

CHAPTER 4

RESULTS

Introduction

Chapter Four is a summary of the data gathered from student attendance records, student, parent, and teacher surveys, and Saturday Redemptive School records. Chapter Four also includes a listing of the null hypotheses and their resolution using two-way analysis of covariance to determine the relationship between and among variables, a descriptive report listing the percentage of responses from administered surveys, and a Chi-square to determine the effect of the Saturday Redemptive School on student participants percent of pass rate.

The chapter is organized into research questions, descriptive analysis, results of ANCOVA on attendance, descriptive report of students, parents, and teachers perceptions of the attendance policy, the Chi-square test on student pass rate while enrolled in Saturday Redemptive School, and summary.

Research Questions

This study investigated the overall research question:

Is the new attendance policy and attendance

program of Newport News Public Schools effective as indicated by statistical analyses of attendance data, students, parents, and teachers' perceptions, and programmatic data after one year of implementation at the high school level?

The specific research questions that were investigated are:

1. Is there a statistically significant interaction between grade level (9, 10, and 11 for year 1995-1996) and gender (male, female) with respect to year 1996-1997 high school attendance after adjusting for initial differences on the 1995-1996 high school attendance?
2. What are the perceptions of students, parents, and teachers regarding the new attendance policy and attendance program after one year of implementation?
3. Is the Saturday Redemptive School effecting the pass rate of participants after one year of implementation?

Descriptive Analysis

Attendance data were collected on 4,236 high schools students in grades 9, 10, and 11. Of the total number of students across these three grades, 1,621(38.3 percent) were ninth graders, 1,413(33.4 percent) were tenth graders, and 1,202(28.4%) were eleventh graders (See Table 1).

Table 1

Characteristics of Sample: Grade and Gender

Grade Level	N	Frequency (%)	Cumulative Percent
9 th	1621	38.3	38.3
10 th	1431	33.4	71.6
11 th	1202	28.4	100
Total	4236		
Gender			
Male	2093	49.4	49.4
Female	2143	50.6	100

Each of the three grades was divided into male and female. Of the total number of 2,093(49.4 percent) males, 814 were ninth graders, 705 were tenth graders, and 574 were eleventh graders. Of the 2,143(50.6 percent) females included in the total sample of high school students, 807 were ninth graders, 708 were tenth graders,

and 628 were eleventh graders (See Table 2).

Table 2

Characteristics of Sample: Grade by Gender

Grade Level	Gender	N	Percent
9 th	Male	814	50.2
	Female	807	49.8
10 th	Male	705	49.9
	Female	708	50.1
11 th	Male	574	47.8
	Female	628	52.2
Total	Male	2093	49.4
	Female	2143	50.6

Ninth grade average attendance increased over two days from the 1995-1996 school year to the 1996-1997 school year. After adjusting the 1996-1997 attendance, ninth grade average attendance increased slightly. Tenth grade attendance showed marginal increase from school year 1995-1996 to school year 1996-1997. The adjusted mean score (166.71) for tenth grade decreased by a small degree from the unadjusted mean score (166.98). Eleventh grade showed a consistent increase in average attendance moving from the 1995-1996 school year to the adjusted 1996-1997 school year (See Table 3).

Table 3

Average Attendance Across All Grades

	<u>Grade 9</u>		<u>Grade 10</u>		<u>Grade 11</u>	
	M	SD	M	SD	M	SD
<hr/>						
1995-1996						
Attendance	165.49	12.69	166.16	11.45	165.77	11.60
1996-1997						
Attendance	167.82	12.35	166.98	12.80	166.30	12.60
Adjusted						
1996-1997						
Attendance	168.02	.918	166.71	-.397	166.34	-.771
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The total average attendance for school year 1995-1996 had a mean score of 165.79 compared to 1996-1997 mean score of 167.11. It is clear for school year 1996-1997 average attendance improved from the previous year (See Table 4).

