental Phases.....	88

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CHAPTER 1

INTRODUCTION

Over the past few decades, an increasingly challenging problem in the classroom has been how to organize and manage large groups of children to decrease the incidence of off-task and disruptive behaviors. Discipline and management, for example, have been identified by the Gallop polls as the most serious problems in American schools in the past decade (Reese, 1993).

Wynne and Ryan (1993) provide demographic data showing an alarming trend toward increasing violence and anti-social behavior among children and youth; a trend that is continuing to increase in number and severity of incidents. Additionally, these authors cite demographic data that may be potentially related to violent and anti-social tendencies. Data include long-term trends from the 1940s to present of:

1. Out-of-wedlock births for white females ages 15-19 increased 650%.
2. Suicide rates rose 277%.

3. Homicide rates have increased 219%.

4. Rate of 14-17 year old youth arrest increase from .01% to 13%.

Although youth drug use has demonstrated recent declines to 29% of the adolescent population, most authorities agree that contemporary levels of youth drug use are far higher than they were 30 years ago and, if not the case, specific drug usage is of greater potency with greater negative societal impact (Wynne & Ryan, 1993).

Although the trend data just listed may not be linked directly to unwanted off-task and anti-social school behavior, many scholars assume that these potential cause and effect linkages are inseparable with the educational environment in which the students spend a vast majority of their time.

St. George and Thomas (1997), for example, looked into the descriptive demographics of a range of behavioral problems that occur specifically in school based settings. Among other disturbing numbers, they found that one out of five middle school students reported fighting on a regular basis. When demographic data were linked to minority populations only, much higher percentages were found. Furthermore, the National Center for Educational Statistics (1997) reported that 47% of principals in city schools

stated discipline issues as one of the most serious problems impacting on educational effectiveness.

Another important demographic dynamic relates to the strong correlation between disruptive behaviors in early school years, with similar to more acute types of behavior in high school and adulthood years. Research indicates that middle school discipline referrals are a strong indicator of chronic behavior problems and violence in later years both within and outside the educational setting (Tobin & Sugai, 1999). Students involved in disruptive or anti-social behavior during their school years have been found to be at a higher risk of dropping out, participating in juvenile delinquency, drug and alcohol abuse, and a host of other negative social and societal outcomes (Walker, Calvin, & Ramsey, 1995).

The disturbing disruptive and anti-social behavior problems and larger demographic trends just summarized appear to be occurring in concert with trend declines in student learning as measured by a variety of subject-matter and skill-based test batteries. From 1955 to 1982, for example, the annual high school average SAT verbal score declined from 479 to 425 (Wynne & Ryan, 1993). Since then the numbers have leveled out, but still continue to remain at or near the all time low experienced in 1982. When

viewing these two traditionally separately reported negative behavioral and learning trends in education settings, it should not be surprising that these two trends may be potentially linked.

Clearly the chronic and acute character of off-task, violent, and disruptive anti-social behavior that is prevalent in school-based settings, and the potential negative connections with academic proficiency and lifespan behavior, is well documented conceptually in the literature. A large literature, some data-based and some conceptual, devoted to the implementation and support of a variety of school-based interventions designed to be helpful in the areas of curbing disruptive behaviors and facilitating positive social behavior among children and youth is available. While little empirical evidence exists in the literature, these interventions may, in turn, provide for impact on the relative improvement over time in a variety of learning measures as well.

For example, accountability mechanisms such as public posting have received much research attention, and related data-based support, as effective strategies for reducing undesirable behaviors in many different educational and athletic settings, and among many differing populations (Thorpe & Darche, 1979; Van Houten & Lai Fatt, 1981; Van

Houten & Nau, 1980; Ward, Smith, & Sharpe, 1997). These studies have found that when students perceive that they are being held strictly accountable for the demonstration or non-demonstration of certain behaviors or skill practices, they tend to more closely follow and demonstrate the expectations of their particular instructor.

In providing another intervention illustration, Sharpe, Crider, Vyhlidal, and Brown (1996) found that through a proactive and behaviorally-based social skill training approach implemented with elementary students, that many types of off-task and anti-social behaviors can be reduced, and other types of positive social behavior can be successfully trained for use in the primary education setting.

Another example is found in the work of Rathvon (1990). This author examined the effects of encouragement on off-task behavior. She found that providing encouraging comments to those students that exhibited a range of disruptive behaviors decreased student off-task behavior. Other interventions designed to reduce off-task behavior have centered on providing rewards (such as computer time; Willis, 1995), reprimands or punishment (Abromovitz, O'Leary, & Rorea, 1987), and variable proximal distance

between the teacher and off-task student (Ryan & Yerg, 2001), all with varying success.

From this range of demographic literature, and related range of reported intervention work in the area of off-task and anti-social behavior change, it is clear that one of the most significant educational challenges that continues to cause concern for parents, teachers, and educational administrators is one of how to be genuinely effective in the area of productive off-task and antisocial behavior change (Veenman, 1984). Reports, for example, reveal the destructive effect that disruptive off-task behavior can have on students as well as the teacher (Vogler & Bishop, 1990). Teacher burnout, decreased amount of time students spend engaged in the subject matter, and the majority of the instructors time spent dealing with those students who are off-task, may result from the chronic presence of these types of behavior challenges (Doyle, 1984). When a teacher fails to control off-task behavior, the situation tends to inhibit the learning process, erode teacher morale, and catalyze a trust issue with the larger parental and community public (Wynne & Ryan, 1997). For example, when a teacher is forced to spend large portions of class time on a variety of off-task and disruptive behavior, or to curtail negatively impacting antisocial incidents, that

teacher will not be able to devote as much time to the preparation and implementation of creative and engaging lessons that facilitate student learning.

One of the appealing initiatives in the area of off-task and anti-social behavior management recommends to not respond negatively to off-task behavior, but rather to use more proactive and positively reinforcing strategies, in turn providing the potential for creating a more supportive learning environment (Evertson & Harris, 1992). A supportive learning environment is defined as one where students are conjointly encouraged to learn by their teachers, fellow students, and the setting in which they are surrounded (Power & Dolly, 1990). According to Power and Dolly (1990), creating and consistently maintaining this type of educational environment has helped students develop positive social skills during their school years that has generalized well beyond graduation and outside educational settings. Doyle (1984) suggests at the conceptual level that the creation of this type of positive environment not only promotes the creation of effective strategies for dealing with a variety of disruptive and anti-social challenges, but also tends to prevent those challenges from occurring in future similar circumstances

outside of the education setting in which those strategies were initially implemented.

Specific to physical education settings, physical education teacher professionals are faced with both similar off-task and anti-social behavior management challenges as that of the regular classroom teacher, and a variety of additional challenges unique to the physical education class setting (Vogler & Bishop, 1990). Clearly, the physical education environment lends itself to a variety of challenges due to the typically larger class sizes and the movement oriented and oftentimes competitive environment that is created during each lesson. Factors such as climate, proximity of students to teacher, and the use of potentially dangerous equipment, are just some of the aspects that are unique to physical education and subsequently provide additional stimuli conducive to a variety of off-task, disruptive, and potentially anti-social student activities.

Despite these physical education specific challenges, successful strategies have been developed and documented as effective tools to reduce off-task behavior in physical education settings (Ryan & Yerg, 2001; Sharpe, Crider, Vyhlidal, & Brown, 1996; van der Mars, 1989). Operating on the assumption that physical education settings are,

perhaps, one of the most challenging to manage in terms of off-task and anti-social behavior incidences, documented effective strategies in these settings may have much to offer the regular education classroom as well. One such study conducted by Ryan & Yerg (2001), again, looked at the proximal distance between the monitoring teacher and the off-task student, in a racially diverse middle school. As the teachers were monitoring the physical education class they were asked to provide feedback to students from either close distances or distant distances. Levels of off-task behavior were recorded on all students while feedback was given at both distances. Surprisingly, results indicated a consistent decline of off-task behavior for all classes when opposite sector (distant) feedback was implemented, which suggests that teacher feedback at a distance can be an effective strategy for reducing student off-task behavior.

The study by Ryan and Yerg (2001) is only one example of the surprising findings when studying educational treatments designed for the amelioration of off-task and anti-social behavior in education settings. Clearly, there is a need for additional documentation of potentially effective strategies and tactics across a variety of situations that exhibit instructional and managerial

challenges in this area. This need is based on the increasing incidence of unwanted student behaviors and on the potential correlations with student learning and student behaviors once outside of the primary education setting.

Accountability

One of the most important and necessary characteristics of an effective teacher's repertoire is the accountability system used to ensure students are adhering to the rules, structures, and learning activities of the instructional environment. A variety of accountability procedures have been implemented with relative success in both the regular education classroom and the physical education setting; and have been used across many teacher organization, management, discipline, and instructional activities.

One potentially effective method that facilitates accountability in both the classroom and the gymnasium is public posting. Public posting allows students to receive recognition for their achievement. For example, a basketball coach may post individual shooting percentages from practice on the wall for his or her team to review after practice. When the players see the percentages, they are made explicitly aware of their performance in relation

to others, and are motivated to improve on the specific task in accordance with the measure that has been publicly posted (Ward, Smith & Sharpe, 1997).

Public posting has been used to improve students' performance in learning activities ranging from science (Tharpe & Darche, 1979), to writing (Van Houten & Nau, 1980), and reading (Van Houten & Lai Fatt, 1981). Public posting has also been found effective in physical education and sport settings, with examples including the improvement of collegiate football players task accomplishment during practice (Ward, Smith & Sharpe, 1997). Public posting has also been used with success in what have been traditionally considered professional preparation settings outside of the education field, such as posting doctors performances in the field of medicine (Fielding, Aguirre & Palaiologos, 2001). In most documented instances, those that have implemented a public posting strategy have improved on their respective desired results in relation to immediate and long range behavior change; providing a solid literature in support of public posting as an important and potentially effective component to an educational strategy.

Along with public posting, another potentially effective method for influencing behavior and promoting accountability is that of peer reinforcement. Peer

reinforcement is a strategy that allows an individual's friend, teammate, or colleague to reinforce the desired behavior of the instructor, coach, or professional supervisor. The philosophy behind this method is that an individual may learn with greater proficiency when a peer reinforces objectives as compared to an instructor's reinforcement.

Peer reinforcement has been found to be effective in modifying classmates' social behavior (Strain, 1978) as well as improving compliance to teacher rules (Noonan & Thibeault, 1974). In non-school settings, peer reinforcement has been found to be effective in job training and skill learning (Weinbach & Kuehner, 1986). Research on peer reinforcement in physical education and sports settings is relatively new and sparsely documented to date. Of the literature available, Crouch, Ward & Patrick (1997) provide an example by studying the effect peer reinforcement had on task accomplishment in an elementary physical education environment. They found that when students received peer-mediated reinforcement they accomplished the task at hand with relatively greater success than those students who were not exposed to this reinforcement method. Crouch, Ward & Patrick's (1997) study provides some evidence that a peer reinforcement component

to potentially effective educational treatments may facilitate the effectiveness of those treatments.

Responsibility

Another appealing area to the management of off-task and anti-social behavior lies in a general area of the literature termed personal responsibility. A variety of more qualitative approaches to the management of off-task and anti-social behavior have been documented in the literature. Though rare, and most often found cited in the adapted education literature, some behaviorally based treatments exist as well. Broadly defined, a personal responsibility strategy is designed to encourage students to take greater responsibility for their actions due to instruction on the outcome relationships of a variety of anti- and positive-social behaviors. A personal responsibility model most often promotes understanding of the ramifications of a variety of interactive behaviors, with hope that through this type of instruction students will demonstrate greater concern for the well being, safety, and enhanced quality of experience of their peers.

Hellison (1995), for example, has promoted a qualitative approach to the design and implementation of personal responsibility instructional models. The approach he has

contributed is called Teaching Personal and Social Responsibility, and involves four levels that encourage students to move from irresponsibility to responsibility and from respecting ones self to respecting others. The first level's emphasis is on the student showing respect and concern for others. The second level encourages students to participate, giving the best effort possible in whatever they are engaged in. The third level allows the student to learn how to work independently, accepting responsibility for their work or performance. The final level is one where the student displays caring behaviors such as support, showing concern, and exhibiting compassion. Though ill-defined from a traditional scientific perspective, and fraught with reliable measurement challenges in implementation, the four levels provide a conceptual framework upon which a teacher can encourage and evaluate dimensions of personal responsibility in relation to the behavioral control of off-task and anti-social behavior.

Hellison and Walsh (2002) recently provide a detailed analysis of 26 studies employing the personal responsibility model. They conclude that, while there are gaps in the evidence and clear methodological issues, the models theoretical and practical application is apparent.

They encourage future research to alleviate the gaps and build on the theoretical base.

Teaching personal responsibility is potentially important for an educator involved in the creation and implementation of a productive and effective learning atmosphere. Kahan & McKnight (1998), for example, introduced personal responsibility skills to a class of elementary physical education students. They found that decision-making skills, interpersonal skills, and acceptance of responsibility, were learned much more quickly and performed more regularly when the students were formally taught these skills, and were formally involved in their own behavior management akin to a peer reinforcement model discussed in the preceding accountability section.

Personal responsibility has also been shown to be correlated with academic achievement. Martel, McKelvie and Standing (1987) found, for example, that an important single predictor of academic achievement among students is the extent to which students are held formally and personally responsible for their actions. In contrast to the currently popular cooperative learning approaches to instructional effectiveness, personal responsibility ranked higher than general intelligence in predicting academic success. These factors were measured by a standard IQ test

battery, providing additional support for the importance of a personal responsibility component to potentially effective educational treatments (Martel, McKelvie & Standing, 1987).

The Problem

This study is designed to examine strategies for reducing off-task and anti-social behavior in school-based settings. In addition, while there exists a conceptual and data-based literature in relation to the potential handling of these challenges, it remains incomplete and inconclusive due to measurement challenges and unsubstantiated treatment recommendations. Based on the importance of personal accountability and personal responsibility components to the facilitation of effective instruction in general, and to the treatment of off-task and anti-social behavior in specific, this author developed and implemented one potentially effective data based instructional model with an underserved and underachieving academic student population. It is hoped that as a function of this proposed scientific activity, the literature in this area would be advanced in relation to treatment operations, measurement challenges, and student impact documentation. Unique to this study's treatment development efforts, is the

combining of qualitatively appealing personal responsibility strategies with behaviorally based and behaviorally documented accountability strategies. This treatment package was designed to curtail off-task and anti-social behavior, and promote positive social behaviors in at-risk children and youth.

Study Purpose

In specific, this study was designed to determine the effects of one behaviorally based personal accountability/personal responsibility model on the measures of:

1. Teacher Observation, Management, Skill Instruction, and Social Skill Instruction Time.
2. Student Off-Task Behavior, dichotomized by Passive and Disruptive Behaviors.
3. Student Anti-Social Behavior.
4. Student Positive Social Behavior, dichotomized by Conflict Resolution and Leadership Behaviors such as Peer Encouragement/Support and Peer Instruction.
5. Student Academic Learning Time, used as a correlate with student learning (as defined in Appendix B).

This study was designed to research the potential effects of one appealing personal accountability and personal responsibility strategy in an urban elementary school

setting in which large portions of the student population were considered academically and economically at risk. Focus was on the immediate and long-range behavioral changes in passive and disruptive off-task behaviors, and on positive social behaviors of encouragement/peer support and peer instruction.

Guiding Hypotheses

It was hypothesized that the personal accountability/personal responsibility model will impact the measures listed in the appropriate directions (i.e., reduce off-task and anti-social behavior dimensions, and increase positive social and academic learning time dimensions).

Significance

Results derived from the design and implementation of this research study provided data to support one behaviorally based and quantitatively measured treatment for off-task and anti-social incidents with metropolitan to urban elementary age at-risk clientele. In addition, treatment operation and measurement challenges with respect to this research area were furthered in important quantitative ways.

Limiting Factors

Scope

This study was designed for an at-risk urban elementary school in which the treatment was designed specifically for students exhibiting chronic off-task and anti-social behavior practices. The potential to generalize these findings to other settings is therefore limited.

Assumptions

The following assumptions were important to summarize as a guide to this study:

- 1) It was assumed that the behaviors displayed during the observation periods were an accurate representation of what occurs on a daily basis.
- 2) It was assumed that the BEST software (Sharpe & Koperwas, 2000) for the collection and analysis of direct observational data for this study were valid and reliable instruments for such.
- 3) It was assumed that the participants observed and studied in this thesis were representative of the larger populations to be generalized.

