Improving student bus behavior in an elementary school through the use of video cameras and an incentive program

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IMPROVING STUDENT BUS BEHAVIOR IN AN ELEMENTARY SCHOOL THROUGH THE USE OF VIDEO CAMERAS AND AN INCENTIVE PROGRAM

by

Mary L. Steinhauer-Kula

A Thesis

Submitted in partial fulfillment of the requirements of a Master of Arts Degree of The Graduate School at Rowan University May 1999

Approved by

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This report focuses on two strategies used to improve student behavior on school buses at Silver Run School, an elementary school in Millville, New Jersey. The purpose of this comparative study was to determine whether or not the use of video cameras on school buses and the implementation of the "Best Bus" program, a behavior incentive program, leads to improved student behavior as measured by fewer discipline referrals. Two consecutive school years, 1997-1998 and 1998-1999, were studied. In the 1997-1998 school year, neither strategy was utilized, while both were implemented in the 1998-1999 school year. In addition to the quantitative aspect of the study, qualitative data was also gathered and analyzed via student and bus driver surveys. The research indicated a 20.2% decrease in discipline referrals between the two school years, thus showing that the use of video cameras and the incentive program had a positive effect on student behavior. The survey results reinforced this finding.
Mini-Abstract

Mary L. Steinhauer-Kula

Improving Student Bus Behavior in an Elementary School Through the Use of Video Cameras and an Incentive Program
1999
Dr. Ronald L. Capasso
Educational Administration

This report focuses on two strategies used to improve student behavior on school buses at an elementary school in Millville, New Jersey. With the utilization of those two strategies, the use of video cameras on buses and a behavior incentive program, discipline referrals decreased by 20.2%.
Acknowledgments

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Chapter 1

Introduction: Focus of the Study

Elementary schools are working hard to create a peaceful school climate where learning can take place in a safe environment. Teachers implement behavior modification programs, such as Lee Canter's guide to assertive discipline and incentive programs, to help promote positive student behavior in the classroom. However, teachers are not with students on the bus when they are coming to and going home from school. There is a need for a plan to improve student behavior on buses, and this plan should include the use of video cameras on the buses and an incentive program for good behavior. The number one concern of the Vice Principal at Silver Run School in Millville, New Jersey is the amount of discipline problems on the bus as illustrated by the high number of referrals she received in the 1996-1997 and 1997-1998 school years.

Purpose of the Study

The purpose of the study is to reduce student discipline referrals from bus drivers through the use of video cameras and a behavior incentive program. The intern wants to develop an incentive program for good student behavior and then determine if this, along with the use of video cameras on the buses, results in a reduction of the number of bus-related discipline referrals. Evaluating the success of the plan will provide direction for future policies, procedures, and incentive programs. In addition, the findings of this study may be used by school administrators in decision-making regarding the following: inservicing of bus drivers, student bus safety workshops, and the development of a bus
discipline policy with related consequences. The study will result in a comparison of the referrals received in the months of October through February of the 1998-1999 school year with the same months of the 1997-1998 school year.

It is the assertion of the intern that using the video cameras to serve as “eyes” to what takes place on the buses will deter misbehavior of students when used to show students, what they are doing wrong. The videos can also be used to show parents the kinds of inappropriate behavior their children are displaying. The intern also believes that an incentive program, which will recognize student groups by bus which exhibit proper bus behavior, will lead to a decrease in the number of discipline referrals. This incentive program, entitled “Best Bus”, will award tickets for free ice cream treats to students on the bus that receives the highest ratings by the bus driver and the school monitor, while also having the fewest discipline referrals during a two-week period of time. A certificate of achievement will be displayed on the bus and at the end of the year, the students on the bus with the most certificates will receive a school tee-shirt.

Definition of Terms

*Bus suspension:* Loss of bus-riding privileges for a period of one or more days.

*Incentive program:* Program which rewards positive student behavior.

*Black box:* Box mounted on buses which may or may not contain a video camera; a red light is always on, and students do not know whether or not the camera is inside.

*Video camera on bus:* Device used to capture the events taking place on a school bus, with sound.
Alternative Classroom Instruction: A consequence for poor behavior in which students do their work in a different classroom setting for a period of one or more days; called in-school suspension in some schools.

Discipline referral: Written report filled out by bus driver detailing incidents of poor behavior (who was involved, what happened, etc.)

Limitations of the Study

This project will focus on Silver Run School, an elementary school in Millville, New Jersey which houses approximately 800 students in grades Kindergarten through seven. The programs implemented will be for the 1998-1999 school year, but may be extended to future years depending upon their success. This project will focus on decreasing discipline referrals related to bus incidents only, not all types of discipline referrals.

Due to differences in student populations, the amount of parental support, and the amount of training bus drivers receive in managing student behavior, the results of this study can not be generalized for all elementary schools. Other schools implementing the same programs will find differing results, depending partly on the variables just mentioned. In addition, the study will not be able to measure the success of each of the two programs independently, only the success of the two programs in combination.

Setting of the Study

The city of Millville is located in Cumberland County, New Jersey. It was established in 1801 and was officially incorporated as a city by the New Jersey state legislature in 1866. The form of government employed up until 1913 was the Mayor-council. Thereafter, as a result of the Walsh Act of 1913, the city changed to a commission form of government in which five commissioners were elected and the one with the highest
number of votes served as the city’s mayor. This form of the city government still exists today (Millville City Commission, 1990).