Table 4

Total Average Attendance Across
All Grade Levels

	M	SD
1995-1996 Total Attendance	165.79	11.98
1996-1997 Total Attendance	167.11	12.58
Adjusted 1996-1997 Total Attendance	167.01	-.25

In order to address the first research question, three null hypotheses were investigated:

- 1a. There is no statistically significant difference among grade level (9, 10, 11 for year 1995-1996) with respect to year 1996-1997 high school attendance after adjusting for initial differences on the 1995-1996 high school attendance.
- 1b. There is no statistically significant difference between gender (male, female) with respect to year 1996-1997 high school attendance after adjusting for initial differences on the 1995-1996 high school attendance.
- 1c. There is no statistically significant interaction between grade level (9, 10, and 11 for year 1995-1996) and gender (male, female)

with respect to year 1996-1997 high school attendance after adjusting for initial differences on the 1995-1996 high school attendance.

In analyzing the total attendance by grade level and gender for 1996-1997 with the covariate being the total attendance for 1995-1996, ninth grade male students were in school more than other students in the sample. Tenth and eleventh grade males' attendance was almost the same number of days. Female students showed a steady decline in the number of days they were in school. It seems the attendance policy negatively affected female high school students to some degree more than males as indicated by observing the attendance data. Males were attended school an average of two more days than females were during the first year of the new attendance policy (See Table 5).

Table 5

Total Average Attendance for 1996-1997 by Grade Level and Gender with 1995-1996 Total Attendance as a Covariate

Grade Level	Gender	Mean	N
9 th	Male	168.21	814
	Female	167.21	814
	Total	167.83	1,621
10 th	Male	167.97	705
	Female	165.99	708
	Total	166.98	1,413
11 th	Male	167.77	574
	Female	164.97	628
	Total	166.30	1,202
Total	Male	168.01	2,093
	Female	166.23	2,143
	Total	167.11	4,236

The attendance data supplied for this study was the actual attendance records of ninth, tenth and eleventh grade high school students for school years 1995-1996 and 1996-1997. A two-way ANCOVA was employed to determine if there were differences among grade levels, between male and female (gender). The two way ANCOVA also tested for an interaction between grade level (9, 10, 11) and gender (male, female) with respect to the 1996-1997 high school attendance. The independent variables for the

ANCOVA are grade levels (9, 10, and 11) and gender (male, female). The independent variables are both on the nominal scale of measurement. The dependent variable for the ANCOVA is the 1996-1997 high school attendance. The dependent variable is on the interval scale of measurement. The covariate for this study is the total 1995-1996 high school attendance.

The analysis of covariance statistical procedure examined the attendance by grade level (9, 10, 11) and gender (male, female) with respect to the 1996-1997 attendance at a pre-established alpha level of .05. The ANCOVA summary table is shown in Table 6.

Table 6

Analysis of Covariance Source Table for Attendance

Source	SS	Df	MS	F	Sig.
Covariate	315272.3	1	315272.3	3783.4	.001
Main Effects					
Grade	2352.77	2	1176.3	14.1	.001
Gender	997.55	1	997.5	11.9	.001
2-way Interaction					
Grade	204.44	2	102.2	1.2	.293
x					
Gender					
Within	352396.06	4229	83.3		
Total	671223.15	4235	158.4		

* $p \leq .05$

The researcher hypothesized at the .05 pre-established alpha level that there would be no statistically significant difference among grade levels (9, 10, 11) for year 1995-1996 with respect to year 1996-1997 high school attendance after adjusting for initial differences on the 1995-1996 high school attendance. It is clear that this hypothesis was significant at the .05 alpha level. Therefore, it is determined that grade level had a significant main effect ($p=.001$). This significance means there were differences in the attendance among the grade levels for the 1996-1997 school year after adjusting for initial differences in the 1995-1996 attendance.

To determine where the differences are among the grade levels, a Scheffe post hoc test was employed to test for significance. All tests were conducted using the adjusted means (controlling for any differences in 1995-1996 attendance). The post hoc test for the grade level variable was tested at the pre-established alpha level of .05. Ninth grade was compared to tenth grade with a mean difference of .838 and a significance of .158 which means there was no differences between the two grade levels. When ninth grade was compared to eleventh grade, a mean difference of 1.514 appeared indicating a significant difference (.004) between the two grade levels. Tenth grade was compared to eleventh grade which

produced no significant differences (sig. .354). It is clearly noted from the results of the post hoc test that there were attendance differences only between ninth and eleventh grade (See Table 7).