Limitations

This thesis study is limited by the following:

1. Behavioral data on teacher practices are limited to only observable, overt behaviors.

2. Behavioral data are purely descriptive and not prescriptive.
3. This study is limited to the types of sample populations and settings in which the study was conducted.

Operational Definitions

Personal Accountability- Students are held specifically accountable for subject matter skill demonstration; organization, management and social behavior; and related verbal and non-verbal activities displayed during particular school-based lessons.

Personal Responsibility- Students accept and display responsibility for his or her own personal actions as well as showing respect for others.

Passive Off-Task Behavior- The student is either not engaged in an activity he or she should be engaged in or is engaged in an activity other than the one he or she should be engaged in. An example might be a student not listening to the teacher or misusing equipment.

Disruptive Off-Task Behavior- The student is either not engaged in an activity he or she should be engaged in or is engaged in an activity other than the one he or she should be engaged in. This behavior affects not only the student

exhibiting the off-task behavior but also other students and/or the teacher). For example, talking when the teacher is explaining a skill, fighting, and/or disrupting a drill through inappropriate behavior (Siedentop, Tousignant, & Parker, 1982) indicate disruptive off-task behavior.

Anti-Social Behavior- Students display disrespectful behavior towards the teacher or another student such as: hitting, yelling, pushing, arguing, or name-calling. This category of behavior goes beyond the category of off-task in that a clear negative connotation and denotation is evident from the behavioral display, and is clearly designed to elicit negative response from other students and potentially the teacher.

Positive Social Behavior- Students demonstrate an overt respect and support for other students and/or the teacher through the use of encouraging, supporting, peer-instruction, and other similar behavior forms designed to increase the positive social interactions and demonstration of skills that the teacher is attempting to hold the students accountable for.

CHAPTER 2

METHODS

This chapter provides a detailed description of the methods and procedures used to implement this Thesis. Sections include the following: A thorough description of the participants studied and the setting in which they operate, the specific research design, operational description of the general and specific procedures used for implementation of the treatment, specific measures used to detect treatment effects, methods for data collection, reliability procedures used to ensure treatment fidelity and accuracy of data collection, and methods for data analysis.

Participants and Setting

Students from four fourth and fifth grade physical education classes were selected as participants due to their similar background, characteristics, and previous disruptive and anti-social behavior as observed by the participating teacher. Discipline referral data were also

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collected to provide further illustration on demographic data in relation to disruptive behavior history. The general school setting was characterized as urban, serving elementary age children only, and serving a large percentage of low socio-economic status students from underrepresented minority backgrounds (largely African American and Hispanic). The mean age for the four classes studied was 10.2 years old. Classes were held on an open grass field adjacent to the school, and at a community grass field located across the street from the school. Equipment and resources at these two sites were limited. All physical education classes taught for observation purposes within this study included movement-oriented subject matter content designed to build fundamental motor skills (Refer to Appendix IV: Example Subject Matter Content Lesson Plan). Among the four classes used for observation purposes, the average class size was 25 students.

Students were characterized by a predominantly low academic achievement history, predominantly African American descent (90%), with a large percentage of these individuals living in single-parent households. The students had relatively equal amounts of previous exposure to physical education activities and displayed a wide range

of movement abilities. The participating teacher was an African American male that was completing his second year at this particular school, and had over ten years of substitute teaching, regular teaching, and coaching assignments within the local school district. The participating teacher's coaching background was extensive and covered a variety of sports at both the high school, middle school, and elementary school levels. This teacher taught all four physical education classes and implemented all treatments used in this study.

The Andre Agassi College Preparatory Academy school site is a model charter school whose goal is to offer superior academic opportunities to those students who have been faced with undesirable economic, academic, and social circumstances. The elementary school is located in an acutely at-risk, urban area of a major South Western United States city. Enrollment at the school is approximately 200 students, and is in its second full year of operation. School intent is to expand to a fully functioning K-12 school setting over the next five years. Core funding for this school comes from the Andre Agassi Charitable Foundation.

Design

The design selected for this study was chosen to best determine the effectiveness of the personal accountability and personal responsibility intervention strategies generally outlined in Chapter One. This design falls under the category of single case applied behavior analysis research, which has an underlying objective of making inferences about the effects of interventions across different treatment conditions while presented to the same study participants over time. The following treatment implementation structure illustrated and discussed provides opportunity for scrutiny of participant behavior changes as a function of treatment exposure (Kazdin, 1982; Sharpe & Koperwas, 2003).

A multiple treatment ABAD, ACAD, ADA, Control behavior analysis design across four separate and distinct matched classes was implemented as the order and grouping protocol for this study. The design encompassed four distinct elementary physical education classes matched for participant and setting similarity. The phase designation was: A= Baseline Period, B= Personal Accountability Treatment, C= Personal Responsibility Treatment, D= Both Treatments.

An appealing aspect of this design is the reduction of many internal validity concerns associated with single case research studies. Collecting the initial baseline data, and involving a return to the baseline condition, helps the treatment stand alone as the sole factor for behavioral change. Key validity threats, with the potential to seriously affect behavior, such as history and maturation are eliminated through the use of this particular research design. In withdrawing the treatment and returning to baseline conditions, the behavior occurrences can be compared to the behavioral levels during the treatment phase.

Another appealing aspect of this type of single case design is the structural conformity to the natural physical education environment the students had been previously accustomed to. The treatments were implemented within the context of regular physical education units of study, during regular class-time hours, and at the same location the students were used to. These factors contributed to a very close replication of a familiar situation, allowing the students to behave as normally as possible throughout the entirety of the study.

General Procedures

This research study was guided by a set of specific procedures aimed at providing a framework for implementing the educational treatments of interest and for observing target behaviors to determine treatment effects over time. A detailed outline of treatment procedures is provided, discussing the characteristics of the physical education program at the school, as well as an in-depth look at the order in which the three classes were exposed to the two treatments.

The personal accountability and personal responsibility interventions, along with all other physical education instruction, were conducted in the context of a movement skill acquisition curriculum taught in 50-minute blocks two days a week. The third day of physical education class during a typical week was designated as an combined class intramural day in which team games and sport activities were provided for student enjoyment; and subsequently this day was not used to collect data. Each class was exposed to an initial baseline period in order to gather an accurate indication of behavior levels on all target measures (refer to the Measures and Data Collection Procedures sections following) before the treatment was implemented. After this initial period, one class was

exposed to the personal accountability treatment, followed by a return to baseline, and then they were exposed to both treatments as a treatment package. The second class, after the initial baseline period, was exposed to the personal responsibility treatment followed by a return to the baseline and then like the first class, received both treatments concurrently. The third class received both treatments at the same time, with baseline conditions prior to and following treatment package implementation. The fourth class remained in the baseline phase throughout the entire study, serving as a classroom control group.

The first treatment phase consisted of five observations sessions spread across three weeks of classroom instruction and the remaining phases consisted of four observations spread across two weeks. The entire experiment lasted 9 weeks for a total of 17 direct observation data collection sessions. All four physical education groups were engaged in developmentally appropriate movement activities that were matched across all classes to ensure similar activities were being performed each day within and across classes for the entire duration of the experiment.

Treatment Procedures

The two treatments implemented in this Thesis included *personal accountability* and *personal responsibility*

strategies outlined in a general way in Chapter One. These two treatments were considered separate and distinct, with each founded on existing and largely qualitative literature in support of variations of these types of instructional interventions. Again, given the nature of the literature specific to positive social behavior change in K-12 settings, the chronic challenge of disruptive and anti-social behavior occurrence, the potential relationship between anti-social behavior and societal challenges later in life, and the limited applied behavioral measurement of these types of treatments; additional study was considered warranted. Additionally, it was felt important to completely and operationally define personal accountability and personal responsibility treatments behaviorally, as this approach to treatment definition was viewed as an asset to both the future study of such treatments in terms of treatment fidelity issues, and the potential use of these treatments by practicing teacher professionals due to enhanced application definition. Expanded procedural discussion therefore follows:

The personal accountability and personal responsibility treatments were implemented each physical education class during the treatment phases, either separately or as a treatment package in accordance with the behavior analysis

design structure (i.e., ABAD, ACAD, ADA, and Control).

These treatments were based on the literature documenting the relative effectiveness of previous attempts to utilize ways in which off-task behavior may be reduced, while at the same time encouraging positive social behavior (see for example, Hellison, 1995; Kahan & McKnight, 1998; Thorpe & Darche, 1979; Van Houten & Nau, 1980; Van Houten & Fatt, 1981, Ward, Smith, & Sharpe, 1997).

The personal accountability strategy is associated with facilitating a culture of accountability awareness on the part of students who are behaviorally participating in the classroom experience. Based on previous research, public posting of behaviors, was selected as the primary means to accomplish this accountability task. The specific procedures during implementation of the personal accountability treatment included:

1. During the entire course of the physical education lesson numeric, percentage of class time, and rate data were recorded on: a) student off-task behavior, dichotomized by passive and disruptive behaviors, b) student anti-social behavior, c) student positive social behavior, dichotomized by conflict resolution and leadership behaviors such as peer encouragement/support and peer instruction, and d)

student academic learning time in physical education (ALT-PE), used as a correlate with student learning. During this data recording activity, observers recorded each and every instance of the student measures listed (refer to Appendix E for complete operational definitions) as a function of a classroom as the unit of analysis procedure (Silverman, 1997).

2. Each class's performance from the previous day was publicly posted each morning in the physical education meeting room so that they could have many opportunities to read the information. The information was broken down into the four categories listed above (a,b,c,d) and each numeric value in every category reflected each classes' behavior as a whole.
3. The participating teacher made no attempt to articulate a viewpoint on the specific data posted. Instead, the teacher encouraged students throughout the day to view the publicly posted information, and made general comments in relation to the importance of acting in a positive social manner and participating prosocially in the physical education activities provided.

The personal responsibility intervention was founded on the theoretical tenet of empowerment of students into leadership positions within the public educational setting. Desired results of this process are behaviors more conducive to an effective learning environment for all students. Mentioned previously, Hellison (1995) provides the major conceptual and theoretical articulation in this area in supporting the notion of empowering students to take responsibility for their behavioral actions. His work has pointed to the view that when teachers empower rather than overpower, they are more likely to see positive behaviors emerge which act as a positive catalyst for student learning opportunities (De Busk & Hellison, 1989).

Paralleling these ideas, this study employed a specific behaviorally based leadership method to encourage desirable student behaviors in this domain while at the same time discouraging inappropriate ones. A behaviorally based intervention protocol coupled with a behaviorally based measurement system to determine treatment effects was viewed as an important contribution to the literature given that most work to date in this area has been qualitative in methodological implementation. The specific intervention protocol included;

1. During the intervention phase a random student (students could not be chosen twice during the experiment) was chosen at the beginning of class, to come to the front of the class and go over the eight main personal responsibility class rules. These rules included (with corresponding measures):

- a) Keep your hands to yourself (off-task disruptive).
- b) Quietly talk problems out, don't yell (off-task disruptive, positive social- conflict resolution).
- c) Do not talk while the teacher is talking (off-task disruptive, off-task passive).
- d) Stand quietly in straight lines (off-task disruptive, off-task passive).
- e) Encourage others to do well on all classroom activities (positive social- leadership).
- f) Solve conflict and arguments in a calm manner and provide solutions that ensure a positive outcome for all participants (positive social- conflict resolution and leadership).
- g) Accept in positive manner resolutions to conflict (positive social- conflict resolution).

- h) Move quickly and quietly when asked, and engage in appropriate skill practice activities (off-task disruptive, academic learning time).
2. The teacher did nothing during this treatment phase to reinforce the set of personal responsibility rules as it was left up to the students. The teacher did make sure that all the rules were remembered and spoken at a level that all could hear, and made a point of helping clarify the student presentation by providing an illustration or a model of an example of each of the eight rules in terms of a positive and negative example.
3. Behavioral data were then recorded for the duration of the experimental class period and according to the measures operationalized in Appendix V.
4. The teacher provided five minutes of summary talk over the measures used in this study related to the eight personal responsibility rules at the end of each class period for this experimental phase.

Baseline Conditions

Baseline conditions were designed to be as unobtrusive as possible, and were designed to gather number, percent, and

rate data on all measures operationalized in Appendix V. These data were then used to provide a characteristic summary, or behavioral topography, of each class used for experimental purposes prior to any treatment implementation. In this manner, and as a function of treatment implementation across classes, baseline conditions could be compared to treatment conditions within and across classes, and could be compared to the comparative control class to legitimately determine the experimental effects of the treatment.

In addition, treatment fidelity data were collected according to the observation system operationalized in Appendix V for the purposes of ensuring the accuracy of treatment implementation on the part of the teacher in accordance with the procedural descriptions of this study. In other words, behavioral data were collected to ensure that components of the personal accountability treatment were not present in other experimental or baseline phases, and that personal responsibility treatment components were not present in experimental phases other than that specifically designated for this treatment.

Measures

The measures chosen for this study were retrieved from the behavioral literature related to the training and generalization of positive social behaviors in elementary age children. In this respect, the work of Sharpe, Brown, and Crider (1994) in the area of training positive social behavior, the applied behavior analysis approach to teacher education of Landin, Hawkins, and Wiegand (1986), and the public-posting operationalizations of Ward, Smith, and Sharpe (1997) were relied upon in developing a behavioral measurement system best suited to the intentions of this study. All measurement terms and operational definitions are completely listed in Appendix V.

The first measure, termed off-task, records incidents of both passive and disruptive behaviors that impede either an individual student's or student group's progress in the activities prescribed by the teacher for that day. This first measure may be considered a source behavior, for it is the core challenge that most teachers face in relation to the running of potentially effective classrooms, and it is a foundational behavior to integrally related positive and negative social behavior outcomes.

The next level of measures focus on social behaviors exhibited by students. Two measures were used at this level

and were respectively termed, anti-social and positive-social behavior. Categories were dichotomized into conflict resolution, positive social, and student leadership behaviors in the face of peer conflict and off-task behaviors. Last, and as a context or ecologically bound measure in relation to conflict resolution and leadership behaviors, a measure of conflict incidence as a subset of off-task behavior was collected. In this regard, conflict incidence could be related to disruptive off-task behaviors or conflicts that arise out of the natural participation in physical education activities.

The final measure was implemented to provide a proxy for skill achievement in lesson activities, and was termed academic learning time in physical education or ALT-PE (Siedentop, Tousignant, & Parker, 1982). This measure was felt important to provide potential correlations among decreases in off-task behaviors and negative social behaviors and increases in positive social behaviors due to this study's treatment implementation; and an approximation or proxy for student achievement in the subject matter presented. In this manner a behavioral case may be potentially developed for the immediate relationships among student achievement and the form and character of classroom social behavior interactions.

Data Collection Procedures

Data collection for this study involved three components. First, data collectors were trained to criterion according to an accepted three-step method for data collection training (Kazdin, 1982; Sharpe & Koperwas, 2003). Second, treatment fidelity was ensured through the collection of behavioral data on the teacher who implemented the treatments for this study and who oversaw the baseline phases of this study, to ensure that across phase and across class treatment interference was not an issue, and that the treatments operationalized for each experimental phase were implemented according to the procedures defined in this study. Last, behavioral data were collected on the measures summarized in the preceding Measures section and operationalized in Appendix V.

Data were recorded for 50 minute class periods during the prescribed observational days, with all data collected by three trained observers in real time. All teacher behaviors related to the issue of treatment fidelity were recorded by the observers during this time. These teacher behaviors included: Student measures of off-task (passive or disruptive), conflict, antisocial, and positive social (conflict resolution and peer leadership) behaviors were recorded during this time. This type of collection is

appropriate given that each of these measures were either (a) evidenced on the part of one experimental individual (i.e., teacher behaviors), or (b) were student measures that were not held specific to one student but were, rather, indicative of the general character of the particular classroom setting observed (i.e., the classroom as the unit of analysis) (Silverman, 1997). In the case of recording ALT-PE, students within each observed classroom episode were randomly selected in two minute intervals for recording purposes, and observed for those two minutes in a rotating fashion until the class observation concluded. Akin to acceptable moment-to-moment recording methods (Sharpe & Koperwas, 2003), a representation of the general character of ALT-PE was determined for each observational period.

The Behavior Evaluation Strategy and Taxonomy (BEST, Sharpe & Koperwas, 2000) software was used for all data training and data collection aspects of the study, and implemented with IBM Thinkpad laptop hardware.

Reliability

The rationale behind assessing reliability in a single case study is the pursuit of data collection consistency, minimization of observer bias, and through such, increasing

the probability of accurate data in relation to the experimental settings to be observed. Three general areas of reliability were included in this study; data collector training to criterion, data collector reliability checks during study implementation and actual data collection from videotape records, and treatment fidelity checks throughout study implementation.