The social characteristics of Millville, which are based on the data compiled by the New Jersey State Data Center, are as follows: (a) urban residence – 25,992 (100%); (b) rural residence – 0 (0%); educational attainment (based on persons 25 years and over) – less than 9th grade - 16,308; 9th to 12th grade without a diploma – 1,791; high school graduate – 6,122; some college but without a degree – 2,362; associate’s degree – 1,008; bachelor’s degree – 1,366; graduate or professional degree – 532. The percentage of high school graduates or higher is 69.4%, in which 11.64% of the 69.4% have a Bachelor’s degree or higher.

Economically, as of 1990, Millville has been categorized as an urban community (Cumberland County Department of Planning and Development, 1990). The average household salaries by race, based on the 1990 census, are as follows: White - $38,414; Black - $25,432; American Indian/Eskimo - $22,264; Asian/Pacific Islander - $21,938; Hispanic - $22,839; and Other races - $23,194. Cumberland County currently ranks last in per capita income in the state of New Jersey. As a result, the average socioeconomic status, based on educational level of persons 25 years and older, occupational status, median family income, families living below the poverty level, percent unemployed, the degree of urbanization, and persons per household, is low-middle class. Ranking in the bottom 10% in community wealth of all New Jersey school districts, the Millville Public School system is in the District Factor “B” group. This ranking, which ranges from “A”, the lowest factor score, to “J”, the highest factor score, is based on the seven variables mentioned above.
Based on the 1990 Census Profile Series, the percentage of children under the age of 18 residing in a two parent or one parent home was 70% and 30% respectively. Millville falls below the reported New Jersey state average of 80% regarding the two parent household status. This contributes to more of Millville’s students being at-risk.

The Millville Board of Education is comprised of a nine member elected team with three additional members who represent the four sending districts of Woodbine, Commercial township, Lawrence Township, and Maurice River Township. The inclusion of the members from the sending districts is due to a law enacted in 1995 by the state legislature which states that sending districts must be represented on the boards of the school district to which the respective districts send their students.

Currently, there are approximately 5,700 students in the eleven schools which make up the Millville School District. These schools include: Child Family Center (Pre-K); Bacon School (grades Pre-K through five); Mount Pleasant School (grades Pre-K through five); Wood School (grades Pre-K through five); Holly Heights School (grades K through seven); Rieck Avenue School (grades K through seven); Silver Run School (grades K through seven); Memorial High School (grades eight and nine); Millville Senior High School (grades ten through twelve); Alternative School (grades nine through twelve); and Millville Academy (grades five through eight). During the 1996-1997 school year, the district purchased the Prudential Building, which is now being transformed into the Lakeside Middle School. This school will house approximately 1200 students in grades six through eight, and is scheduled to open in September 1999. Grades six and seven will be in the new school in September 1999, with grade eight to be added the following year. The grade configuration at the other schools in the district will
change due to the addition of the new middle school. Decisions as to which grade levels will be housed at the various schools have not yet been made.

Silver Run School, the setting of this study, is the newest of the elementary school in the district. Opening in 1992, the school houses approximately 800 students in grades Kindergarten through seven. Much of the student body is considered to be at-risk, and approximately 63% of the students receive free or reduced lunch. The racial breakdown of the student population is as follows: 58% white, 29% black, 11% hispanic, 2% other. Most students are bus students due to the location of the school being on the outskirts of town and the fact that most students come from the center of town. There are 13 buses used to transport regular education students to and from school.

The data provided indicates that the students of Millville have a lesser social, economic, and educational status than that recorded for the state norm. Addressing these issues will not only require local, county, and state agencies, but will also place a greater burden on the public school system to deal with the possible negative social, emotional, and educational consequences of the socioeconomic and demographic status of the community. The increase in state aid has been instrumental in providing much needed services to the students via the Abbott v. Burke decision. The Millville Public School district is considered one of the “urban 30” school districts in the state, which is a designation of the poorest districts in the state and qualifies those districts for additional state aid.

Significance of the Study

The number of disciplinary actions taken for bus-related behavioral incidents during each of the past two school years, 1996-1997 and 1997-1998, was over 350. In the five-
month period of the 1997-1998 school year under study, there were 238 discipline referrals. A total of 64 students were repeat offenders, having at least two discipline referrals. The school’s Vice Principal, who serves as the disciplinarian, has been inundated with discipline referrals from bus drivers. Bus drivers have gotten frustrated and burned out, and students have arrived to school upset over incidents that took place while riding buses to and from school. The problem of poor bus behavior is a major concern of the Vice Principal and needs to be addressed. The intern asserts that the use of video cameras on the buses and an incentive program for good behavior will result in fewer bus discipline referrals. This, in turn, will result in bus drivers feeling less frustrated and burned out. In addition, the Vice Principal will not have to spend such a large part of her time dealing with bus-related discipline issues. If successful, these measures can be used in future years for improving and maintaining good behavior. If not successful, the study will be significant in that it will examine other variables, such as bus driver training in assertive discipline and a district-wide bus discipline policy, which may need to be altered and/or improved.