Table 7

Scheffe Post Hoc Test Results by Grade

Grade Levels	MD	Sig.
9 th & 10 th	.838	.186
9 th & 11 th	1.514	.004*
10 th & 11 th	.676	.354

$P \leq .05$

After examining the results of the ANCOVA table, the researcher notes that there was a significant difference ($p=.000$) between male and female high school attendance at the .05 alpha level. Therefore, the researcher rejected the null hypothesis noting differences existing among the grade levels of high school attendance during the first year of implementation of the new attendance policy. It is further determined that gender had a significant main effect. The significance indicates that the newly adopted attendance policy may have had effect on male and female attendance.

The results of the ANCOVA showed no significant interaction ($p=.293$) between grade level and gender with respect to the 1996-1997 high school attendance. This

hypothesis was not substantiated prompting the researcher to fail to reject the aforementioned null hypothesis. Therefore, the researcher was not able to ascertain that grade level of a student combined with gender effected high school student attendance during the first year of implementation of the new attendance policy.

Attendance Survey

To address the second research question, attendance surveys were administered to a total sample of 1,800 people. The sample included 425 male high school students and 425 female high school students in grade nine, ten, eleven, and twelve. The total sample also included 850 parents identified from the selected student sample. The last group included in the survey was a sample of 100 high school teachers. The total survey sample was comprised of 20 percent of the total high school student population (4,236), parent population (4,236), and high school teacher workforce (500). See table 8.

Table 8

Total Survey Sample by Group

Participants	N
Female Students (HS)	425
Male Students(HS)	425
Parents	850
Teachers(HS)	100
Total	1800

To gather data for this study, surveys were administered to a stratified sample of identified students and teachers. Additionally, surveys were sent to parents of identified students in the survey sample. High school male students were administered 425 surveys with a return of 398(94 percent). Female students were administered the identical number of surveys (425) but surprisingly had a lower return of 317(75 percent). Parent surveys were mailed to 850 households and given a two week time period for return responses. Parent responses to the survey was extremely low (50 representing 6 percent). On the other hand, teachers' response to the survey was moderately high with 76(76%) returning there surveys (See Table 9).

Table 9

Total Surveys Issued /Returned

Participants	Issued(N)	Returned (N)	%
Students (M)	425	398	94
Students (F)	425	317	75
Parents	850	50	6
Teachers	100	76	76
Total	1800	841	47

The overall results of the survey indicated a high degree of students (26.2 percent) generally agreed to question one of the surveys that the attendance policy is necessary and needed. Parents (62.0 percent) and teachers (76.3 percent) responded overwhelmingly that they strongly agreed with question one of the survey that the attendance policy is necessary and needed. There were a small number of respondents (22.2 percent) that disagreed with question one of the survey that the attendance policy is necessary and needed.

A majority of the respondents (21.6 percent) disagreed that the attendance policy reduced the number of days students were out of school. Parent respondents (32.0 percent) differed greatly from students and teachers that the attendance policy was reducing the number of days students were out of school.

A large number of respondents (24.9 percent) agreed

with question three that the attendance policy had been fully explained to students. A large percent of parents (26.0 percent) didn't know whether the attendance policy had been fully explained to their children.

Female high school students (20.5 percent), parents (38.0 percent), and teacher (32.9 percent) felt the attendance policy had been fully explained to parents and teachers. Male high school students (27.1 percent) felt the attendance policy had not been fully explained to parents. Oddly both male and female students (27.7.6 percent) felt that parents were not keeping records of their attendance.

Students (26.6 percent) and teachers' (32.9 percent) both disagreed that the five unexcused absence rule is keeping students in school. Parent responses (32.0 percent) deviated greatly from that of the other two groups of respondents.

There were mixed feelings from the respondents about the attendance policy helping students to demonstrate responsible behavior which had a mean score 2.5 and participation in class with a mean score of 2.2. Both male and female high school students disagreed that the attendance policy had an effect on their behavior (27.7 percent) and class participation (28.8 percent). Parents, with a mean score of 3.6 for question 9 and 2.9 for

question 10, were not in total agreement. Teachers, with a mean score of 2.7 for question 9 and 2.4 for question 10 disagreed on the impact of the attendance policy on student behavior and class participation.