For data collector training, one advanced graduate student and two advanced undergraduate physical education majors were trained through 15-20 hours of practice and instruction on the coding system. A three-step process was used for this stage. First, a criterion tape standard depicting multiple occurrences of the various behavior categories of Appendix V was prepared. This criterion tape was then divided into distinct four-minute segments for training purposes. The videotape included multiple four-minute records of physical education students at the same school and with the same teacher during a pilot study done one year earlier. These videotapes, once faculty level data collectors provided a reliable data record of each four-minute tape segment, were used as the data standard to train all data collectors for this experiment.

The second step involved data collectors being trained to a criterion of $>.85$ agreement for three consecutive

observations on the 4 minute segments of videotape and in comparison to the corresponding data standard created by the faculty coders. The final reliability step included independent interobserver agreement checks, assessed at least once during each experimental phase (4 checks per class, for 16 total checks) by comparing two independent but simultaneous observations of the same observation episode (Sharpe & Koperwas, 2003). Kazdin's (1982) point by point formula was used across number and percent duration measures for all behaviors contained within the Appendix V listing. According to Kazdin (1982), the point-by-point agreement ratio is an important method for computing reliability to assess whether there is agreement on each instance of the observed behavior. The formula for computing point-by-point agreement consists of:

$$\text{Point-by-Point Agreement} = \frac{A \times 100}{A + D}$$

A= agreements for each behavior occurrence

D= disagreements for each behavior occurrence

To evaluate percentage measure agreement, percentages for each behavior occurrence were converted into discrete whole integers.

Treatment fidelity analyses consisted of tabulating the number and percentage of occurrence for all teacher

behaviors contained in Appendix E and categorizing these behavior occurrences by class and by experimental phase. In this manner, a visual representation of how accurately the teacher tended to operate experimentally and according to the defined treatment or baseline procedures of the study was made available.

Data Analyses

Observations, using BEST software and IBM compatible hardware (Sharpe & Koperwas, 2000), recorded the number, percentage of total class time of occurrence, and rate of all behaviors listed in Appendix V.

Data analysis first included the tabular and graphic representation of all behavior occurrences according to accepted applied behavior analysis table and figure preparation guidelines. Each behavioral measure, that is number, rate, and percentage of total class time, was analyzed according to magnitude (i.e., mean and level) and rate (i.e., trend and latency) analyses (Kazdin, 1982; Sharpe & Koperwas, 2003). Visual inspection was viewed as the most amenable analysis method given (a) single subject non-parametric data were collected and therefore not amenable to most traditional statistical analyses, (b) focus was on the therapeutic value of the treatment for one

particular setting with generalization concerns minimized, and (c) only those effects of a strength visible to the practicing professional on a data graph were felt warranted to present given the applied nature of the study.

Summary

A productive, albeit often overlooked, literature exists with regard to applied behavior analysis strategies designed and developed to facilitate effective educational change. Chapter Two highlights two potential behaviorally-based educational interventions, personal accountability and personal responsibility, hypothesized to be productive in the amelioration of challenging off-task and negative social behaviors in metropolitan to urban elementary physical education settings. In addition, it was felt important to include a proxy measure for student achievement, termed ALT-PE, to attempt to uncover any potential correlations among student learning and the form and character of social behavior interplay in the classroom setting in which learning is potentially occurring.

It was felt that implementation of a study such as the one methodologically described would provide a more rigorously measured and scientifically documented approach to research into the effectiveness of personal

accountability and personal responsibility strategies that to this point have surfaced primarily in the qualitative literature. If successfully implemented, and if providing results in accordance with this study's hypotheses, a quantitative approach to assessing behavioral change in the realm of personal accountability and personal responsibility may be realized. This realization may then be translated into meaningful information for practicing physical education professionals interested in effective treatments for challenging off-task and negative social activity.

CHAPTER 3

RESULTS

This chapter provides a detailed look at the results derived from implementing the personal accountability and personal responsibility interventions. Sections within the Results chapter include: a) results from reliability checks, b) treatment fidelity data, c) results from the teacher behaviors observed, d) results from the student behaviors observed, and e) results from the conflict in the context of conflict resolution behavior analysis.

Reliability

The purposes that govern assessing reliability in a single case or behavior analysis study include assuring the consistency of data collection, minimizing observer bias and data collection drift over the course of the experiment, and as a function of these purposes increasing the probability of accurate data representation of the experimental setting observed. Following the three-step process outlined in chapter two, each data collector was first trained to an acceptable criterion standard of $>.85$

agreement on three consecutive observations (Kazdin, 1982; Sharpe & Koperwas, 2003) in accordance with a predeveloped criterion standard. Interrator checks were then performed once per experimental phase with all three data collectors. Mean observer training agreement was .89 with a range of .85 to .98. Mean Interrator agreement was .92 with a range of .87 to .96. This data supports the view that the data recorded and analyzed for this study were reliable and potentially accurate in representation of what actually occurred in the observational settings utilized for this experiment.

Treatment Fidelity

Treatment fidelity analyses consisted of tabulating the percentage of occurrences for all teacher behaviors contained in Appendix V and categorizing these behavior occurrences by class and by experimental phase. In this manner, a visual representation is provided for how accurately the teacher tended to operate experimentally in accordance with the operational definitions of both treatment implementation and baseline conditions of the experiment as provided in Chapter 2 of this thesis document.

Teacher behaviors are listed and compared in Table 1 according to mean percentages and ranges of occurrence across the four phases of this study (baseline, treatment, baseline, treatment). Categories of Personal Accountability (e.g., public posting), Personal Responsibility (e.g., leadership talk), Observation, Skill Instruction, Social Skill Instruction, and Management are represented. Data show that the personal accountability and personal responsibility strategies were consistently present for the treatment phases and for the relative amount of time stipulated by the treatment implementation definitions across phases and class settings as contained in Chapter 2, and that these treatments were consistently absent during the baseline phases. Other ancillary teacher behaviors (e.g., Observation, Skill Instruction, and Management) consistently and appropriately varied as a function of treatment implementation; and the teacher behavior of Social Skill Instruction remained at consistently minimal levels over the course of the experiment and across all experimental phases.

Teacher Behaviors

Each teacher behavior inductively determined useful for analysis purposes (in accordance with a behavior systems

approach to experimentation as described in Chapter 2) was presented graphically in accordance with accepted data graphing procedures (Sharpe & Koperwas, 2003) and visually inspected according to within and across phase mean, level, trend, and latency analyses in relation to treatment implementation. Teacher behaviors within the observational category system that displayed substantial change are represented in Figures 1 and 2 (i.e., Teacher Management and Student Leadership) and represented respectively using measures of number and percent of total observational time. Student Leadership was included within the teacher behavior analysis due to its operational definition component of assisting the instructor with his or her teaching.

Again, Figure 1 compares the respective number of occurrences for the two teacher behaviors observed (Management and Student Leadership) across the four different experimental phases and across four separate classes of the thesis experiment. Data first show the number of Management behaviors to consistently decrease as a function of the onset of either initial treatment phase (Class 1 Baseline Mean= 5.4, range from 3 to 7; Personal Accountability Treatment Mean= 2.3, range from 1 to 3; Class 2 Baseline Mean= 10.6, range from 7 to 16; Personal Responsibility Treatment Mean= 5.0, range from 2 to 10).

Additionally, while the implementation of both treatments as a treatment package did not have a visible effect from second baseline to the final combined treatment phase on the number of Management behaviors for Class 1 or Class 2; when used as an initial treatment in the case of Class 3, a reliable decrease was observed from initial baseline to treatment phase (Class 3 Baseline Mean= 10.2, range from 8 to 15; Both Treatments Mean= 3.0, range from 1 to 5). Finally, and in relation to the numerical data, a return to baseline after initial treatment demonstrated a reliable, though short-term, maintenance effect in relation to post-treatment withdrawal for all three classes (Class 1, 2nd Baseline Mean= 5.0, range from 3 to 7; Class 2, 2nd Baseline Mean= 3.3, range from 2 to 4; Class 3, 2nd Baseline Mean= 8.0, range from 6 to 12). These findings in support of the effectiveness of both the Personal Accountability and Personal Responsibility treatments, and the combined treatment package, were felt particularly important in light of (a) the lack of change in Class 4's teacher Management data when used as a comparative control that was never exposed to treatment (Class 4 Continuous Baseline Mean= 5.9, range 4 to 14), and (b) Class 4's characteristic data similarity with the initial baseline phases of Class 1 and Class 2.

Regarding the numerical Student Leadership data, each initial treatment phase, and the combined treatment phase of Class 3, demonstrated similar consistent and reliable increases in the number of Student Leadership behaviors (Class 1 Baseline Mean= 0.4, range from 0 to 1; Personal Accountability Treatment Mean= 5.0, range from 4 to 6; Class 2 Baseline Mean= 1.2, range from 0 to 3; Personal Responsibility Treatment Mean= 3.5, range from 2 to 5; Class 3 Baseline Mean= 0.6, range from 0 to 2; Both Treatments Mean= 1.8, range from 0 to 3). Similar to the numerical Management data, while the implementation of both treatments as a treatment package did not have a visible effect from second baseline to the final combined treatment phase on the number of Student Leadership behaviors for Class 1 or Class 2; a consistent maintenance effect was demonstrated from initial treatments of Classes 1-3 throughout the remainder of the experiment (Class 1 2nd Baseline Mean= 4.0, range from 2 to 5; Both Treatment Mean= 5.3, range from 3 to 7; Class 2 2nd Baseline Mean= 2.8, range from 2 to 3; Both Treatment Mean= 4.3, range from 3 to 6; Class 3 2nd Baseline Mean= 5.5, range from 4 to 7). Again similar to the numerical Management data, the Student Leadership findings in support of the effectiveness of both the Personal Accountability and Personal Responsibility

treatments, and the combined treatment package, were felt particularly important in light of (a) the lack of change in Class 4's Student Leadership data when used as a comparative control that was never exposed to treatment. (Class 4 Continuous Baseline Mean= 1.3, range 0 to 3), and (b) Class 4's characteristic data similarity with the initial baseline phases of Class 1 and Class 2.

Percentage data describing Management and Student Leadership behaviors, shown in Figure 2, demonstrate similar changes in response to treatment implementation as those presented in the numerical data of Figure 1. Data first show the percentage of class time devoted to Management behavior to slightly decrease upon the first Personal Accountability treatment implementation for Class 1, while Class 2 displayed a consistent and much greater decrease as a function of Personal Responsibility treatment phase implementation (Class 1 Baseline Mean= 13.2, range from 4 to 22; Personal Accountability Treatment Mean= 10.8, range from 3 to 21; Class 2 Baseline Mean= 19.4, range from 8 to 30; Personal Responsibility Treatment Mean= 5.0, range from 2 to 10).

Additionally, while Class 1 and Class 2 displayed marginal increases in the percentage of class time devoted to Student Leadership behaviors upon treatment initiation,

Class 3 experienced a more substantial increase in this behavior due to the Both Treatment intervention phase of the experiment (Class 1 Baseline Mean= 1.4, range from 0 to 4; Personal Accountability Treatment Mean= 3.5, range from 2 to 4; Class 2 Baseline Mean= 0.6, range from 0 to 2; Personal Responsibility Treatment Mean= 2.8, range from 2 to 4; Class 3 Baseline Mean= 1.0, range from 0 to 3; Both Treatments Mean= 6.0, range from 5 to 7).

The percentage data shown in Figure 2 demonstrated a relatively weak, and in some cases lack of, maintenance effect with the returns to baseline for Classes 1-3 and across both Management and Student Leadership behaviors (Management- Class 1 2nd Baseline Mean= 15.8, range from 6 to 36; Class 2 2nd Baseline Mean= 10.3, range from 6 to 14; Class 3 2nd Baseline Mean= 16.5, range from 10 to 21; Student Leadership- Class 1 2nd Baseline Mean= 1.0, range from 0 to 2; Class 2 2nd Baseline Mean= 1.5, range from 0 to 3; Class 3 2nd Baseline Mean= 4.5, range from 3 to 7). When the Both Treatments phase of the experiment was implemented for Classes 1 and 2 a return to the behavioral change levels of initial treatment for Classes 1-3 was evidenced, indicating the potential need for repeated treatments to bring Management and Student Leadership behaviors under consistent treatment control (Management-

Class 1 Both Treatments Mean= 7.8, range from 6 to 10;
 Class 2 Both Treatments Mean= 6.3, range from 4 to 8;
 Student Leadership- Class 1 Both Treatments Mean= 4.0,
 range from 3 to 5; Class 2 Both Mean= 4.0, range from 3 to
 5). These percentage data, when compared to the lack of
 change in Class 4's ongoing baseline (Management- Class 4
 Baseline Mean= 0.8, range from 5 to 35; Student Leadership-
 Class 4 Baseline Mean= 4.0, range from 0 to 2). This data
 highlights the potential importance of a multiple treatment
 approach in initiating behavioral change. In addition,
 these data highlight the importance of including a multiple
 measurement type approach to behavior analysis
 experimentation, due to the differential findings in
 relative maintenance effects across numerical and
 percentage data records of the same observational settings.

Student Behaviors

Each student behavior determined useful for analysis
 purposes was also presented graphically in accordance with
 accepted data graphing procedures (Sharpe & Koperwas, 2003)
 and visually inspected according to within and across phase
 mean, level, trend, and latency analyses in relation to
 treatment implementation. Student behaviors within the
 observational category system that displayed substantial

change are represented in Figures 3 and 4 (i.e., Passive Off-Task, Disruptive Off-Task, and Positive Social) and represented respectively using measures of number and percent of total observationa.

Figure 3 compares the respective number of occurrences for the three student behaviors observed across the four different experimental phases and across four separate classes of the thesis experiment. Data first show the number of Passive Off-Task behaviors to consistently decrease as a function of Class 1-3's initial treatment phase implementation (Class 1 Baseline Mean= 10.4, range from 8 to 14; Personal Accountability Treatment Mean= 2.8, range from 2 to 4; Class 2 Baseline Mean= 8.6, range from 7 to 11; Personal Responsibility Treatment Mean= 4.3, range from 2 to 6; Class 3 Baseline Mean= 10.0, range from 8 to 11; Both Treatments Mean= 3.0, range from 1 to 7). The data represented in Figure 3 also show similarly strong treatment effects in the appropriate directions for Disruptive Off-Task and Positive Social behavior change as a function of the initial treatment exposures for Classes 1-3 (Disruptive Off-Task- Class 1 Baseline Mean= 8.8, range from 7 to 11; Personal Accountability Treatment Mean= 3.0, range from 2 to 5; Class 2 Baseline Mean= 5.4, range from 3 to 8; Personal Responsibility Treatment Mean= 3.5, range

from 2 to 5; Class 3 Baseline Mean= 10.4, range from 8 to 14; Both Treatments Mean= 3.5, range from 2 to 5; Positive Social- Class 1 Baseline Mean= 1.0, range from 0 to 3; Personal Accountability Treatment Mean= 8.5, range from 4 to 13; Class 2 Baseline Mean= 0.8, range from 0 to 2; Personal Responsibility Treatment Mean= 5.0, range from 3 to 7; Class 3 Baseline Mean= 1.6, range from 0 to 4; Both Treatments Mean= 12.5, range from 8 to 15). For all three classes and for all three behavioral variables represented in Figure 3, a return to baseline demonstrated limited maintenance effects. Albeit, the behaviors did not show a complete return to initial baseline levels, with the final treatment implementation for Classes 1 and 2 demonstrating a limited effect (Passive Off-Task- Class 1 2nd Baseline Mean= 4.5, range from 4 to 5; Both Treatments Mean = 3.5, range from 2 to 6; Class 2 2nd Baseline Mean= 4.8, range from 3 to 6; Both Treatments Mean= 3.5, range from 3 to 4; Class 3 2nd Baseline Mean= 4.8, range from 4 to 6; Disruptive Off-Task- Class 1 2nd Baseline Mean= 6.0, range from 5 to 7; Both Treatments Mean = 2.8, range from 1 to 4; Class 2 2nd Baseline Mean= 4.8, range from 3 to 7; Both Treatments Mean = 4.5, range from 3 to 6; Class 3 2nd Baseline Mean= 7.8, range from 6 to 10; Positive Social- Class 1 2nd Baseline Mean= 7.0, range from 4 to 10; Both

Treatments Mean = 8.0, range from 7 to 9; Class 2 2nd Baseline Mean= 4.5, range from 3 to 6; Both Treatments Mean = 4.5, range from 2 to 7; Class 3 2nd Baseline Mean= 5.8, range from 2 to 8). Similar to the Figure 1 and 2 data, the continuous baseline of Class 4 provided for legitimacy of experimental comparison across baseline and treatment phases due to the consistent characteristic similarity of the Class 4 data with initial baseline data of Classes 1-3 (Passive Off-Task Continuous Baseline Mean= 6.8, range from 3 to 11; Disruptive Off-Task Continuous Baseline Mean= 6.9, range from 3 to 12; Positive Social Continuous Baseline Mean= 0.7, range from 0 to 2).