Organization of the Study

The remainder of this study will include the following: Chapter 2 Review of Literature – a review of programs and research findings related to improving bus behavior; Chapter 3 The Design of the Study – descriptions of the following: research design, development and design of the research instruments used in the study, the sample and sampling technique used in the study, the data collection approach, and the data analysis plan; Chapter 4 Presentation of the Research Findings – what information was found and what
it means; and Chapter 5 Conclusions, Implications, and Further Study – major conclusions, their implications, and need for further study.
Chapter 2

Review of Literature

The purpose of this review of literature is to examine information dealing with the research topic of improving student behavior on school buses. This review will examine studies that have been done on the subject and will provide rationale for the researcher's project.

Howell (1992) asserts that “no position in a school system goes more unnoticed and unrewarded than that of a school bus driver” (p.33). Due to a high rate of discipline problems on school buses, many programs have been implemented in elementary schools throughout the country to help improve bus behavior. Problems encountered by bus drivers include disrespect for the bus driver and fellow students, profanity, students getting out of their seats, fighting, and loud, rowdy behavior. Many schools implement assertive discipline programs in the classroom, such as the one designed by Lee Canter and Associates (1994). Such programs have helped improve school climate and allow teachers to teach and students to learn. But behavior to and from school is still a problem for many school districts.

School systems are making an effort to improve behavior on buses by addressing many different aspects of the problem and involving various stakeholders in the school community. In Reflective Practice for Educators, Osterman and Kottkamp (1993) assert that “as people begin to envision new possibilities and to work together in different ways to achieve newly defined goals, the possibility of change on a broader level becomes more real” (p. 186). Some of the efforts to improve bus behavior include inservicing bus
drivers on how to manage behavior, teaching students about bus safety, using video cameras on the buses, and implementing incentive programs for good behavior. Following is a review of such programs.

Shantl (1991) used a motivational plan to reduce bus discipline referrals in a K-5 elementary school. He developed an incentive program which rewarded positive bus behavior on a monthly basis. Some students served as bus patrol members helping to monitor behavior on the buses and in areas around the school. The safety patrol members issued "ticket citations" to those who violated the rules, copies of which were given to teachers. They were also responsible for explaining the incentive program entitled "Bus of the Month" to all classrooms. All students were given a school bus safety test which teachers then discussed with them. The bus of the month was determined by a point system consisting of three areas: disciplines, safety violations, and neatness. Students on the winning buses received rewards such as pizza parties and snow cones. The program was publicized in a school newsletter to parents and greatly involved the bus drivers. At the end of a fourteen week period, bus discipline referrals in the three categories were evaluated and compared to the bus discipline referrals of the same fourteen week period of the previous year. Schantl found that the referrals decreased from 385 of the previous year's fourteen week period to 168 of the fourteen week period during which the program was implemented. The use of such incentive programs encourages students to take responsibility for their behavior, help monitor their peers' behavior, and reinforces good behavior. Such programs are supported by behavioral psychologists and help improve student and bus driver morale. They also involve bus drivers, giving them an important role in the selection of the best bus. Cross (1997) states that "psychologists have known
for a long time that an event followed by a positive response will occur more often than an event followed by a negative response or no response at all...adults should use...positive reinforcement in order to achieve better student behavior” (p.57).

Dawson and Sanders (1997) discuss an incentive program that is implemented in an elementary school in Alaska. The program provides incentives for both individuals and groups. All bus drivers select two students every two week period that receive certificates and other recognition for good bus behavior. In addition, buses earn group points and are rewarded after they accumulate set amounts of points. The points needed for the group incentive, which consists of treats on the bus ride home with the principal, starts with 50, then increases each time to 100, 150, etc. This is another positive incentive reinforcement program involving incentives. With this program, Dawson and Sanders report a dramatic decrease in bus discipline referrals, from an average of 15 per week before the program to an average of 1 per week after the program was implemented.

It is imperative to find ways of improving bus behavior because of the myriad of problems poor behavior causes. Dealing with bus-related discipline issues takes up a lot of time in many assistant principals’ days. Students often carry over problems on the bus into the classroom, leading to fights and arguments. Still another very critical issue is the safety, with poor behavior leading to traffic accidents when the driver’s attention is diverted from the road to the what the students are doing. In her article *Fuss on the Bus*, George (1995) shows yet another impact of problems on the bus, a very costly one. She asserts that “poor student discipline on the school bus can lead straight to economic trouble for your school district, too” (p.33). This, she says, is because the high anxiety
level experienced by school bus drivers because of poor student behavior can lower driver morale and lead to high turnover among drivers. This, in turn, means extra costs to the school district for the constant inservicing of new drivers and even higher transportation insurance premiums if these new, inexperienced drivers fail to operate the buses properly or get into accidents. She further asserts that the high turnover could lead to public relations problems for schools if drivers miss pickups and dropoffs. It often takes several weeks at the beginning of school for drivers to get used to their routes and to begin to develop a rapport with students. Imagine going through that newness all year long because of driver turnover caused by the stress of students’ poor behavior. Parents would be upset and administrators would have even more problems with which to deal.

Copans and Gibbons (1984) agree that bus discipline has become a major concern for all members of the school community in the areas described by George (1995). In addition, Farmer (1984) and Howell (1992) agree that the need to control and discipline students is paramount and that all schools must make an effort to improve this area of school-related behavior.