Thirty percent of the parent respondents strongly agreed that they assisted the school in enforcing standards of the attendance policy. In direct contrast to the parents were students (22.5 percent) and teachers (38.2 percent) who felt parents were not enforcing the standards set by the attendance policy.

Question 12 had a mean of 2.16 and a standard deviation of 1.7, which means the respondents, disagreed with the statement that the Saturday Redemptive School is meeting the needs of students. A majority of the parents (34.0 percent) surveyed strongly agreed that the Saturday Redemptive School was meeting the needs of students. The same was not true for teachers (38.2 percent) who felt that the Saturday Redemptive School was not meeting the needs of students. Male (19.1 percent) and female (30.0 percent) high school students felt they didn't know if the Saturday Redemptive School was meeting their needs. As expected, twenty eight percent of teacher respondents (28.9 percent) strongly agreed that SRS should be changed compared to a majority of the students (21.4 percent) and parent (32.0 percent) either not knowing about SRS or in

disagreement that the SRS should be changed.

Students (25.6 percent) and parents (32.0 percent) don't know whether the SRS is keeping students from failing courses due to their attendance. Teachers (22.4 percent) felt that SRS is keeping students from failing due to attendance. Interestingly, student feelings were divided on whether or not SRS was keeping students from failing courses.

Parents (32.0 percent) were the only group that felt they didn't know whether or not there was prompt communication from school regarding expectations and conferences. However, all other groups felt the opposite, meaning communication and expectations were clearly defined to students.

Teachers had to respond to two additional survey questions that linked directly to their job expectancies. As expected, a majority of teacher respondents (38.2 percent) agreed that they keep accurate attendance records. Teachers that responded to question 18 in regard to the distribution of copies of the policy and procedures had a mean score of 4.5 and a standard deviation of .64 which means that 65 percent of the respondents strongly agreed that they completed the task of distributing attendance materials to the high school students (See Table 10 and 11).

Table 10

Overall Descriptive Frequencies for Student, Parent,
Teacher Survey

Questions	N	Mean	SD
Q1	841	3.27	1.50
Q2	841	2.55	1.59
Q3	841	3.21	1.48
Q4	841	2.60	1.63
Q5	841	2.50	1.66
Q6	841	2.24	1.47
Q7	841	2.26	1.59
Q8	841	3.27	1.65
Q9	841	2.54	1.41
Q10	841	2.28	1.42
Q11	841	2.26	1.55
Q12	841	2.16	1.70

Table 11

Continuation of Overall Descriptive Frequencies for
Student, Parent, Teacher Survey

Questions	N	M	SD
Q13	841	2.53	1.80
Q14	841	2.37	1.75
Q15	841	2.44	1.60
Q16	841	2.80	1.64
Q17	76	3.64	1.02
Q18	76	4.57	.63

Seven hundred fifteen (715) students responded to the student survey, which represents a high returned rate. Of the total number of students that responded, a fairly large number of male and female students (20.3 percent) felt strongly that the attendance policy is necessary and needed. In contrast, only 5.5 percent of students surveyed didn't know whether or not the attendance policy was necessary or needed.

The researcher noted an interesting point in that there was only a slight difference between those students who agreed that the attendance policy reduced the number

of days student were out of school versus those who felt it didn't make a difference. A pocket of students (16.6 percent) felt that the attendance policy had not been fully explained to them, which may support the fact that 17.6 percent of the students surveyed felt the attendance policy didn't help students behave responsibly. However, a small percentage of students (7.4 percent) felt the attendance policy helped students participate in class.

There was an interestingly small percentage difference (1.3 percent) between students who felt the Saturday Redemptive School was meeting the needs of students. In alignment with the above thought, there was almost an even distribution between students who strongly felt (19.4 percent) Saturday Redemptive School was meeting the needs of students compared to 19.7 percent who disagreed (See Table 12 and 13).