Percentage data describing Passive Off-Task, Disruptive Off-Task, and Positive Social behaviors, shown in Figure 4, demonstrate comparable changes in response to treatment implementation as that of the numerical data represented in Figure 3. Data first show the percentage of class time spent in Passive Off-Task to substantially decrease as a function of initial treatment for Classes 1-3 (Class 1 Baseline Mean= 7.8, range from 6 to 12; Personal Accountability Treatment Mean= 2.8, range from 1 to 3; Class 2 Baseline Mean= 14.2, range from 10 to 18; Personal Responsibility Treatment Mean= 6.0, range from 3 to 12; Class 3 Baseline Mean= 5.4, range from 3 to 7; Both

Treatments Mean= 1.0, range from 0 to 2). Data also show the percentage of Disruptive Off-Task behaviors to consistently decrease upon treatment phase implementation (Class 1 Baseline Mean= 9.0, range from 5 to 13; Personal Accountability Treatment Mean= 5.8, range from 2 to 13; Class 2 Baseline Mean= 8.4, range from 5 to 12; Personal Responsibility Treatment Mean= 2.5, range from 2 to 3; Class 3 Baseline Mean= 8.0, range from 5 to 12; Both Treatments Mean= 1.8, range from 1 to 3). Additionally, all three classes that received a treatment experienced changes in the percentage of class time devoted to Positive Social occurrences, with Class 3 showing the greatest increase. (Class 1 Baseline Mean= 1.4, range from 0 to 4; Personal Accountability Treatment Mean= 8.0, range from 4 to 10; Class 2 Baseline Mean= 0.4, range from 0 to 1; Personal Responsibility Treatment Mean= 3.3, range from 2 to 5; Class 3 Baseline Mean= 0.6, range from 0 to 2; Both Treatments Mean= 5.8, range from 5 to 7). Similar to the Figure 3 numerical data, a return to baseline for Classes 1-3, and second Both Treatments implementation for Class 1 and 2, demonstrated a respective limited maintenance and limited second treatment effect in further supporting the need for repeated treatment to ensure that a complex set of behaviors related to social responsibility come under

complete stimulus control (Passive Off-Task- Class 1 2nd Baseline Mean= 6.8, range from 5 to 8; Both Treatments Mean = 2.8, range from 2 to 3; Class 2 2nd Baseline Mean= 11.0, range from 8 to 13; Both Treatments Mean= 5.0, range from 3 to 6; Class 3 2nd Baseline Mean= 4.8, range from 2 to 7; Disruptive Off-Task- Class 1 2nd Baseline Mean= 6.3, range from 4 to 8; Both Treatments Mean = 3.8, range from 1 to 7; Class 2 2nd Baseline Mean= 7.8, range from 5 to 15; Both Treatments Mean = 5.8, range from 3 to 7; Class 3 2nd Baseline Mean= 7.3, range from 5 to 9; Positive Social- Class 1 2nd Baseline Mean= 3.3, range from 2 to 4; Both Treatments Mean = 3.5, range from 2 to 5; Class 2 2nd Baseline Mean= 3.0, range from 2 to 4; Both Treatments Mean = 2.5, range from 1 to 4; Class 3 2nd Baseline Mean= 8.0, range from 7 to 9). Again, the Class 4 data provided support for legitimacy of experimental comparison due to its consistent data pattern similarity with the initial baselines of Classes 1-3 (Passive Off-Task Continuous Baseline Mean= 4.7, range from 3 to 8; Disruptive Off-Task Continuous Baseline Mean= 0.5, range from 0 to 2).

Conflict and Conflict Resolution Behaviors

Conflict, in the time-based context of Conflict Resolution, was the final behavior determined useful, and potentially the most interesting from a behavior systems experimental perspective, for analysis purposes in this study. The behaviors contained in Figure 4 are again presented graphically in accordance with accepted data graphing procedures (Sharpe & Koperwas, 2003) and visually inspected according to within and across phase mean, level, trend, and latency analyses in relation to treatment implementation.

Figure 5 compares the respective number of occurrences for Conflict and the Conflict Resolution behaviors that were present during Conflict episodes across the four different experimental phases of this thesis study and across the four separate experimental classes observed. Data first show the number of Conflict behaviors to be consistent throughout all four classes and across the entirety of the study (Class 1 Mean: 3.2, range 1 to 5; Class 2 Mean: 3.6, range 1 to 7; Class 3 Mean: 4.3, range 2 to 6; Class 4 Mean: 4.7, range 2 to 6). This data representation is to be expected given the natural conflict orientation of a physical education and sport setting due

to the nature of the skills to be learned in the context of the sport oriented games introduced to the class and consequently played. Data next show the number of Conflict Resolutions evidenced on the part of student peers to increase as a function of each of the initial treatment phases of Classes 1-3 (Class 1 Baseline Mean= 0.2, range from 0 to 1; Personal Accountability Treatment Mean= 3.3, range from 3 to 4; Class 2 Baseline Mean= 0.2, range from 0 to 1; Personal Responsibility Treatment Mean= 1.8, range from 1 to 3; Class 3 Baseline Mean= 0.6, range from 0 to 1; Both Treatments Mean= 2.3, range from 1 to 3). Similar to the data patterns represented in Figures 3 and 4, albeit more markedly so with respect to the Figure 5 data, the effects of initial treatment for Classes 1-3 were limited and not well maintained upon return to a second baseline, and the impact of a Both Treatments phase for Classes 1 and 2 demonstrated limited effects (Class 1 2nd Baseline Mean= 1.3, range from 1 to 2; Both Treatments Mean = 2.0, range from 1 to 3; Class 2 2nd Baseline Mean= 3.5, range from 3 to 4; Both Treatments Mean= 1.3, range from 1 to 2; Class 3 2nd Baseline Mean= 1.5, range from 1 to 2). The limited maintenance and second treatment effect findings are in line with the hypothesized view that the more complex the behavioral package becomes in relation to what is being

treated for change, the longer it may take in the context of repeated treatments for complete stimulus control to take place. Again, the data contained in the Class 4 representation made for legitimate experimental comparison due to its characteristic similarity with the initial baseline data representations of Classes 1-3 (Conflict-Class 4 Continuous Baseline Mean= 4.4, range from 2 to 6; Conflict Resolution Continuous Baseline Mean = 1.2, range from 0 to 3).

Based on these results, the hypotheses, as outlined in Chapter 1, were confirmed in support of the general short term effectiveness of the Personal Accountability and Personal Responsibility treatments; with the Personal Responsibility treatment demonstrating superior effectiveness as the behaviors targeted for change became more complex in their character.

CHAPTER 4

DISCUSSION AND IMPLICATIONS

This chapter discusses the results from the implementation of the Personal Responsibility and Personal Accountability treatments. Included in the chapter are overviews of the objectives and hypothesis of this thesis, the potential implications of these findings, how the findings of this thesis study connect to the existing positive social treatment literature, and some concluding recommendations for future study to continue this line of research.

This study was based on the pervasive and steadily increasing challenge of off-task and anti-social behavior whose respective incidence is on the rise in school-based settings. While there exists a conceptual and data-based literature in relation to the potential remediation of these challenges, it remains incomplete and inconclusive due to measurement challenges and in many cases scientifically unsubstantiated treatment recommendations. Based on the hypothesized importance of Personal Accountability and Personal Responsibility components to

the facilitation of effective instruction in general, and to the treatment of off-Task and anti-social behavior in specific (refer to the appended Literature Review), this thesis study's primary objective was to develop and implement two potentially effective instructional treatment packages with activity focus on a thoroughgoing quantitative measurement system designed to provide a scientific basis for the relative effectiveness of the instructional treatments implemented. It was hoped that as a function of this type of data-based scientific activity, the literature in this area would be advanced in relation to treatment operations, measurement challenges, and student impact documentation.

As stipulated in the Study Purpose section, it was hypothesized that both the Personal Accountability and Personal Responsibility treatments would impact the measures listed in the appropriate directions (i.e., reduce Off-Task behavior dimensions, and increase Student Leadership, Positive Social, and Conflict Resolution measures of general positive social behavior). In these many regards this study was successful in documenting the short term effectiveness of each treatment when administered alone, and when administered as a treatment package, in relation to impacting the target behaviors in

indicated directions. Interestingly, however, as the target behaviors became more complex in character and related more closely to a behavior systems dimension, treatment effect became more limited and generalization less pronounced. This finding is in line with Morris' (1992) and Sharpe and Koperwas (2003) position that for an applied behavior analysis technology to become genuinely and generally effective, one must move from a simple linear demonstration view of stimulus→response function, to a systems discovery view of the appropriate application in context of multiple stimuli and response functions as the ecological character of the set and setting warrants.

A potentially important finding of this study was contained in the superior effectiveness of the Personal Responsibility and Combined Treatments effects data. Again, as the target behaviors became more complex, these treatments were demonstrated as relatively more effective. In this regard, the qualitative treatment design work of Hellison and colleagues (see for example, Hellison, 1995; Hellison & Templin, 1991; Hellison & Georgiadis, 1992) was found to be quantitatively supported. The success that the personal responsibility strategy experienced parallels a recent summary of responsibility-based programs and their qualitative support provided by Hellison and Walsh (2002).

Empowering students to take leadership roles is proven through this thesis research to be an effective way to reduce undesirable social behavior and increase desirable social practices. This is important given the criticisms from the quantitative science perspective that much of the educational treatment work that emanates from a qualitative paradigm suffers from measurement challenges and a lack of empirical substantiation with regard to treatment implementation.

The findings from this thesis research are also consistent with the existing literature in the area of positive social treatment (Sharpe, Brown, & Crider, 1995; Sharpe, Crider, Vyhlidal, & Brown, 1996). This study provides important additional support for the effectiveness of behavioral treatments in education that make use of a public posting component to treatment design (see for example, Thorpe & Darche, 1979; Van Houten & Nau, 1980; Van Houten & Lai Fatt, 1981; Ward, Smith & Sharpe, 1997). Perhaps more importantly, and as already mentioned, this study provides important quantitative empirical support for a Personal Responsibility treatment approach that has been espoused as effective from a qualitative and theoretical stance over the past decade, particularly in the physical education teacher education literature (Hellison, 2002).

Based on existing literature and the findings of this thesis study, some recommendations for future research are warranted. First, study should be undertaken (similar to the work of Sharpe, Brown, & Crider, 1995; and Sharpe, Crider, Vyhliadal, & Brown, 1996) to determine the relative generalization of changes in positive social target behaviors to other educational and non-educational settings. This is potentially important information as the ultimate test of treatment effects according to a behavior systems approach is not simply the demonstration of behavior change in a primary training setting; but the reliable and consistent application of appropriate behavior change in settings outside of a primary training environment and that differ in degree from the character of that original training environment. Second, little work has been accomplished, potentially due to the cost and labor intensiveness of such an undertaking, in the area of discovery of the long term or longitudinal effects of implementing the types of treatments contained in this study. Clearly, the relative effects of repeated exposure to these treatments as students matriculate through the K-12 educational system and beyond have far reaching implications for the importance of their inclusion in public school curricula. This second recommendation is

particularly salient with respect to the documented correlation among the anti-social behavior incidence of children and youth and a variety of social and societal challenges for these individuals later in life (see for example, Tobin & Sugai, 1999; Walker, Calvin, & Ramsey, 1995).

In light of the immediate short-term findings of this study, when dealing with complex behaviors such as Student Leadership and Conflict Resolution, the determination of most effective treatment schedule and the long-term character of behavioral measurement may be important and necessary in evaluating the complete nature of treatment effect. Future research that looks at the long-term effects of the treatments implemented in this study may show that while some behavioral changes are not that striking initially, over the course of a most appropriate treatment schedule over multiple years of treatment activity, more substantial change may be documented.

Along with the two previous recommendations for future study, two additional recommendations may provide valuable information to the education science body of knowledge. First, a behavior systems approach to the study of complex and interactive instructional settings was found valuable to the generation of important data in relation to how

instructional settings may operate. Documenting that behavior analysis can answer the type of questions that this study focused on should serve to enhance the contributions that this method can provide to the larger education literature. A behavioral approach as systemically unpacked and evolved provides a much needed quantitative dimension to understanding and evaluating educational questions. Because behavior analysis is informally used and understood among a majority of practicing teacher professionals, and because it does not place undue reliance upon complex statistical procedures and large group empirical structures, this method provides an elegant alternative for educational researchers.

In relation, a final recommendation is for the continued use of a behavioral systems approach to studying educational questions, particularly in relation to the use of available computer-based technologies (see for example, Sharpe & Koperwas, 2000). The ability to record multiple occurrences of multiple behaviors and ecological events as they actually occur, and to analyze this type of data record in a variety of discrete and temporal ways, provides an important set of data collection and data analysis procedures previously unavailable to educational researchers.

In conclusion, this study provided important evidence in favor of the short term effectiveness of one Personal Accountability and one Personal Responsibility treatment when used separately and in concert. In the many regards mentioned, structured physical education implemented within required K-12 public school curricula provide a wealth of opportunity for the teaching and learning of a variety of sport-based and generalized social and cognitive skills. In this last regard, providing a scientifically generated data-based in support of the positive effects of physical education-based curriculum treatments, and demonstrating how the positive results of implementation of these treatments in physical education may generalize to other educational and non-educational settings over the lifespan merits continued development, implementation, and scientific documentation. If efforts in this last regard are committed to by postsecondary professionals, and K-12 educational settings are held accountable for their implementation, a more effective and complete education for our children and youth may be realized.

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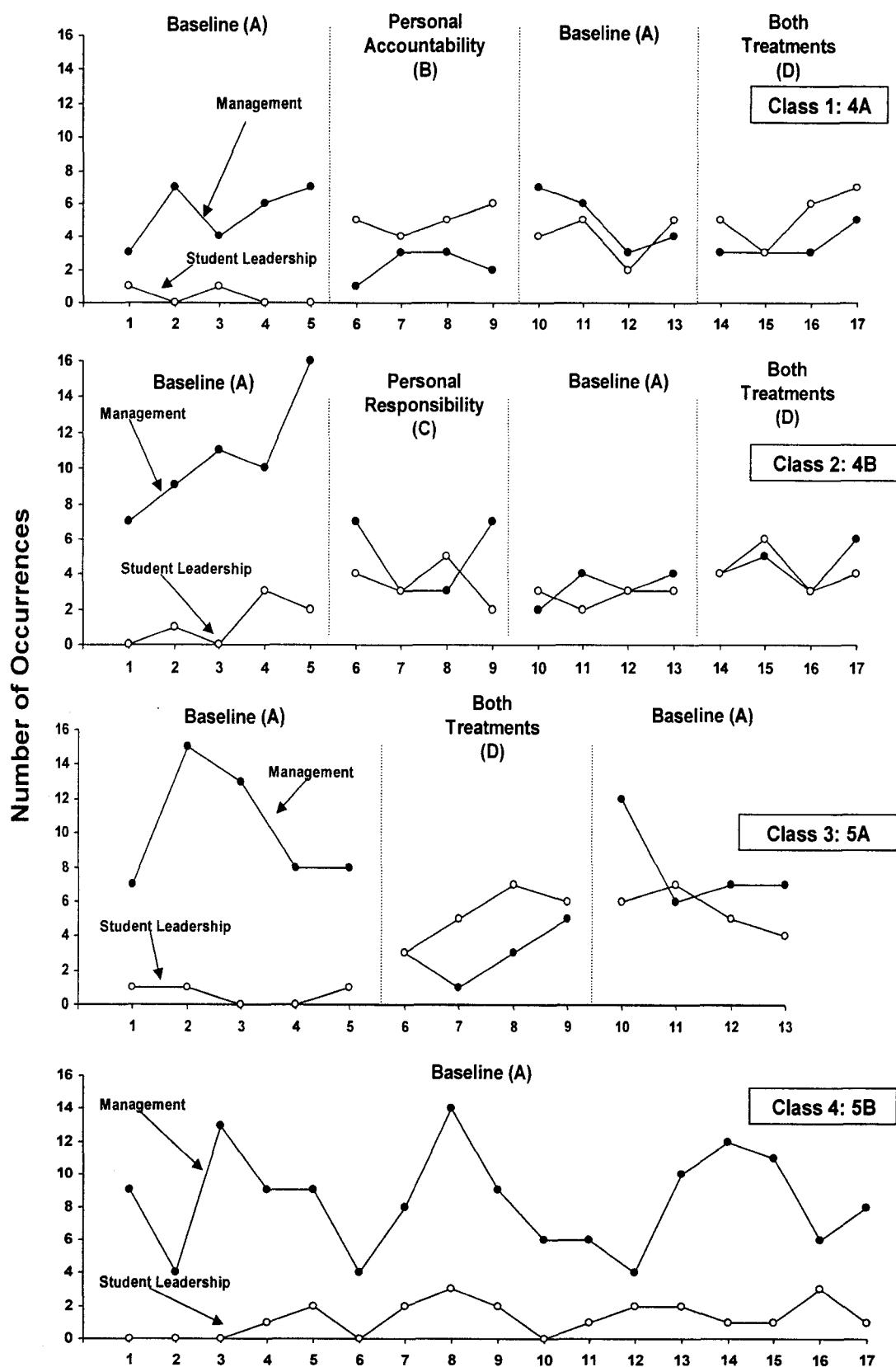