George (1995) examines various strategies for improving bus behavior, most of which involve parents, bus drivers, students, and school administrators. In a two-year pilot program in the Beaufort County School District in South Carolina, bus driver turnover rates decreased from 20 percent to well under 10 percent by giving drivers the authority to suspend students from the bus for misbehavior. This program encouraged parental involvement in improving behavior because of the inconvenience to them when their children needed a ride to school.
Still another strategy highlighted by George (1995) is the use of video cameras on the buses. She says “a growing number of school districts have reported success in using onboard video cameras to detect and document misbehavior on school buses” (p.36). Due to the high cost of the equipment, many districts rotate the cameras, yet every bus has a black box with a blinking red light. Since the actual camera is hidden, installed inside the black box, students have no way of knowing when their bus has a camera on it. Some schools rotate the cameras on a schedule, while others change the cameras in response to problems on particular buses. The video camera allows the bus driver to concentrate more on driving and less on student behavior, knowing that the actions are being taped and that he/she can view it when necessary. George asserts that it is important, however, to notify parents about the use of the video cameras, with many schools having parents sign a form. Some people of the American Civil liberties Union say that this weakens students’ Fourth Amendment Rights. George stated a passage from the new standards on video surveillance that were developed by the School Transportation Section of the National Safety Council. It states that “the video camera on a school bus should be used only as an aid to monitor student and driver behavior. It should not replace the discipline policy, the authority of the driver, or the responsibility of the school officials” (p.36).

Howell (1992) explained the River Road Independent Schools’ use of video cameras on an experimental basis. Students were given no formal announcements about the cameras; instead, the word spread by student word of mouth. Bus incident reports, which were filled out by the bus drivers on student misbehavior, were analyzed after the three-month trial period. Compared to the previous three-month period, discipline
referrals decreased by 40 percent on the buses with video cameras. Howell (1992) sums up the use of video cameras by asserting that, in addition to improving student behavior, they have “made the driver’s job easier, improved the principal’s bus-discipline techniques, raised parent awareness levels, and improved the bus driver’s public relation skills” (p.34-35).

Still other schools have implemented school bus safety education programs designed to improve behavior by having students see the connection good behavior has with safety. Richardson (1986) focused on student responsibility for appropriate bus behavior. In addition to conducting a bus driver training program which focused on effectively managing student behavior, and meeting monthly with bus drivers, his program also consisted of a ridership responsibilities program for students in grades four, five, and six. The student program, implemented by classroom teachers, focused on personal responsibility, appropriate bus behavior, and perhaps of most importance, the link between bus behavior and bus safety. After a review of bus referrals in various areas of infractions, Richardson found that the referrals decreased by between 50 percent and 61 percent from the previous year, depending on the category of infractions.

Hill (1995) designed a similar comprehensive school bus safety education program, along with a public awareness program and a revised bus discipline code, which resulted in a 66 percent decrease in disruptive behavior from the previous year. Her program included all of the stakeholders of the school community. This supports the popular view today that when implementing a new program in the school, it is essential to involve all stakeholders in the process.
In addition, Vail (1997) asserts that the bus driver training programs enable drivers to learn ways to better communicate with students and how to develop a rapport with them. Just as positive, mutually respectful teacher-student relationships are essential to a conducive learning environment, good bus driver-student relationships are imperative for safe and disruptive-free rides to and from school. Kravas and Kravas (1977) say that school bus drivers are trained in vehicle handling, equipment maintenance, emergency procedures, and highway regulations, yet few school systems instruct bus drivers on managing students. They described a bus driver training program implemented in the Hoquiam Public School System in Washington state which focused on creating a better working relationship between drivers and school officials as well as problem management. The program has helped bus drivers in that they feel supported and appreciated.

In a poll taken by the National School transportation Association (NSTA) in 1996, student behavior is one of the top transportation concerns of school board members (Vail, 1997). Vail also reported that Gwinnett County in Georgia has revamped the bus discipline policy and uses principals to train the drivers in the area of child development as well as ways to handle student behavior. The schools involved in the program reported a 50 to 80 percent reduction in bus discipline referrals. A big part of this program is that bus drivers were given authority to call parents concerning student misbehavior.

Vail (1997) also describes a training program entitled “Pro Bus” developed by a school psychologist, Mary Alice Myers, in Volusia County, Florida. Myers’ “Pro Bus” program trains drivers in techniques to use in dealing with behavior problems, and
emphasizes better communication and establishing a rapport with the students. Myers asserts that "kids misbehave because they can. The driver is not empowered by the school or the parents" (p.35). This suggests that empowering the bus drivers will help improve bus behavior. According to Osterman and Kottkamp (1993), empowerment is something that emanates from the individual, not something that is given. "It is not an entity distributed through a chain of command but a willingness and drive to act professionally and responsibly, grounded in a sense of self-esteem, competence, and autonomy" (p. 186-187). It is therefore essential to involve the bus drivers as much as possible in any programs related to bus behavior and to value their suggestions.

Vail (1997) highlighted yet another model driver training program which was designed by Mary Lin Truelove, the transportation coordinator for Chapel Hill-Carrboro City School System in North Carolina. Truelove emphasizes communication, team building, and respect. The program has made the drivers happier and less frustrated with their jobs. She asserts that a respectful driver with good communication skills and sharing the same expectations as students will result in fewer discipline problems.