Table 12

Overall Student Survey Responses

Questions	N	Mean	SD
Q1	715	3.10	1.46
Q2	715	2.53	1.60
Q3	715	3.17	1.44
Q4	715	2.51	1.60
Q5	715	2.54	1.66
Q6	715	2.24	1.44
Q7	715	2.21	1.51
Q8	715	3.36	1.61
Q9	715	2.44	1.40
Q10	715	2.23	1.39
Q11	715	2.28	1.54
Q12	715	2.18	1.70
Q13	715	2.47	1.78

Table 13

Continuation of Overall Student Survey Responses

Questions	N	M	SD
Q14	715	2.37	1.75
Q15	715	2.42	1.60
Q16	715	2.67	1.62

More than half of the parents (62.0 percent) surveyed felt strongly that the attendance policy was necessary and needed compared to a very small percentage (12.9 percent) that strongly disagreed. The researcher noted that 26 percent of the parents surveyed didn't know if the attendance policy had been explained to them. One fourth of the parents surveyed felt the attendance policy rule of five unexcused absences was keeping students in school.

Taking into consideration the low percentage of parent respondents (6 percent), a sizeable number (14) strongly felt they understood the attendance policy and kept records of their students' attendance.

There was almost even parent responses of those who strongly agreed that Saturday Redemptive was meeting the

needs of students versus those parents who didn't know anything about Saturday Redemptive School. The mean score for question 12 was 2.72, which means that an average of the parents responding agreed that the Saturday Redemptive School was meeting the needs of students. The researcher noted a mean score of 2.42, which equates to an average of the parent respondents disagreeing that the Saturday Redemptive School needed to be changed (See Table 14 and 15).

Table 14

Overall Parent Survey

Questions	N	Mean	SD
Q1	50	3.83	1.65
Q2	50	3.16	1.65
Q3	50	2.88	2.11
Q4	50	2.96	2.06
Q5	50	2.56	2.19
Q6	50	2.64	2.01
Q7	50	2.76	2.00
Q8	50	2.86	2.06
Q9	50	3.68	1.43
Q10	50	2.96	2.01
Q11	50	2.84	2.00
Q12	50	2.72	2.13
Q13	50	2.42	2.02

Table 15

Continuation of Overall Parent Survey

Questions	N	M	SD
Q14	50	2.54	2.07
Q15	50	2.58	1.96
Q16	50	2.94	2.07

There was a high degree of teachers (76 percent) who responded to the teacher survey. The researcher expected an overwhelmingly number of teachers (58) to strongly agree that the attendance policy was necessary and needed. The survey question had a mean score of 4.6 and a standard deviation of .881. Only 2 percent of the teachers surveyed disagreed that the attendance policy was needed. Only 6 percent of teachers surveyed felt that the attendance policy reduced the number of days students were out of school. Question 8 pointed out that 18 percent of the teachers surveyed didn't understand the attendance policy. However, the question had a mean score of 2.65 which falls within the generally agree scale.

Some of the teachers (31.6 percent) surveyed felt Saturday Redemptive School had not met the needs of students. The survey question mean score reflected the

percentage of teachers responding. Teachers' responses to question 12 matched the outcomes of question 13 in that teachers felt Saturday Redemptive School should be changed. The last two questions of the teacher survey were specific to the teachers group only because the questions tied directly in their job expectancies. The overall results to question 17 with a mean of 3.88 and 18 with a mean of 4.57 fell within the strongly agree to agree areas. To the researcher's surprise, 2.6 percent of the teachers surveyed didn't know if teachers kept accurate attendance records. As expected, all teachers' respondents agreed that teachers distributed copies of the policy and procedures to students. This survey question matched the highest response rating of the teacher survey with a mean of 4.6(See Table 16 and 17).

Table 16

Overall Teacher Survey

Questions	N	Mean	SD
Q1	76	4.67	.88
Q2	76	2.30	1.28
Q3	76	3.82	1.29
Q4	76	3.23	1.45
Q5	76	2.14	1.17
Q6	76	1.96	1.22
Q7	76	2.43	1.99
Q8	76	2.64	1.58
Q9	76	2.72	1.07
Q10	76	2.38	1.15
Q11	76	1.77	1.19
Q12	76	1.64	1.19
Q13	76	3.13	1.73

Table 17

Continuation of Overall Teacher Survey

Questions	N	M	SD
Q14	76	2.22	1.58
Q15	76	2.53	1.33
Q16	76	3.88	1.03
Q17	76	3.64	1.02
Q18	76	4.57	.63

Chi-square Analysis

To address the third research question, a Chi-square analysis was performed on data gather from Saturday Redemptive School. Saturday Redemptive School data was collected on a total sample of 549 high school students participating in the Saturday Redemptive School attendance program for the 1996-1997 school year. The sample of students of the Chi-square test was grouped by gender (male, female). Of the total sample of student participating in Saturday Redemptive School, 295 were male (53.7 percent) and 254(46.3 percent) were female (See Table 18).