Figure 1. Teacher Behaviors Across Experimental Phases

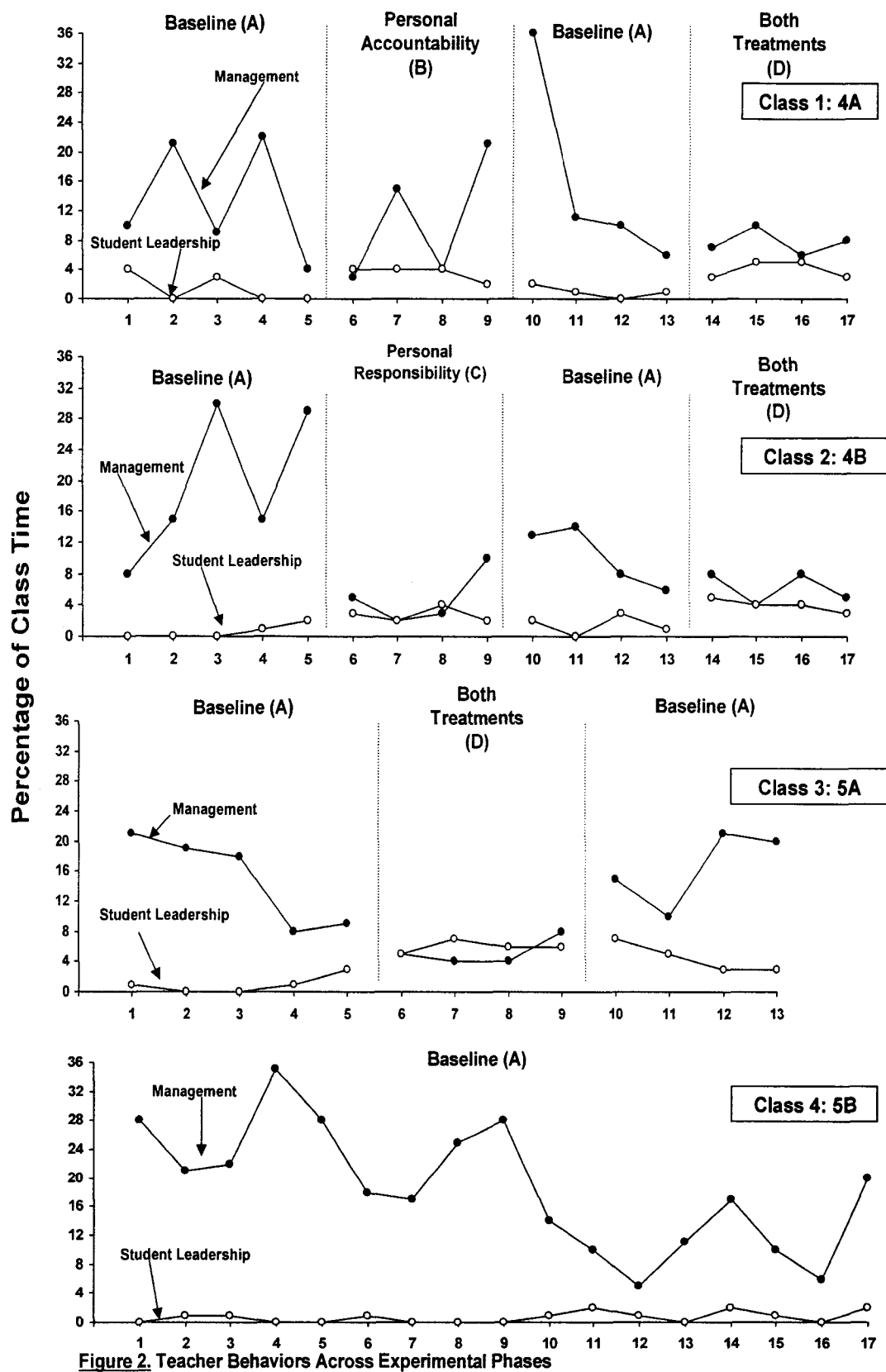


Figure 2. Teacher Behaviors Across Experimental Phases

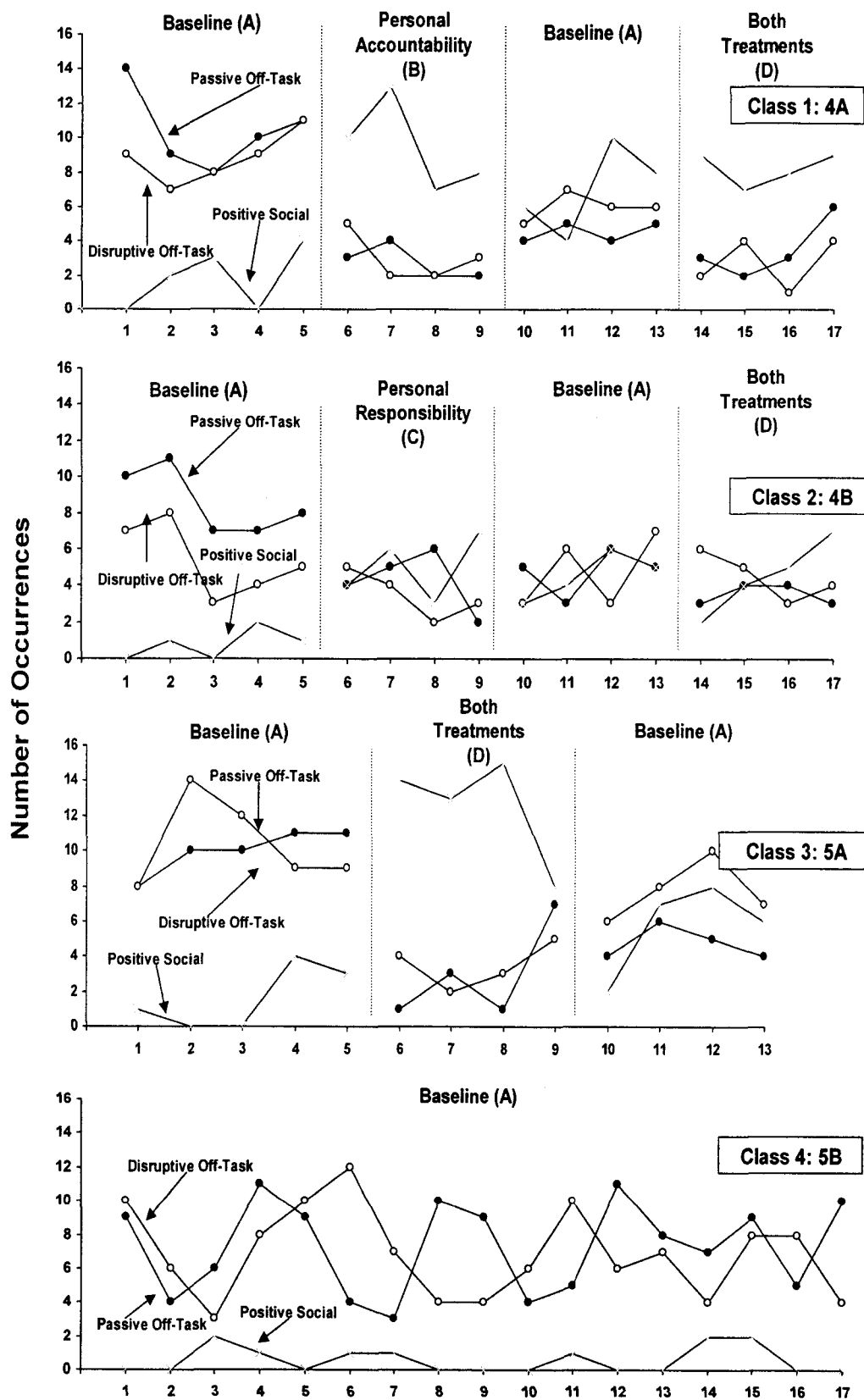


Figure 3. Student Behaviors Across Experimental Phases

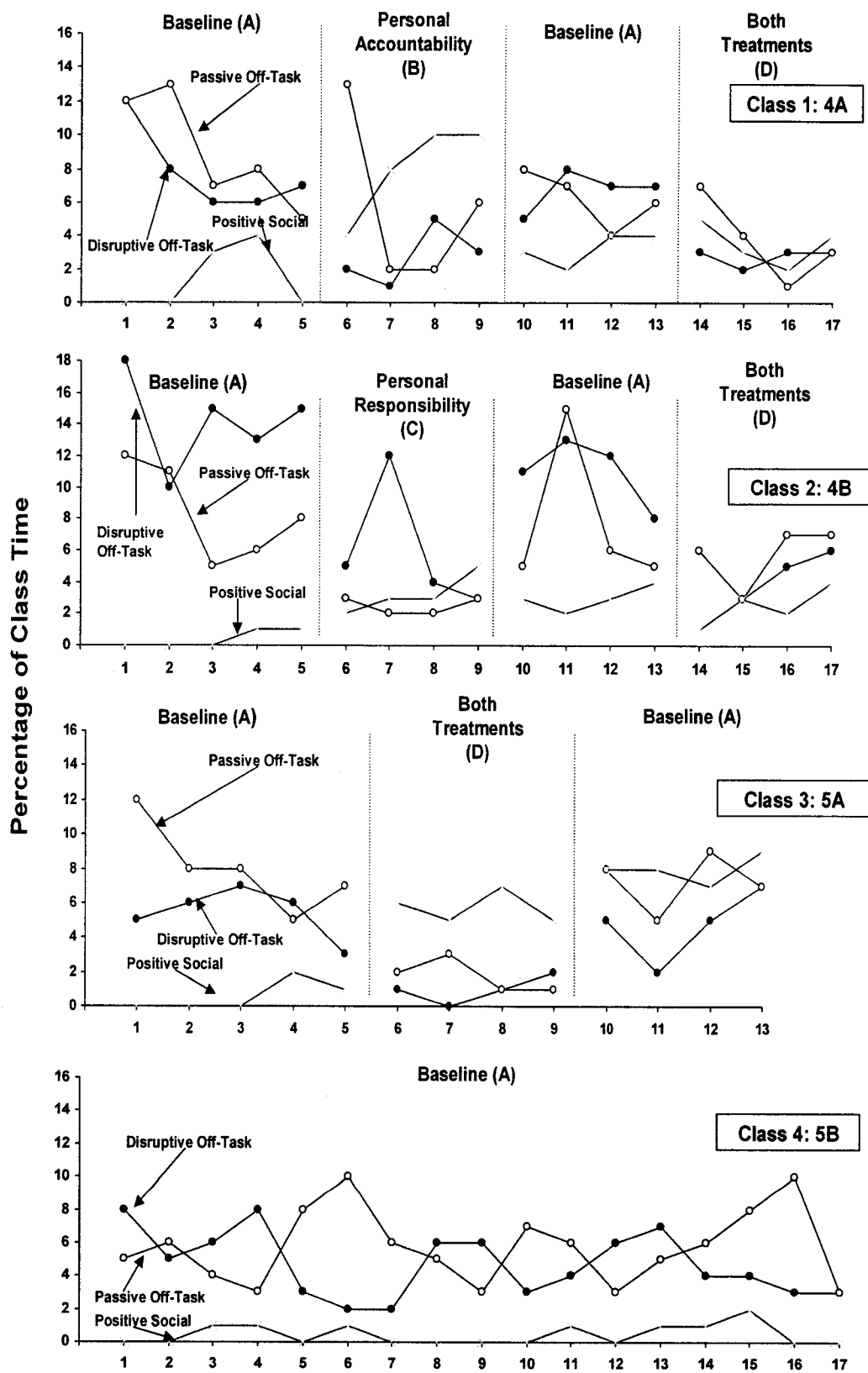


Figure 4. Student Behaviors Across Experimental Phases

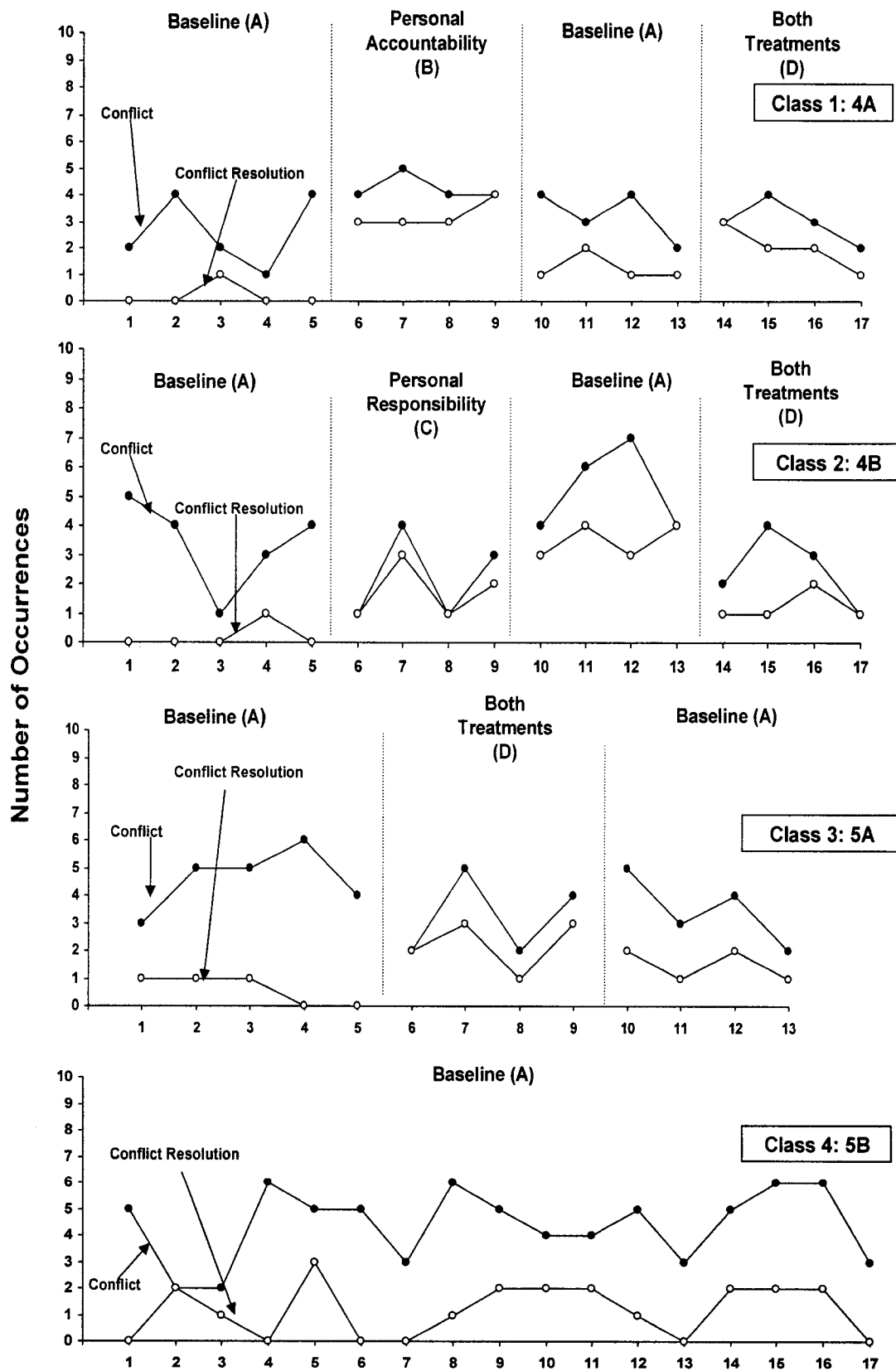


Figure 5. Conflict and Conflict Resolution Occurrences Across Experimental Phases