Canter and Associates sells a student management program for bus drivers, entitled "Assertive Discipline for Bus Drivers", which demonstrates on videotape three different bus driver styles (nonassertive, hostile, and assertive), and provides for discussion among the group leader and bus drivers (Vail 1997).

In summary, Vail (1997) strongly asserts that whatever type of driver training program a school chooses to utilize, "a successful program makes the school bus driver part of your students' education, rather than a peripheral player. The more respect drivers are
shown by administrators and teachers, the more likely it is they will be able to handle their charges” (p.36).
Chapter 3

Design of the Study

General Description of Research Design

The researcher utilized both quantitative and qualitative research designs to determine if the bus incentive program and the use of video cameras on buses led to a decrease in bus-related discipline referrals. Quantitatively, the researcher used a comparative study of bus discipline statistics generated through a computer database. Discipline referrals were categorized into five categories. For the 1997-1998 and 1998-1999 school years during the months of October through February. These categories were: the number of offenses resulting in administrative or parent conferences; the number of offenses resulting in lunch detention, office detention, or loss of extracurricular privileges; the number of offenses resulting in peer mediation; the number of offenses resulting in alternative classroom instruction (ACI); and the number of offenses resulting in suspension of bus-riding privileges. These categories are in order of the severity of the behavior and/or the frequency of offenses for a particular student. For example, a student who didn’t remain in his/her seat may have had an administrative conference the first time the offense occurred. If it was his/her fourth referral, however, he/she may lose bus-riding privileges for several days. In the case of fighting or another serious offense, the action taken could jump right to suspension of bus-riding privileges. The researcher then compared the number of referrals, by category, for the specified time period of the two school years.
Qualitatively, the researcher surveyed bus drivers on their feelings of whether or not the incentive program and video cameras had improved student behavior on buses. In addition, a random sample of students was surveyed on their opinions of the two programs being examined in this study. In the months of October through February for the 1997-1998 school year, video cameras were not installed on buses, nor was the incentive program instituted. Both, however, were utilized in the same five-month time period for the 1998-1999 school year.

**Description of the Development and Design of Research Instruments**

The researcher relied on the use of several research instruments to study whether or not bus discipline referrals decreased after the installation of video cameras on buses and the implementation of “Best Bus”, a bus behavior incentive program. Of most importance to this study was the actual numbers of discipline referrals handled by the Vice Principal in the months of October through February for each of the 1997-1998 and 1998-1999 school years. This data was entered into the computer by date, student, and action taken. The researcher sorted the data by the action taken.

For the “Best Bus” program, students were rated by their bus drivers (see Appendix A), and the teacher who dismisses students from the buses in the morning (see Appendix B). These two rating scales earned students points in the program, while each discipline referral from a particular bus resulted in losing two points. The two rating scales were developed by addressing the bus rules, with input from the Vice Principal, a teacher, and bus drivers.

The rating scale for the bus driver, which was filled out at the end of each week during the study, consisted of six items and used a five-point lickert scale. Bus drivers rated
their students, as a whole, on the six items. Although each bus driver may interpret the rating scale differently, the researcher felt this was a critical part of the incentive program. In addition to helping students realize that the bus driver is in charge, involving the bus driver also contributes to them supporting the program and lets them know we value them. The rating scale used by the teacher in charge of dismissing students from buses in the morning consisted of two items. She rated all of the buses on a weekly basis, with buses getting a point each day for each item if they met the criteria.

A form (see Appendix C) was developed through a word processing program that assisted the researcher in compiling the results of “Best Bus” for each two-week period during the duration of the study.

A survey for bus drivers (see Appendix D) was developed by the researcher and Vice Principal. This survey served as a qualitative component to the study, measuring the feelings of the bus drivers as to whether or not the utilization of video cameras and the incentive program have resulted in fewer behavioral problems. The survey, administered in March 1999, consisted of three items using a four-point lickert scale as well as two open-ended items. The items on this survey directly relate to the research problem being addressed and served to ensure that other variables were not causing the decreases in discipline referrals. Only bus drivers who worked for the school during both years being studied were surveyed, adding to the validity of the study.

The student survey (see Appendix E) was also administered in March 1999 and was used to further eliminate intervening variables from the research study. It consisted of two items using a four-point lickert scale as well as three open-ended items. The student survey was administered on a random basis by bus.
Description of the Sample and Sampling Technique

The only component of the study using a sampling technique was the student survey. Five students from each bus were randomly selected to complete the survey. Using an alphabetical list of students by bus, every fifth student was selected until a total of five students was reached for each bus.

Description of the Data Collection Approach

To determine the impact that the use of video cameras and the bus incentive program had on student behavior, the researcher relied most heavily on computer print-outs of bus discipline statistics. Computer reports for the months of October through February for the 1997-1998 and 1998-1999 school years enabled the researcher to compare total numbers of referrals. These reports were also utilized to code the data into the five categories mentioned earlier in this chapter. The Vice Principal entered discipline information into a database from which the reports were generated.