Table 18

Descriptive Analysis of Total Student Sample

Frequency	Gender	Percent
295	Male	53.7
254	Female	46.3
549	Total	100

For the purpose of this study, ninth, tenth, eleventh, and twelfth grade Saturday Redemptive School participants' grade data was studied. Of the total number of students participating in Saturday Redemptive School, 272(49 percent) passed and 277(50.5 percent) failed due to student participants not redeeming absences. With this observation, it appeared that Saturday Redemptive School met about half the needs of its participants (See Table 19).

Table 19

Descriptive Analysis of Total Student Pass or Fail Rating

Rating	Frequency	Percent
Pass	272	49.5
Fail	277	50.5
Total	549	100

Chi-square analysis indicated that 154 Saturday Redemptive School male participants passed (52.2 percent) compared to 141 male participants failing (47.8 percent).

The expected count was 146.2 males passed versus 148.8 males failing. Overall, male students far exceed the expected rate of passing during the initial implementation of Saturday Redemptive School.

Surprisingly, more males failed as a result of not redeeming absences from Saturday Redemptive School than was expected.

Of the female Saturday Redemptive School participants, 118 passed compared to 136 failing. The expected count for females passing was 125.8 and 128.2 failing. It is noted that females far exceeded their expected results meaning the Saturday Redemptive School possibly could not be meeting the needs of a majority of the females participants (See Table 20).

Table 20

Total Pass or Fail by Gender

	<u>Males</u>		<u>Females</u>		<u>Total</u>	
	P	F	P	F	P	F
Count	154	141	118	136	272	277
Expected	146.2	148.8	125.8	128.8	272	277
% of count	52.2	47.8	46.5	53.5	49.5	50.5

A Chi-square nonparametric statistical test was used to determine whether the Saturday Redemptive School pass or fail grade data in the form of frequency counts was distributed differently for males or female participants. The Chi-square test analysis was employed on a sample of 549 Saturday Redemptive School high school participants. The Chi-square test results had a value of 1.80. The Chi-square test significance score was .179. Based on the pre-established alpha level of .05, the .179 was not significant. Therefore, there was not a significant difference in the pass or fail rate of male and female participants of the Saturday Redemptive School attendance program. Based on the non-significance of the Chi-square test, the Saturday Redemptive School during its first year of implementation may not have effected whether a student passed or failed due to their attendance (See Table 21).

Table 21

Chi-square Test Results for SRS Participants

χ^2	Value	Df	Asymp Sig.
Chi-square	1.80	1	.179

0 cells (.0 percent) have expected count less than 5.
The minimum expected count is 125.84.

Summary

Chapter Four presented and summarized the data gathered from a two-way analysis of covariance (ANCOVA),

surveys from students, parents, and teachers, and a Chi-square test. Research questions were clearly listed as well as corresponding null hypotheses. Specific null hypotheses were tested using a two-way analysis of covariance to determine the relationship among grade level (9, 10, 11), between gender (male, female), and to see if there was an interaction between the grade level and gender at the pre-established alpha level of .05.

A descriptive report was used to address the second research question which asked about respondents' perceptions. The descriptive report listed percent frequencies, mean scores, and standard deviation from data gathered from a survey administered to a stratified sample of high school students, parents, and teachers.

The third research question, which asked about the pass/fail rate of Saturday Redemptive School participants was addressed by using a Chi-square test. A Chi-square test was conducted on the Saturday Redemptive School grades (pass, fail rating) at the pre-established alpha level of .05. Descriptive data, mean scores, and significant relationships were reported in tables for further clarification and discussion.

The results addressed all research questions and null hypotheses, which can be utilized to determine the effect of Newport News Public Schools attendance policy and attendance program (SRS) after one year of

implementation. It can be noted that no significant interaction occurred between grade level and gender with respect to the 1996-1997 high school attendance.

A summary of the study, conclusions, recommendations, and implications for further research follow in Chapter Five.