Table 1

Mean Percentage of Teacher Behaviors Across Baseline and Treatment Phases (Ranges in Parentheses)

	Baseline	Treatment	Baseline	Treatment
Class 1: 4A				
Personal Accountability Strategy	0 (0 to 0)	4.4 (3 to 6)	0 (0 to 0)	3.2 (3 to 4)
Personal Responsibility Strategy	0 (0 to 0)	0 (0 to 0)	0 (0 to 0)	2.8 (2 to 3)
Observation	16.4 (13 to 27)	18.3 (9 to 33)	15.7 (10 to 29)	21.2 (17 to 25)
Skill Instruction	11.1 (5 to 23)	10.5 (2 to 13)	9.9 (8 to 11)	9.6 (3 to 17)
Social Skill Instruction	0.9 (.5 to 1.2)	0.5 (.3 to .7)	1.2 (1.0 to 1.5)	0.4 (.1 to .7)
Management	13.2 (4 to 21)	10.6 (3 to 21)	15.8 (6 to 36)	7.8 (6 to 10)
Class 2: 4B				
Personal Accountability Strategy	0 (0 to 0)	0 (0 to 0)	0 (0 to 0)	4.7 (2 to 7)
Personal Responsibility Strategy	0 (0 to 0)	5.3 (3 to 7)	0 (0 to 0)	4.4 (1 to 7)
Observation	4.7 (3 to 25)	18.1 (10 to 32)	9.9 (8 to 13)	18.0 (16 to 20)
Skill Instruction	21.4 (18 to 32)	7.5 (5 to 8)	9.9 (8 to 13)	6.2 (2 to 15)
Social Skill Instruction .7)	0.4 (.2 to .8)	0.9 (.3 to 1.7)	1.3 (1.0 to 1.5)	0.5 (.1 to
Management	19.4 (8 to 30)	5.0 (2 to 10)	10.3 (6 to 14)	6.3 (5 to 8)

Table 1 continued p.2

Mean Percentage of Teacher Behaviors Across Baseline and Treatment Phases (Ranges in Parentheses)

	Baseline	Treatment	Baseline	Treatment
Class 3: 5A				
Personal Accountability Strategy	0 (0 to 0)	3.5 (2 to 5)	0 (0 to 0)	
Personal Responsibility Strategy	0 (0 to 0)	5.5 (2 to 8)	0 (0 to 0)	
Observation	7.7 (4 to 16)	4.0 (3 to 5)	6.7 (4 to 12)	
Skill Instruction	24.2 (16 to 33)	8.4 (2 to 13)	9.5 (8 to 11)	
Social Skill Instruction	1.2 (.5 to 1.7)	0.8 (.3 to .9)	1.2 (1.0 to 1.5)	
Management	15.0 (8 to 21)	5.3 (4 to 8)	16.7 (10 to 21)	
Class 4: 5B				
Personal Accountability Strategy	0 (0 to 0)	0 (0 to 0)	0 (0 to 0)	0 (0 to 0)
Personal Responsibility Strategy	0 (0 to 0)	0 (0 to 0)	0 (0 to 0)	0 (0 to 0)
Observation	9.7 (5 to 17)	16.4 (7 to 22)	7.9 (4 to 20)	18.5 (16 to 23)
Skill Instruction	21.5 (17 to 32)	14.6 (7 to 33)	17.4 (8 to 22)	12.7 (8 to 20)
Social Skill Instruction	0.7 (.2 to .9)	0.5 (.3 to .7)	1.0 (0 to 1.5)	1.7 (.1 to 2.4)
Management	26.8 (21 to 35)	22.0 (17 to 28)	10.0 (5 to 14)	13.3 (6 to 20)

APPENDIX I

LITERATURE REVIEW

This appendix is designed to provide a comprehensive look at the relevant literature associated with this Thesis study. Sections included in this appendix to that end are: 1) A review of the discipline and management literature 2) Personal accountability and personal responsibility literature and 3) A review of the applied behavior analysis literature. After these three sections, a brief summary section concludes this appendix.

The Discipline and Management Literature

This section examines in detail two topics that are related to the literature surrounding discipline and management. The first topic in this section discusses the recent trends in discipline and disruptive behavior among children and youth. Associated with these trends, a discussion of general school violence and the potential correlations with later lifespan behavior and student learning and

achievement in academic settings is provided. The second topic in this section explores classroom management strategies designed to combat many of the disruptive and off-task behavioral challenges discussed in topic one.

Discipline and management issues have long been a source of concern for K-12 educators (Reese, 1993). In a recent survey, 9 out of 10 teachers indicated student discipline problems as the primary interfering cause with respect to their teaching (Kirsh & McBride, 1987). Among pre-service teachers, discipline and management was cited as their premiere concern, and among in-service teachers, it was cited as a primary and ongoing concern (Kirsh & McBride, 1987). Another recent survey conducted by the National Center for Educational Statistics (1997) polled a broad cross-section of urban school principals and asked them to describe what posed the most serious single problem in their schools. Forty-seven percent of these principals isolated disruptive behavior and discipline issues as the most serious problem they face on a daily basis.

From the questionnaire data cited, it is easy to discern that discipline and management issues present a chronic and oftentimes acute concern for educators. In order to adequately discuss the primarily classroom specific challenges of discipline and disruptive/off-task behavior,

a look at the measured increases in general children and youth violence also needs to be addressed. Addressing the specific academic challenge in the context of a more pervasive societal challenge of youth violence provides important insight.

Many educators argue that disruptions and violent behavior in U.S. schools are an outgrowth of an increasingly violent trend in U.S. society (Burstyn, 2001). When violence occurs in schools, it not only leads to the same consequences as violence in society - victimization, crime, and in extreme cases even death - but, in addition, it undermines the students' chances of attaining an optimally productive academic education (Burstyn, 2001). Although certain forms of violence (use of weaponry) seem to receive most of the public's attention, other, less noticeable forms (coercion, fighting), still impact many students.

Wynne and Ryan (1993) provide demographic data that highlight some alarming trends in violent and anti-social behavior among children and youth. Data included long term trends from the 1940's onward of:

1. Out-of-wedlock births for white females ages 15-19 increased 650%.
2. Suicide rates rose 277%.

3. Homicide rates have increased 219%.

4. Rate of 14-17 year old youth arrest have increased from .01% to 13%.

Although this data may not be directly linked to the challenge of undesirable school discipline and management challenges, many scholars hypothesize that these potential cause and effect linkages are inseparable given the amount of time youth spend at school.

In looking specifically at school violence, St. George and Thomas (1997) studied a range of behavioral problems. One focus of their research concentrated on the less noticeable forms of school violence; specifically fighting and the frequency of this occurrence in school settings. Alarming, they found that one out of five middle school students reported involvement in fighting on a regular basis (St. George & Thomas, 1997). Further analysis pointed to the significantly greater frequency of occurrence among minority populations.

Another study looking at fighting in schools, was conducted by Casella and summarized in Burstyn (2001). Casella used a qualitative methodology to document a small city school in New York State where the student population was relatively equally divided between Caucasian and African American ethnicity. In an exhaustive observational

record of student classroom and hallway behavior, she concluded that fighting has become so common that it often receives little attention from relevant supervisory educational staff members. Teacher and administrator comments like, "If you sit in enough lunches you're bound to see fights", typified the data record (Burstyn, 2001, p. 21). Casella's data also showed, surprisingly, that girls were more likely to fight than boys, with minority females, again, tending to fight more than the Caucasian population (Burstyn, 2001).

Fighting and physical attacks are not totally specific to students. Kirsch and McBride (1987), for example, found that in one year, 110,000 public and private school teachers across the United States suffered physical attacks from students. One might think that most of these attacks occurred in non-academic areas such as school dances or school parking lots, but according to demographic data, most were reported to have taken place in the immediate classroom setting (Kirsh & McBride, 1987).

It is assumed that the examples, and related data, mentioned above are not specific to a few schools only. The literature in this area provides a compelling case for widespread generalization of this discipline specific data characterization; assuming that these disruptive behavior

and discipline issues are common across other schools throughout the United States. Furthermore, the detrimental effect that these problems are providing for students, as they matriculate through high school and beyond, are argued as inextricably correlated with the relative ability to provide optimally effective instructional environments, hence, to the detriment of student achievement and learning.

Students involved in violence, disruptive, or antisocial behavior during their elementary and middle school years are also documented as more likely to continue this trend in later school years and eventually adulthood (Tobin & Sugai, 1999). Research indicates that middle school discipline referrals are a strong indicator of chronic behavior problems, both inside and outside educational settings, and even into later life situations outside of the K-12 academic environment (Tobin & Sugai, 1999). Another study conducted by Walker, Calvin, & Ramsey (1995) found that students who were chronically involved in disruptive and anti-social behavior were at a higher risk of dropping out, participating in juvenile delinquency and drug and alcohol abuse, and inclined toward a host of other negative social and societal outcomes.

Though data does not currently exist to make explicit a potential relationship, the increasing discipline problems and related trends just summarized appear to be occurring in concert with measured trend declines in student learning. In their book *Reclaiming our Schools: Teacher Character, Academics, and Discipline*, Wynne and Ryan (1993) discuss these declines as measured by a variety of subject matter and skill test batteries. They found that from 1955 to 1982 the annual high school average on the SAT verbal score declined from 479 to 425 (Wynne & Ryan, 1993). Since then the numbers have leveled out, but still remain at or near the all time low experienced in 1982. It is difficult to overlook the fact that, as discipline problems have increased, student achievement has decreased. It should not be surprising, therefore, that these two trends may be potentially linked in some way though rigorous experimentation remains to validate this hypothesis.

These various demographic trends suggest an increasingly exacerbating challenge that the schools, and society in general, face. In response to this challenge, a variety of classroom management strategies have emerged in an effort to reverse these trends and reduce undesirable behaviors, both in and outside the classroom.

Ryan and Yerg (2001), for example, looked specifically at one management strategy with the intent of reducing disruptive off-task behaviors. Their treatment intervention focused on teacher-based feedback provision at differing locations in a public school physical education gymnasium. They found that disruptive behavior could be reduced when constant, distal (at a distance) feedback was given. Conclusions were made that this strategy could help in the elimination of undesirable behaviors, in direct response to addressing the aforementioned problems.

Clare, Jenson, Kehle & Bray (2000) implemented a classroom management strategy that called for the student to view edited videotapes of their appropriate behaviors repeatedly. They found that when these students, who had previously displayed a high rate of disruptive behavior, watched themselves performing on-task, acceptable behavior, their rate of disruptive occurrences dropped dramatically. The authors concluded that this proactive strategy may also be used by teachers to effectively manage classrooms and reduce undesirable behaviors.

Rathvon (1990) studied the effects of encouragement on off-task behavior. During this study, students who displayed off-task behavior, rather than being scolded, were provided with encouraging comments from their teacher.

Rathvon found that not only did this encouragement reduce off-task behavior significantly, but the students also showed greater academic productivity.

Similar to the previous example, van der Mars (1989) looked at the effects of specific verbal praise on second grade students' off-task behavior. In this study, three students were identified by their teacher as displaying high amounts of off-task behavior. For this study, off-task behavior was described as inattentiveness, inappropriate use of equipment, talk outs, interaction with other students while the teacher was talking, and not following directions. Baseline data were collected, followed by a verbal praise treatment. Upon treatment implementation, a significant positive difference in off-task behaviors among all three students was realized. This significant difference remained as the students continued to be exposed to the treatment. van der Mars concluded that this strategy may facilitate the reduction of off-task behaviors. As a teacher educator, van der Mars argues that it is critical to teach this strategy to novice and even experienced teachers.

This first Appendix section has discussed the alarming discipline and disruptive behavioral challenges and trends that are clearly cause for concern among committed

educators. Select literature has also been provided highlighting attempts to reverse these trends by the implementation of proactive classroom management systems and strategies. What has appeared most helpful in the data-based documentation are strategies which (a) provide consistent feedback on off-task and disruptive occurrences, (b) get the student(s) involved in the infraction to realize in an accurate manner their inappropriate versus appropriate behavioral activity, and (b) provide constructive feedback to those students involved in off-task and disruptive behavior in an encouraging and positive light. As helpful as a few of the documented management and discipline strategies have been, however, there is still need for further study into what sorts of treatments most optimally reduce undesirable behaviors, but also, encourage positive social behaviors in the hopes of moving students away from off-task and violent behavioral displays in a generalized way. There is also a need for strategies that may help specific minority populations that seem to be disproportionately represented by these trends as documented earlier.

Personal Accountability and Personal Responsibility

One appealing area of treatment analysis emphasis that has emerged over the past decade in response to these alarming trends in off-task and violent behavior in children and youth, has been in the area of the design and implementation of strategies based on student accountability and personal responsibility tenets. This Appendix section, therefore, presents in detail a summary of these potentially appealing strategies as documented in the contemporary literature, and as they have been used productively both inside and outside physical education settings.

Recently, conceptualization and applied study of classroom discipline and management systems has taken a turn from that of a controlling nature to a more proactive and nurturing, strategy based approach (Pagnano & Langley, 2001; Ryan & Yerg, 2001; Sharpe, Brown & Crider, 1995).

For example, Pagnano and Langley (2001) observed two teachers employing two starkly differing classroom management systems in a physical education class. These authors interviewed students who came from either an authoritarian teacher, whose management system was primarily responding to disruptive behavior, and a teacher

whose management system provided ways for the student to choose appropriate behavior in proactive and semi-independent ways. They found that the students who were exposed to the latter management system (termed empowerment) were better behaved in terms of off-task and disruptive episode incidence and had greater self-perceived satisfaction for the class experience and their interactions with the teacher. They conclude their study by arguing that the controlling ways of the teacher, who has his or her students "drop and give me 20 (pushups)", should cease due to the method's documented relative ineffectiveness. They further hypothesize, and take great license in generalization in the absence of a larger and more comprehensive dataset, that the more controlling and dictatorial managerial method is contraindicated with regard to effectively managed classrooms and off-task and disruptive student behavior, and has in its worst manifestation provided a falsely negative perception of physical education programming (Pagnano & Langley, 2001). What is strongly recommended is a move toward more proactive classroom management systems.

Specific to physical education settings, physical education teacher professionals are faced with similar types of behavioral challenges as those in regular

classroom settings, as well as a variety of additional challenges due to the naturally movement oriented activity base, the safety issues related to equipment usage for the learning of those activities, and the typically larger number of students per class. Factors such as climate, proximity of students to teacher, and the use of potentially dangerous equipment, are just some of the aspects that are unique to physical education and subsequently provide additional stimuli conducive to a variety of off-task, disruptive, and potentially anti-social student activities. Physical education teachers have, therefore, employed a variety of management systems in response to the additional challenges unique to the physical education class setting (Vogler & Bishop, 1990).

Personal Accountability

Clearly, one of the most important and necessary characteristics of an effective teacher's repertoire is the accountability system used to ensure students are adhering to the rules, structures, and learning activities of the instructional environment. Tousignant (1982) has defined accountability as the ongoing process of evaluation pertaining to a student's task accomplishment in accordance with the objectives of the teacher.

Accountability mechanisms have received much research attention, and related data based support, as effective strategies for reducing unwanted behaviors in many different educational and athletic settings, and among many differing populations (Tharpe & Darche, 1979; Van Houten & Lai Fatt, 1981; Van Houten & Nau, 1980; Ward, Smith & Sharpe, 1997).

One potentially effective strategy, for example, that facilitates accountability in both the classroom and the gymnasium is public posting. Public posting calls for students to receive recognition for their achievement. Public posting may also involve students receiving recognition for their behaviors, both good and bad. One of the primary intentions of this strategy is to motivate students to more closely follow the directions of the teacher or coach through clear understanding of measures of their activities. An example of this might be a basketball coach who posts shooting percentages from practice on the wall for all to see after practice. When players see the percentages, they are made explicitly aware of their performance in relation to others, and are therefore motivated by this information to improve on the specific task in accordance with the measure that has been publicly posted.

The public posting strategy has been successful in improving a variety of classroom specific performances. Studies have found that it improved student performance in content areas from science (Tharpe & Darche, 1979), to writing (Van Houten & Nau, 1980), and reading (Van Houten & Lai Fatt, 1981). Each of these studies had various forms of student achievement placed on the wall or chalkboard for all to view. As a result, classroom aggregate performance was measurably higher than previous levels due to the collective motivation of the class (Van Houten & Nau, 1980). Van Houten (1980) attributes two explanations for the effectiveness of public posting. First, "it stimulates strong peer interactions, which serve to prompt and reinforce increased student output"(p.95). Second, it provides a set of very public expectations that become the norm for conduct in an instructional environment (Van Houten, 1980).