For the bus incentive program, the researcher utilized the weekly rating scales from the bus drivers and the teacher on morning bus duty to identify the winning bus every two weeks. Buses received scores ranging from one to thirty on each bus driver rating scale, and from zero to ten on each teacher rating scale. In addition, the Vice Principal reported the number of referrals received, by bus, during each two-week period. The following formula was applied to each bus to determine the winner: Total points = A + B - 2C, where A = bus driver ratings for two-week period; B = teacher rating for two-week period; C = number of discipline referrals. Through this formula, buses were rewarded for good behavior and penalized for the referrals.
The bus driver and student surveys were used to help eliminate intervening variables that may have had an impact on the results of this study. In addition to the number of discipline referrals for each of the time periods being compared, the researcher was also interested in determining how the bus drivers and students felt about the video cameras and incentive program. The results of these surveys were used to help explain the research findings.

Data Analysis Plan

To analyze the data, the researcher coded the bus discipline referrals into four categories for each of the two school years under examination. The four categories, as well as the total number of referrals were compared to determine the impact that the use of video cameras and the incentive program had on student behavior. The surveys were used to gather information on the impact of the study on students' and bus drivers' feelings. They were also used to confirm or help explain the results.
Chapter 4

Presentation of Research Findings

The internship project took place from October 1998 to March 1999 at Silver Run School in Millville, New Jersey. The researcher, under the supervision of the Vice Principal, coordinated the “Best Bus” incentive program. Every two weeks, a best bus was identified and rewarded for their good behavior. In addition, black boxes for video cameras were installed in school buses and the video cameras were rotated from bus to bus on a regular basis. Students do not know when a camera is in the black box, as a red light is on at all times, indicating that the device is on. Video tapes were used when conferencing with students and/or parents about inappropriate bus behavior.

For the 1997-1998 school year, neither video cameras nor the “Best Bus” program were utilized. Both were utilized in the 1998-1999 school year. The researcher did a comparative study of a five-month time period for each of the two school years. In addition, students and bus drivers were surveyed on the use of video cameras on buses and the “Best Bus” program.

Table 1 shows the number of bus discipline referrals for the months of October through February for the 1997-1998 and 1998-1999 school years.

<table>
<thead>
<tr>
<th></th>
<th>Total Number of Referrals for the Months of October through February</th>
</tr>
</thead>
<tbody>
<tr>
<td>1997-1998</td>
<td>238</td>
</tr>
<tr>
<td>1998-1999</td>
<td>190</td>
</tr>
</tbody>
</table>

23
There were 20.2% fewer discipline referrals in the specified time period of the 1998-1999 school year, when the video cameras and the incentive program were utilized. Since these programs were the only major differences between the school years under investigation, the researcher concluded that these strategies positively affected student behavior on buses, resulting in fewer discipline referrals.

In addition to comparing the total number of bus discipline referrals, the researcher also sorted the referrals into five categories for each of the school years under study. Table 2 shows this comparison.

Table 2
Bus Discipline Referrals by Action Taken for the Months of October through February

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>1997-1998</td>
<td>129</td>
<td>2</td>
<td>4</td>
<td>1</td>
<td>102</td>
</tr>
<tr>
<td>1998-1999</td>
<td>119</td>
<td>13</td>
<td>0</td>
<td>22</td>
<td>36</td>
</tr>
</tbody>
</table>

A = Administrative Conference, Parent Conference
B = Office Detention, Lunch Detention, Loss of Extracurricular Privileges
C = Peer Mediation
D = Alternative Classroom Instruction
E = Bus Suspension

The most severe consequence is bus suspension, whereby students are not permitted to ride the bus for a specified period of time, usually one to five days. Bus suspensions result when a student repeatedly misbehaves on the bus or when the behavior is more extreme, such as fighting. This category showed the most dramatic change from the 1997-1998 school year to the 1998-1999 school year. Bus suspensions decreased from
102 in the 1997-1998 school year to 36 in the 1998-1999 school year. This represents a 64.7% decrease. This leads the researcher to the conclusion that the video cameras and incentive program positively affected student behavior.

The researcher also tallied the number of students with repeated bus discipline referrals (two or more) for the five-month period of each of the two school years being studied. The number of repeat offenders decreased 37.5%, from 64 in the specified time period of the 1997-1998 school year to 40 in the same time period of the 1998-1999 school year. This is another positive effect of the programs implemented in the latter school year.

In addition to the quantitative aspect of the study, the researcher also gathered qualitative data through the use of surveys for both students and bus drivers. The purpose of these studies was to help determine whether or not the video cameras and incentive program had a positive effect on student bus behavior. In addition, they served to validate the quantitative results, helping to eliminate intervening variables that could have led to the decrease in referrals. Student survey results are displayed in Table 3. A total of 78 surveys were completed, with most students strongly agreeing or agreeing that the video cameras and the incentive program helped improve students' behavior. Of the students surveyed, 85.9% strongly agreed or agreed that the video camera helped them better follow the bus rules. In addition, 79.5% strongly agreed or agreed that the “Best Bus” incentive program encourages good behavior. This qualitative data supports the qualitative research findings, that the use of video cameras and an incentive program did indeed lead to fewer discipline problems on the buses.
### Table 3