Brantley & Webster (1993) provide another example of public posting as an effective strategy in the classroom. This particular strategy involved identifying the undesirable target behaviors (eg. Stay in your seat without touching others) and then placing checkmarks beside the individuals name when the teacher observed an instance of the undesirable behavior. The results to this study showed

that undesirable target behaviors had a marked decrease across an 8-week treatment period and remained at this level through the end of the school year, even though the treatment was removed (Brantley & Webster, 1993). These results concur with others as to the effectiveness of public posting and provide data to support the long term effectiveness of the treatment.

Public posting has also found success in sport settings. Ward, Smith, and Sharpe (1997) looked at the effects of holding collegiate football players accountable for their task accomplishment during practice. Before the treatment implementation, players met with coaches and set criterion standards that were much higher than previous practice performance. The coaches recorded data during practice and subsequently posted it for all team members to see. The results showed that during the public posting phase players' performance met, and in some instances exceeded, the criterion standards. The authors conclude that this example of the effectiveness of public posting supports previous studies using this same treatment.

Public posting has also been used with success in what have been traditionally considered professional preparation settings outside the education field, such as posting doctors performance in the field of medicine (Fielding,

Aquirre, & Palaiologos, 2001). Although met with some controversy, the strategy has improved the successful performance of those who were held accountable.

In a similar treatment intervention, Hastie & Saunders (1992) took a qualitative look at a task and accountability system, examining the effects it had in an elite junior sports setting. They make an interesting finding, differentiating between both formal and informal forms of accountability. They describe formal accountability as the content related achievement (winning a match), and informal accountability as any non-content related activity (athletes behavior) (Hastie & Saunders, 1992). They argue that formal accountability is much easier to measure than informal, and that an athletic team's success relies heavily on the various forms of informal accountability. This dichotomization has led to a greater understanding of the dynamics within accountability and perhaps a way to understand why various forms of accountability are more successful at different times and in different situations.

Along with public posting, another potentially effective method for influencing behavior and promoting accountability is that of peer reinforcement. Peer reinforcement is a strategy that allows an individual's friend, teammate, or colleague to reinforce the desired

behavior of the instructor, coach, or professional supervisor. The philosophy behind this method is that an individual may learn with greater proficiency when a peer reinforces objectives as compared to an instructor's or authority figure's reinforcement.

Peer reinforcement has been found to be effective in modifying classmates' social behavior (Strain, 1978), as well as improving compliance to teacher rules (Noonan & Thibeault, 1974). In non-school settings, peer reinforcement has been found to be effective in job training and skill learning (Weinbach & Kuehner, 1986). Research on peer reinforcement in physical education and sports settings is relatively new and little documented to date. Only a few studies have been conducted to substantiate this potentially effective method of instruction when used within a physical education ecology.

Crouch, Ward & Patrick (1997) provide one such example of peer reinforcement when they looked at the effect peer reinforcement had on task accomplishment in an elementary physical education environment. They found that when students received peer-mediated reinforcement they accomplished the task at hand with relatively greater success than those students who were not exposed to this reinforcement method. This study provides evidence that a

peer reinforcement component to potentially effective educational treatments in physical education settings may facilitate the effectiveness of those treatments.

In a similar study, Ward, Smith, Makasci, and Crouch (1998) provide further validation of this strategy. They looked specifically at peer-mediated accountability (PMA) and the effect that it had on task accomplishment in an elementary physical education class. During the treatment phase, participants were required to record the number of attempts at a basketball lay-up, and the number of made baskets, within a given time period. The totals were recorded in a public area on the wall for others to see. Results indicated that across low and average skilled players, increases were significant in the number of attempts made (Ward, Makasci, & Crouch, 1998). The average skilled players also made noticeable improvements in the number of baskets made. Because the number of attempts a student performs at a given task is correlated with successful execution, the authors argue that this accountability strategy is a method that can be beneficial to motor skill acquisition.

Clearly, the personal accountability literature is a relatively new area that is receiving much scientific attention. Within this literature, public posting and peer

reinforcement are two treatment strategies designed to be helpful in reducing off-task and disruptive behavior as well as increasing student performance levels.

Personal Responsibility

Another potentially appealing area to the management of off-task and anti-social behavior lies in a general area of the literature termed personal responsibility. A variety of predominantly qualitative approaches to the management of off-task and anti-social behavior have been documented within this personal responsibility literature (Burstyn, 2001; Hastie & Saunders, 1992). Though rare, and most often surfacing in the adapted education literature, some behaviorally based treatments exist as well (e.g., Sharpe, Brown, & Crider, 1995).

Broadly defined, a personal responsibility strategy is focused on encouraging students to take greater responsibility for their actions due to instruction on the outcome relationships of a variety of anti- and positive-social behaviors. A personal responsibility model most often promotes understanding of the ramifications of a variety of interactive behaviors, with hope that through this type of instruction students will demonstrate greater concern for the well being, safety, and enhanced quality of experience of others.

Hellison (1995), for example, has promoted a qualitative approach to the design and implementation of personal responsibility instructional models. The approach he has contributed is called *Teaching Personal and Social Responsibility*, and involves four levels that encourage students to move from irresponsibility to responsibility and from respecting one's self to respecting others. The first level focuses on the student showing respect and concern for the others. The second level encourages students to participate, giving the best effort possible in whatever they are engaged in. The third level allows the student to learn how to work independently, accepting responsibility for their work or performance. The final level is one where the student displays caring behaviors such as support, showing concern, and exhibiting compassion. Though ill defined from a traditional scientific perspective, and fraught with reliable measurement challenges in implementation, the four levels provide a conceptual framework upon which a teacher can encourage and evaluate dimensions of personal responsibility in relation to the behavioral control of off-task and anti-social behavior.

Hellison and Walsh (2002) recently provide a detailed analysis of 26 studies employing the personal

responsibility model. They conclude that, while there are gaps in the evidence and clear methodological issues, the models theoretical and practical application is apparent. They encourage future research to alleviate the gaps and build on the theoretical base.

Teaching personal responsibility is potentially important for an educator involved in the creation and implementation of a productive and effective learning atmosphere. Kahan & McKnight (1998), for example, introduced personal responsibility skills to a class of elementary physical education students. They found that decision-making skills, interpersonal skills, and acceptance of responsibility, were learned much more quickly and performed more regularly when the students were formally taught these skills, and were formally involved in their own behavior management akin to a peer reinforcement model discussed in the preceding accountability section.

In another treatment intervention, Sharpe, Brown, and Crider (1995), and Sharpe, Crider, Vyhliadal, and Brown (1996) studied the effects a sportsmanship curriculum intervention had on generalized positive social behaviors among elementary school students. During the treatment phase the teacher spent five minutes before class talking about class objectives and appropriate forms of behaviors.

After collecting initial baseline data, immediate trend reversals in the areas of student leadership, conflict resolution, and off-task behavior were observed. Findings also indicate an increase in the percentage of class time devoted to activity participation.

Personal responsibility has also been shown to be correlated with academic achievement. Martel, McKelvie and Standing (1987) found, for example, that an important single predictor of academic achievement among students is the extent to which they are held formally and personally responsible for their actions. In contrast to the currently popular cooperative learning approaches to instructional effectiveness, personal responsibility ranked higher than general intelligence as measured by a standard IQ test battery, providing additional support for the importance of a personal responsibility component to potentially effective educational treatments.

The personal responsibility literature is evident in a variety of educational settings. Personal responsibility strategies have also been shown as potentially effective ways to increase the percentage of class time students are engaged in the subject matter as well as promoting increases in academic achievement. While much research remains, relative successes of the personal responsibility

model that have been documented provide initial evidence of the importance of including this strategy when working with challenging off-task and disruptive behaviors.

Applied Behavior Analysis as an Appealing Scientific Method

The experimental and applied analysis of behavior has clearly experienced a long and productive history in the educational, social, and psychological sciences. This section is designed to provide an overall view of behavior analysis research as an important method to use when studying educational phenomena. This section, therefore, describes the salient points of the method and provides select research examples in general education and physical education to illustrate it's potential appeal as appropriate for this Thesis study.

Long thought of as a pioneer, B.F. Skinner (1938; and detailed in Morris, 1992) first introduced behavior analysis as a research tradition with his explication of a three term contingency (i.e., Stimulus → Response → Consequence or $S \rightarrow R \rightarrow C$) model and his related emphasis on the ability to predict and control behavior through the artificial introduction of particular stimuli and consequences.

In support of the three term contingency relationship as applied to scientific practice, Skinner also promoted a theory of radical behaviorism as a foregrounding philosophy upon which the experimental and applied analysis of behavior should be guided (Heward & Cooper, 1992; Schneider & Morris, 1987). In summary, radical behaviorism is the view that all actions and interactions may be predicted and controlled as a function of inter-relationships among behavioral actions and environmental situations (Mahoney, 1989). The science of behavior is essentially preoccupied with how certain directly observable events (whether behavior or environment) affect or influence certain other directly observable events, with a resulting de-emphasis on mental or psychological states as 'causes' (Day, 1976).

Currently, behavior analysis as broadly defined has evolved into three distinct, albeit overlapping, branches which include the following (Morris, 1992):

1. The experimental analysis of behavior in which the theoretical principles of behavior analysis are studied in laboratory environments, typically with animal participants.
2. The applied analysis of behavior in which experimental principles are applied to clinical, educational, and community challenges toward therapeutic ends.

3. The conceptual analysis of behavior for the purposes of providing philosophical and theoretical arguments in favor of particular experimental or applied pursuits

Robust literatures have been produced within all three areas, and have ranged from the discovery of important prediction and control principles (e.g., Hayes & Brownstein, 1986; Smith, 1986; Wanchisen, 1990), to the productive application of a wide range of treatments in applied settings (e.g., Baer, Wolf, & Risley, 1968; Barlow, 1981), to the forwarding of many theories of science in relation to the governing laws of the universe (e.g., Skinner, 1956).

Behavior analysis as a research method has experienced a long and productive history in the field of education. In addition, the experimental analysis of behavior literature has provided a rich source of theory building materials from which productive educational and therapeutic applications have been taken. Currently, behavior analysis is being used with ever increasing frequency in research and evaluation endeavors in various research areas.

Much of the early behavior analysis research efforts in education were descriptive in nature (e.g., Anderson & Barrette, 1978). Efforts in this research period were

focused on descriptions of the effective and not-so-effective practices of teachers and students in particular instructional ecologies, without effort toward constructing causal or correlational relationships among behaviors and events in those ecologies.

A next stage of behavior analysis research in education, focused on a range of questions designed to discover how specific teacher practices might be correlated with various outcome measures. Examples have varied from studies looking at producing change in student behavior (e.g., Ward, Smith, & Sharpe, 1997), how general instructional strategies might impact on student learning (e.g., Goldberger, 1991), and the potential correlations among select teacher and student behaviors and presage variables that are manifest in certain instructional settings (e.g., Silverman, 1991).

Within this literature, behavior analysis in education has proven a productive research and development approach across a host of subject matters (e.g., math to science to reading to physical activity), and a range of client characteristics (e.g., primary to secondary to postsecondary to special populations).

One of the areas receiving great attention is in the area of physical education (see for example, Darst, Zakrajsek, &

Mancini; 1989). Generally, and across subdisciplines, traditional behavior analyses have contributed in a host of ways including contributions to general instructional practices and procedures (e.g., Ingham & Greer, 1992; Kamps, Leonard, Dugan, Bolland, & Greenwood, 1991), specific instructional principles (e.g., Cooper, Thomson, & Baer, 1970; Feiman-Nemser & Floden, 1986; Page, Iwata, & Reid, 1982), and the remediation of specific client challenges (e.g., Bellack & Hersen, 1979).

Termed systematic observation in physical education and sport, these types of more traditional behavior analyses have also experienced a long and productive history (Darst, Zakrajsek, & Mancini, 1989; Metzler, 1989; Siedentop, 1981; Siedentop, Tousignant, & Parker, 1982). Historically, Bookhout's (1967) work was the first of its kind in physical education where systematic observation techniques were used to study the events and behaviors of teachers. Similarly, Tharpe and Gallimore (1976) were among the first to report observational data on coaching behavior after coding several practice sessions of a UCLA basketball coach.

Systematic observation instruments that have been validated for use in classroom settings have also been adapted to physical education, most notably the Flanders'

Interaction Analysis System (FIAS; Flanders, 1970).

Cheffers' Adaptation of Flanders' Interaction Analysis System (CAFIAS; Cheffers, Mancini, & Martinek, 1981)

remains albeit with methodological challenges, one of the most widely used direct observation instruments in physical education teacher education. Darst, Zakrajsek, and Mancini (1989) also provide a wide variety of traditional coding system variations designed for the systematic observation of various physical education teaching and sport coaching settings to make researchers familiar with this methodology in relation to physical education and sport applications.

Traditionally, most applied analyses of behavior within education settings have adhered strictly to Skinner's original $S \rightarrow R \rightarrow C$ template for conducting research activities. Historically, the focus of single-case research in education has been on a select behavior of a single teacher (e.g., number of feedback episodes) using a single metric of interpretation, usually a student behavior dimension such as number of correct practice trials (e.g., C/T ratios, or correct trials over total trials) or percentage of successful practice time in relation to total class time elapsed (e.g., ALT-PE or academic learning time in physical education). Although some studies have examined the behavior of more than one person, rarely have

direct observational behavior analytic research designs focused on the interactions among multiple individuals (Wampold, 1992). In other words, the major emphasis of analysis has historically been focused upon the characteristics of the behaviors observed, typically using a metric such as number of occurrence, average rate of occurrence, percentage of total class time in which the behavior occurred, or average duration of occurrence. What is also recommended is an analysis of the interactional or transactional characteristics over time among certain behaviors or events, or a quantitative measure of just how certain behaviors are connected with certain other behaviors in time. In relationship to this Thesis study, this latter methodological evolution translates into scrutiny of just how certain teacher and student peer behaviors may influence certain off-task and disruptive behaviors; when used within a peer accountability and peer responsibility treatment model.

This section has summarized the history and appeal of the behavior analysis research design. Clearly, research involving behavior analysis has provided a significant contribution to not only the general educational arena, but also the physical education arena as well. Based on the success of these previous examples, and the arguable need

for more rigorous research designs when studying complex educational settings in which personal accountability and personal responsibility models are implemented, this Thesis study employed a behavior analysis design. The benefits and contributions of behavior analysis, which have previously been summarized, outline the rationale for this endeavor.

Summary

This appendix has provided a closer look at the main literatures associated with this Thesis study. The first section focused on the discipline, off-task, and classroom management literature. This section also highlighted recent trends and issues educators face today in relation to the challenges of the increasingly violent and anti-social behavior exhibited in children and youth. The second section of this Appendix summarized in specific personal accountability and personal responsibility treatments; two strategies designed for the reduction and elimination of many of the behavioral challenges mentioned previously. This section not only provided examples of how these methods are effective in reducing these inappropriate behaviors, but it also highlighted studies that have shown instances where students proactively increased their

positive social behavior. The final section was an overview of the experimental design chosen for this study. This section comprised a thorough examination of the behavior analysis literature, providing detailed examples of its potential reliability and validity.

In general, this study is first based on the pervasive and steadily increasing challenge of off-task and anti-social behavior in school-based settings. Second, while there exists a conceptual and data-based literature in relation to the potential handling of these challenges, it remains incomplete and inconclusive due to measurement challenges and unsubstantiated treatment recommendations. Based on the potential importance of personal accountability and personal responsibility components to the facilitation of effective instruction in general, and to the treatment of off-task and anti-social behavior in specific, this study developed and implemented one potentially effective instructional model with a traditionally underserved and underachieving academic student population felt in greatest need of this type of treatment. It was hoped that as a function of this type of data-based scientific activity, that the literature in this area would be advanced in relation to treatment operations, measurement challenges, and student impact documentation.

. Unique to this study's treatment development efforts, was the combining of qualitatively appealing personal responsibility strategies with behaviorally-based and behaviorally documented accountability strategies. This treatment package was designed to curtail off-task and anti-social behavior, and promote positive social behaviors in children and youth exhibiting challenges in the aforementioned measures.

APPENDIX II

DEFINITION OF TERMS

Personal Accountability

An intrinsic and self-directed commitment to hold oneself to the pre-recognized rules, objectives, or goals, or any other type of established regulation in a classroom or structured educational setting (Dorward, Hudson, Drickey & Barta, 2001). For example, a student may hold oneself accountable for a homework assignment because he/she knows that it will be graded the next day; or may refrain from off-task or disruptive behavior because of knowledge of the rules against such behavior as set up by a teacher.

Personal accountability is a learned behavior in terms of a student acquiring a personal locus of control in relationship to a set of prescribed rules or objectives, or structured code of behavioral conduct.

Personal Responsibility

Student sensitivity to a social force to the point that it exerts influence on that student's individual behaviors to conform to pre-determined obligations (Black & Harrison,

2001). An example of personal responsibility would be a student remembering to clean off the chalkboard as a function of his or her classroom responsibilities as prescribed by general teacher rules and directives for a classroom ecology.

Positive Social Behavior

Taken in the context of a physical education classroom setting, this set of behaviors is defined as a broad category of leading the behavior of peers in a productive or positive direction, working and playing cooperatively with others, and resolving peer conflicts in a productive manner without adult or supervisory intervention (Kohlberg, 1963; Sharpe, Brown, & Crider, 1995). Examples include agreeing on difficult referee calls in a team sport situation, diffusing physical conflicts among peers, and encouraging and reinforcing peers to facilitate their improved participation and performance in a prescribed activity.

Achievement

This general term is defined as an external manifestation of accomplishment on a task or skill that has not previously been regularly demonstrated (Edwards & Warin, 1999). An individual making an A on a test is one example of something that is achieved. Other examples include

successful performance of a physical skill that was previously difficult for a student.

Learning

The internal process of content material being formulated into cognitive knowledge (Jordan & Johnson, 2001).

Learning involves successful application and possible behavioral modifications across a variety of circumstances to the point of making consistently appropriate matches between a task or activity to be accomplished and the multiple pieces of prior knowledge necessary to complete that task or activity successfully. For example, once a student has learned that fighting in school is inappropriate, they will choose not to fight in school, and are likely to apply this knowledge after school hours in other relevant situations. Another example relates to the learning of basketball skills. After repeated practice and achievement in dribbling, shooting, passing, and strategy skills in a physical education class, a student consistently applies these achieved skills in a variety of settings appropriate to the act of playing basketball to ensure successful and ecologically bound basketball game playing performance. It is often stipulated that learning has occurred when a set of information has been internalized to the point of appropriate application for

specific situations as they occur, and that that information was necessarily applied to enable successful skill or activity performance.

APPENDIX III

INFORMED CONSENT

AN AFFIRMATIVE ACTION
EQUAL OPPORTUNITY EMPLOYER

CLARK COUNTY SCHOOL DISTRICT

2832 EAST FLAMINGO ROAD LAS VEGAS, NEVADA 89121 TELEPHONE (702) 799-5011



July 10, 2002

Thomas Sharpe, Ed.D.
Department of Educational Leadership
University of Nevada, Las Vegas
4505 Maryland Parkway
Las Vegas, NV 89154

BOARD OF SCHOOL TRUSTEES

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Mrs. Denise Brubaker, Member
Mr. Carlos Arturo Garcia, Superintendent

Dear Dr. Sharpe:

At its meeting on Tuesday, July 9, 2002, the Clark County School District's Committee to Review Cooperative Research Requests reviewed your two proposals, entitled "Immediate and Long-Term Effects of Residency-Based Behavioral Training in Teacher Education: Confirmation of the University of Nevada, Las Vegas, Teacher-Training Model" and "Description of the Effective Behavioral and Qualitative Dimensions of Teaching Practice Across In-Service Professionals of Various Backgrounds, Experience, and Undergraduate Training." I am pleased to inform you that the committee approved your proposals, with the following provisos:

- 1) you will need to obtain parental (and student) permission slips if you wish to use Clark County School District students' videotaped images in any venue other than their own classroom,
- 2) questions #4, #10, and #13 on the Teacher Efficacy Scale need to be modified as indicated on the attachment, and
- 3) even though the committee has approved your proposal, you still need to obtain the permission of any principal at whose school you wish to conduct your research.

Thank you for inviting the Clark County School District to participate in your research. If we can be of any service to you in facilitating this research, please do not hesitate to call me (at 799-5403).

Sincerely,

Judith S. Costa, Ed.D.
Chairman
Committee to Review Cooperative Research Requests

JC/jr

cc:	Kevin Crehan	Bill Hoffman	Craig Kadlub	Lauren Kohut-Rost
	Connie Kratky	Charles Rasmussen	Michael Robison	Betty Sabo

UNIVERSITY OF NEVADA LAS VEGAS

DATE: March 3, 2003

TO: Thomas L. Sharpe, Educational Leadership
M/S 3002

FROM: Dr. Fred Preston, Chair
UNLV Social Behavioral Institutional Review Board

RE: Status of Human Subject Protocol Entitled: Description of the Effective
Behavioral and Qualitative Dimensions of Teaching Practice across Inservice
Professionals of Various Backgrounds, Experience, and Undergraduate Training

OPRS# (old) 303F0202-256
OPRS# (new) 303F0203-028E

The UNLV Social Behavioral Institutional Review Board reviewed your request for an extension of the subject protocol on **February 27, 2003**. The extension was approved and work on the project may continue.

Should the involvement of human subjects described in this protocol continue beyond **February 27, 2004**, it will be necessary to request an extension. Should you require any change(s) to the protocol, it will be necessary to request such change through the Office for the Protection of Research Subjects in writing.

If you have any questions or require assistance, please contact the Office for the Protection of Research Subjects at 895-2794.

cc OPRS File



May 12, 2003

Andre Agassi College Preparatory Academy
1201 West Lake Mead Boulevard
Las Vegas, NV 89106
(702) 948-6000

re: Principal Consent for Instructional Innovation

Dear Mr. Tanaka

The faculty and graduate student staff in the Sports Education and Leadership Program at UNLV are seeking your permission to conduct a research study looking at effective teaching strategies in physical education. To do this project we need your signed permission. It is the intent of the SEL staff to provide educational experiences of the highest quality and to help the Agassi school continually improve on these experiences and activities.

Thank you for your support.

Signature

Wayne N. Tanaka

Regards,

Danny Balderson

Danny Balderson
Graduate Assistant/ Masters Student
SEL Program
Department of Educational Leadership
College of Education
4505 Maryland Parkway Box 453002
University of Nevada- Las Vegas
Las Vegas, NV 89154-3002

(702) 895-3395

Department of Educational Leadership
4505 Maryland Parkway • Box 453002 • Las Vegas, Nevada 89154-3002
(702) 895-3401 • Fax (702) 895-3452



May 12, 2003

Andre Agassi College Preparatory Academy
1201 West Lake Mead Boulevard
Las Vegas, NV 89106
(702) 948-6000

re: Teacher Consent for Instructional Innovation

Dear Mr. Doss,

The faculty and graduate student staff in the Sports Education and Leadership Program at UNLV are seeking your permission to conduct a research study looking at effective teaching strategies in physical education. To do this project we need your signed permission. It is the intent of the SEL staff to provide educational experiences of the highest quality and to help the Agassi school continually improve on these experiences and activities.

Thank you for your support.

Signature

Regards,

Danny Balderson
Graduate Assistant/ Masters Student
SEL Program
Department of Educational Leadership
College of Education
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Las Vegas, NV 89154-3002

(702) 895-3395

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May 8, 2002

Andre Agassi College Preparatory Academy
1201 West Lake Mead Boulevard
Las Vegas, Nevada 89106
(702) 948-6000

Re: Parent Consent for Instructional Innovation

Dear Parents of the Agassi College Preparatory Academy:

With the recommendation and enthusiasm of Wayne Tanaka, the faculty and graduate student staff in the Sports Education and Leadership Program at UNLV are going to conduct a research project looking at effective teaching strategies in physical education. To accurately collect the information, some class periods will need to be videotaped.

To do this project we need your signed permission. It is the intent of the SEL staff to provide educational experiences of the highest quality and be able to help the Agassi School continually improve on the experiences and activities that your children receive.

Thank you in advance for your support.

Parent or Guardian Signature: _____

Regards,

Tom Sharpe, Ed.D.	Director, Educational Consulting, Inc.
Associate Professor	4935 Buckhorn Butte Court
SEL Program Coordinator	Las Vegas, NV 89149
Department of Educational Leadership	www.ekware.com
College of Education	702 839-2640
4505 Maryland Parkway Box 453002	FID #470768945
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SEL Staff
Lanie. Balderson - 895 3395 balderso@unlv.edu

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APPENDIX IV

EXAMPLE SUBJECT MATTER CONTENT LESSON PLAN

Lesson Plan

Mr. Leon Doss Date: April, 2003 Classes: 3-6 School: AACPA
 Lesson: Rescue Me Lesson: 2 of 2
 Equipment: 10 Cones, open space (park)

Safety: Make sure that the playing area is free from broken tree branches and there are no holes in the ground. All shoes must be tied tightly.

Instructional Objectives:

Cognitive- TLWDTAT learn new rules to a new game, spatial awareness, and increase heart rate for a minimum of thirty seconds throughout the period.

Affective- TLWDTAT work together in teams by rescuing players from opposite sides of the field.

Psychomotor- TLWDTAT actively participate in a new game while incorporating some fitness activities relevant to presidential fitness testing.

TIME	ACTIVITY	EQUIPMENT	TEACHING CUES
5 min.	Dress Out	Locker Room	
5 min.	Opening Talk	Meeting Area	
5 Min.	Walk to the park	Park	
5 Min.	Warmup	Open area	
-	15 jumping jacks		
-	arm circles/V-stretch		
-	10 cherry pickers		
-	10 pushups		
3 Min.	Instructions for "Rescue Me"		
-	students will be placed into two teams		
-	one player will stand on the far side of the field, the rest will stand on the opposite side.		
-	When the whistle blows, the rescuer (single player) will run across to grab the next player and bring them back. When teacher blows whistle everyone completes a task (eg. 10 jumping jacks)		
-	The students will go through this game once. Once the last player has been rescued, the first single player must run to the opposite side and back to rescue another player.		
	X ←—————	X&X	XXXXXXXXXXXXXXXXXX
	X ←—————	X&X	XXXXXXXXXXXXXXXXXX
10 Min.	Walk Back to School and Dress In.		

APPENDIX V

DIRECT OBSERVATION CATEGORY SYSTEM

Teacher Behaviors

Personal Accountability Talk

The classroom data for each student measure implemented in this study are placed on a wall by the participating teacher in the classroom on a large poster-type piece of cardboard paper. This category includes teacher encouragement toward students to view and discuss the posted data. This category also includes students engaged in the act of looking at and discussing or reflecting on the data results.

Personal Responsibility Talk

The teacher selects a random student (never the same one twice) to recite in front of the class all of the classroom rules stipulated as related to personal responsibility. Recording time begins when the student's name is called and ends when the student returns to their original seat or placement in the classroom.

Observation

The teacher is either watching student groups or single students engaged in any category of student behavior. This category includes passive supervision, where there is no relationship of the observation to an instructional focus. The teacher must also not be engaged in any other category of teacher behavior in order to record observation.

Skill Instruction

The teacher is engaged in conveying information to students concerning skills to be learned, activities to engage in, or organizational tasks to involve in. This instruction may be verbal in nature, take the form of modeling or physical guidance according to skill or task accomplishment, and may take the form of very extended interactions to very brief encouraging or feedback statements.

Social Skill Instruction

The teacher is, in a verbal, nonverbal, or modeling manner, describing to an individual student or student group some aspect of social behavior. These interactions may include explanation or illustration of the types of social behavior (e.g., off-task, disruptions, negative peer interactions) that should not occur, to explanation or

illustration of the types of social interactions (e.g., peer encouragement and reinforcement, conflict resolution, peer leadership behaviors, etc.) that should occur in ecological context.

Management

The teacher is engaged in carrying out a non-subject-matter organizational task (e.g., setting up equipment, taking roll, collecting papers, explaining station rotations, etc.). This category may include a wide variety of activities, all within the boundaries of conducting something designed to get the general classroom setting to a state of skill- or activity-based learning readiness.

Student Leadership

The student makes an attempt to facilitate, direct, or support an appropriate social response in the face of a student conflict, disagreement, off-task or disruptive episode, or any other type of student-peer altercation. The recording of leadership is differentiated from the behavior of conflict resolution in that with leadership activities on the part of a student a clear effort is made to direct or resolve a challenging student activity, whereas in the recording of conflict resolution the student exhibiting these types of behaviors was successful in his or her

efforts. This behavior may be verbalized in an encouraging manner by a student (e.g., "lets get in line"), or simply take the form of a non-verbal gesture (e.g., arm waving for everyone to gather around and quit arguing).

Student Behaviors

Passive Off-Task

Students are clearly not engaged in an activity in which it is clear they should be engaged in, or engaged in an activity other than the one that was clearly designated by the teacher. The student's off-task behavior does not involve anyone else and does not disrupt the class lesson (ie. not standing in line properly, deviation from the assigned activity, wandering aimlessly when one should be engaged in a prescribed activity or listening to teacher interactions).

Disruptive Off-Task

Students are clearly not engaged in an activity in which it is clear they should be engaged in, or engaged in an activity other than the one that was clearly designated by the teacher. The student's off-task behavior in this category is involved with another student or student group to the point of distracting that student or group away from the skills or activities in which they should be involved

in as prescribed by the teacher, and/or disrupts the flow of the lesson (e.g., talking to another student, pushing, loud outbursts, behavior that takes a teacher's time away from instruction of the larger class, etc.).

Positive Social

The student makes a verbal or nonverbal response to another student or student group that is meant to build the recipient's confidence and self efficacy (e.g., statements such as, "good job" and "nice shot", non-verbal gestures of high-fives, etc.).

Anti-Social

The student makes a verbal or nonverbal response to another student or student group that is meant to damage the recipient's confidence and self efficacy (e.g., statements such as, "you are stupid", "why did you miss that shot" and shaking head in disbelief, "what is wrong with you?", etc.).

Academic Learning Time (ALT)

The percentage of class time a student is engaged in motor activity practice in accordance to lesson-plan objectives, and is engaged in that motor activity or skill practice with a high degree of successful performance in accordance with lesson objectives prescribed by the teacher. Examples include proper footwork in a basketball

lay-up lesson where the teacher's objective is correct footwork; and proper execution of skills in a game play situation in accordance with how those skills were taught in a lesson context.

Conflict

Two or more students are involved in a disagreement over organizational tasks, skill performance, the rules of a large group activity, the correct outcome of a game activity play, or an interpersonal dispute in the context of the activity. This category can include physical contact, vocalizations, or repeated nonverbal gestures.

Conflict Resolution

This category is recorded when a conflict episode is resolved by students independent of a teacher or supervisory figure intervening. In other words, this category represents the number of conflict incidents that were resolved by students without the help of the teacher. Additionally, if a conflict episode is ongoing for more than two minutes, and a teacher or supervisory figure does not intervene but is regarded as that they should have, this category is not recorded.

VITA

Graduate College
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Daniel Wesley Balderson

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Degrees:

Bachelor of Arts, Kinesiology, 2001
University of Lethbridge

Bachelor of Education, 2001
University of Lethbridge

Special Honors and Awards:

2000: Canadian Intercollegiate Athletic Union Basketball
Player of the Year
2000: Royal Bank Academic All-Canadian
1999: Royal Bank Academic All-Canadian
1999: Member of the Canadian Student National Basketball
Team

Publications:

Balderson, D., & Sharpe, T.L. (submitted). Promoting
positive social behavior in physical education.
Strategies.

Sharpe, T.L., Balderson, D., Lounsbery, M., Landwer, G.,
Tanaka, W., Malin, C., & Doss, L. (submitted).
Implementing a collaboration model: Insights from the
Andre Agassi Charter School Project. *The Physical
Educator*.

Sharpe, T.L., Balderson, D., Brown, M. (submitted). Middle- and high- school generalization effects of elementary positive social skills training. *The Journal of Behavioral Education*.

Sharpe, T.L., Balderson, D., So, H.S. (in press). Long-term effects of a behaviorally-based feedback strategy for undergraduate teacher trainees. *Behavior Modification*.

Thesis Title: The Effects of a Personal Accountability and Personal Responsibility Model on Urban Elementary Student Positive Social and Off-Task Behaviors.

Thesis Examination Committee:

Chairperson, Dr. Tom Sharpe, ED.D.

Committee Member, Dr. Gerald Landwer, ED.D.

Committee Member, Dr. Monica Lounsbery, Ph.D.

Graduate Faculty Representative, Dr. Tim Bungum, Ph.D.