**Student Survey Results**

1. Knowing that there is a video camera on my bus helps me better follow the bus rules.

<table>
<thead>
<tr>
<th></th>
<th>strongly agree</th>
<th>agree</th>
<th>disagree</th>
<th>strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>46.2%</td>
<td>39.7%</td>
<td>7.7%</td>
<td>6.4%</td>
</tr>
</tbody>
</table>

2. One of the reasons I try to follow the bus rules is so that my bus will win the “Best Bus” award.

<table>
<thead>
<tr>
<th></th>
<th>strongly agree</th>
<th>agree</th>
<th>disagree</th>
<th>strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>50.0%</td>
<td>29.5%</td>
<td>11.5%</td>
<td>9.0%</td>
</tr>
</tbody>
</table>

3. Please tell us what you think about the “Best Bus” program and if it has helped improve behavior on your bus.

<table>
<thead>
<tr>
<th></th>
<th>Like it &amp; it helped</th>
<th>Like it but it didn’t help</th>
<th>Don’t like it – didn’t help</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>62.8%</td>
<td>11.5%</td>
<td>25.6%</td>
</tr>
</tbody>
</table>

4. Please tell us what you think about having a video camera on the bus and if it has helped improve behavior on your bus.

<table>
<thead>
<tr>
<th></th>
<th>Like it &amp; it helped</th>
<th>Like it but it didn’t help</th>
<th>Don’t like it – didn’t help</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>64.1%</td>
<td>9.0%</td>
<td>26.9%</td>
</tr>
</tbody>
</table>

5. Do you feel there are too many behavior problems on your bus? If yes, what should be done to help improve the behavior.

|        |        |        |  |
|--------|--------|--------|  |
|        | Yes    | No     | Many students who answered “yes” suggested more severe consequences, having students be Suspended from the bus for longer periods of time. |
|        | 53.8%  | 46.2%  | |

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Only three bus drivers responded to the survey for bus drivers who drove a bus for the school in both school years involved in the study. The survey can be found in Appendix E. All three bus drivers agreed that the “Best Bus” incentive program has helped improve student behavior, while only two of the three agreed that the video camera has helped. In addition, all three bus drivers agreed that student behavior has been better in the 1998-1999 school year than in the 1997-1998 school year. The input from bus drivers again reinforced the research findings.

All of the data, both quantitative and qualitative, indicate that having video cameras on the buses and implementing the “Best Bus” incentive program did result in improved bus behavior and fewer discipline referrals.
Conclusions and Implications of the Study

The major conclusion drawn from this research study is that the use of video cameras and a behavior incentive program help improve student behavior on buses, and should be continued. It is the belief of the intern, however, that several changes in the way these two strategies are utilized would result in even fewer discipline referrals. Viewing the video tapes on a regular basis, rather than only when there are problems, would enable administration to “catch” the students being good and reward those students for appropriate behavior. This strategy would be particularly helpful for reinforcing good behavior on buses with many discipline problems. Since some buses never win the “Best Bus” award, this idea would provide recognition for students that display good behavior.

Another strategy that could be utilized to recognize good behavior on buses that never win is to reward those buses once they reach a certain number of points, which can be earned the same way as the “Best Bus” program points. Yet another strategy that can be added to the incentive program is to recognize two students from each non-winning bus that displayed excellent behavior. Those students could receive a free ice cream treat and have their names entered into a monthly drawing, with one name being selected to receive a school t-shirt or skating party ticket.

After implementing the project, the intern recognized the need for a bus safety training program for all students. This training could be done by local police officers and the
student safety patrol at the beginning of the school year. They could review the bus rules and consequences, as well as the primary reason for those rules and proper behavior, which is safety.

The intern also feels strongly about having bus drivers trained in assertive discipline and dealing with children. Lee Canter has such a program, which would contribute to better order on the buses and better bus driver – student relationships.

Lastly, the intern believes that a policy with set consequences for the first, second, third, etc. offenses would greatly improve student behavior on the buses. Many students responded on the survey that more severe consequences would help reduce discipline problems on the bus. The consistency such a policy would ensure is vital to managing student behavior, whether on the bus, in the cafeteria, or in the classroom.

Intern’s Leadership Conclusions and Implications

The intern utilized valuable interpersonal, written, and oral communication skills by working on this project. She also further developed her facilitative leadership skills by working with students, parents, bus drivers, teachers, and administration. In addition, she put theory into action by involving key stakeholders in attempting to remedy a school problem.

The intern also furthered her knowledge of the types of situations with which school administrators deal on a daily basis. Time management and organizational skills were also effectively utilized by the intern.

Organizational Change as a Result of the Study

Behavior on the school buses improved as a result of this project, as measured by the number of discipline referrals. Bus drivers feel that behavior has improved since the
installation of the video cameras and the implementation of the “Best Bus” incentive program. Students learned how to work together for a shared purpose and help each other in an effort to win the “Best Bus” award.

In addition, this project promoted open communication among the intern, bus drivers, students, and administration. Ideas to further improve behavior have been discussed and more attention has been focused on this school issue. As a result of this increased focus, the school administration will soon be implementing a new bus behavior policy, one which provides consistency and more severe consequences for discipline infractions. The intern sees this as a very positive organizational change that has come about, partly due to the project and the attention it attracted to this important school issue.

Further Study

The intern would like to add the previously mentioned components to the “Best Bus” program, as well as institute training programs for students and bus drivers. A study could then be conducted to determine whether or not these additional strategies further improve behavior on the buses. In addition, the intern would like to study the effects of the new bus discipline policy on student behavior, as measured by discipline referrals.
References


Kravas, C. & Kravas, K. (1977). One to Copy: This school board’s training program for bus drivers that really worked. The American School Board Journal, 164 (11), 44.


Appendix A

Bus Driver Rating Scale for "Best Bus" Incentive Program
“Best Bus” Incentive Program

Bus Number ________ Route ________

Bus Driver’s Name __________________________

Date ______________

Please rate your students on the following and give to Mary or Patrick each Friday morning. The scale is 1-5, with 1 being the lowest rating and 5 being the highest. Please rate students based on the entire week overall. This is a very important part of the “Best Bus” incentive program for students. **We thank you for your time and support.**

(1) Students were orderly and ready to board bus.

1 2 3 4 5

(2) Students quietly boarded bus and took their seats quickly and without complaining.

1 2 3 4 5

(3) Students treated the bus driver with respect.

1 2 3 4 5

(4) Students treated each other with respect.

1 2 3 4 5

(5) Students carried on conversations in an acceptable tone of voice both to and from school.

1 2 3 4 5

(6) Students remained in their seats to and from school.

1 2 3 4 5
Appendix B

Rating Scale for Teacher on Bus Duty for "Best Bus" Incentive Program
“Best Bus” Incentive Program

Rating – Mrs. Ciccio

Please rate the students on the two items with a rating of 1-5, with 5 being the highest. Then return to Mary or Patrick on Fridays. Thank you for your support and contribution to this program.

<table>
<thead>
<tr>
<th>Bus #</th>
<th>Students were sitting quietly in their seats until dismissed.</th>
<th>Students exited bus in an orderly fashion, talking in an acceptable tone of voice.</th>
</tr>
</thead>
<tbody>
<tr>
<td>207</td>
<td></td>
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<td>208</td>
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<tr>
<td>222</td>
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</tbody>
</table>
Appendix C

Form for Compiling Results of "Best Bus" Incentive Program
<table>
<thead>
<tr>
<th>Bus #</th>
<th>A: Bus Driver's Ratings</th>
<th>B: Mrs. Ciccio's Ratings</th>
<th>C: Number of Referrals</th>
<th>Total Points (A+B-2C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>207</td>
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</tbody>
</table>
Appendix D

Bus Driver Survey
Bus Driver Survey

1. Having video cameras on the buses has helped improve student behavior.
   
<table>
<thead>
<tr>
<th>strongly agree</th>
<th>agree</th>
<th>disagree</th>
<th>strongly disagree</th>
</tr>
</thead>
</table>

2. The “Best Bus” incentive program has helped improve student behavior.

<table>
<thead>
<tr>
<th>strongly agree</th>
<th>agree</th>
<th>disagree</th>
<th>strongly disagree</th>
</tr>
</thead>
</table>

3. In comparing this year with last year, student behavior has been better this year.

<table>
<thead>
<tr>
<th>strongly agree</th>
<th>agree</th>
<th>disagree</th>
<th>strongly disagree</th>
</tr>
</thead>
</table>

4. Please comment on the differences, if any, in student behavior on your bus last year and this year. List or describe the factors you think have contributed to these differences.

5. Please comment on the “Best Bus” incentive program and the use of video cameras on the bus. Include the impact, if any, you feel they have had on student behavior. In your opinion, what else would help improve student behavior?
Appendix E

Student Survey
Student Survey

1. Knowing that there is a video camera on my bus helps me better follow the bus rules.

   strongly agree disagree strongly disagree

2. One of the reasons I try to follow the bus rules is so that my bus will win the "Best Bus" award.

   strongly agree disagree strongly disagree

3. Please tell us what you think about the "Best Bus" program and if it has helped improve behavior on your bus.

4. Please tell us what you think about having a video camera on the bus and if it has helped improve behavior on your bus.

5. Do you feel there are too many behavior problems on your bus? If yes, what should be done to help improve the behavior?
Biographical Data

<table>
<thead>
<tr>
<th>Name</th>
<th>Mary L. Steinhauer-Kula</th>
</tr>
</thead>
<tbody>
<tr>
<td>High School</td>
<td>Bridgeton High School</td>
</tr>
<tr>
<td></td>
<td>Bridgeton, New Jersey</td>
</tr>
<tr>
<td>Undergraduate</td>
<td>Bachelor of Arts</td>
</tr>
<tr>
<td></td>
<td>Mathematics</td>
</tr>
<tr>
<td></td>
<td>Rowan University</td>
</tr>
<tr>
<td></td>
<td>Glassboro, New Jersey</td>
</tr>
<tr>
<td>Graduate</td>
<td>Master of Arts</td>
</tr>
<tr>
<td></td>
<td>Student Personnel Services</td>
</tr>
<tr>
<td></td>
<td>Rowan University</td>
</tr>
<tr>
<td></td>
<td>Glassboro, New Jersey</td>
</tr>
<tr>
<td>Present Occupation</td>
<td>Guidance Counselor</td>
</tr>
<tr>
<td></td>
<td>Silver Run School</td>
</tr>
<tr>
<td></td>
<td>Millville, New Jersey</td>
</tr>
</tbody>
</table>