## FACULTY APPROVAL

The Effect of School Attendance

on WASL Achievement

Approved for the Faculty

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, Faculty Advisor

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# MASTERS' PROJECT

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# **ABSTRACT**

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# TABLE OF CONTENTS

Page
FACULTY APPROVALi
ABSTRACTii
PERMISSION TO STOREiii
TABLE OF CONTENTSiv
LIST OF TABLESvii
LIST OF FIGURESviii
CHAPTER 11
Introduction1
Background for the Project1
Statement of the Problem1
Purpose of the Project2
Delimitations2
Assumptions3
Hypothesis3
Null Hypothesis3
Significance of the Project3
Procedure4
Definition of Terms4
Acronyms4

	Page
CHAPTER 2	3
Review of Selected Literature	5
Introduction	5
No Child Left Behind	5
Graduation Requirements	6
WASL	7
Absenteeism and Truancy	7
Becca Bill	8
Effects of Absenteeism	9
When is Attendance a Problem?	10
Summary	10
CHAPTER 3	12
Methodology and Treatment of Data	12
Introduction	12
Methodology	12
Participants	12
Instruments	12
Design	13
Procedure	13
Treatment of the Data	13
Summary	13

Pa	ge
HAPTER 41	4
Analysis of the Data1	4
Introduction1	4
Description of the Environment	14
Hypothesis/Research Question1	5
Null Hypothesis1	5
Results of the Study1	.5
Findings1	7
Discussion1	17
Summary1	17
IAPTER 520	)
Summary, Conclusions and Recommendations	20
Summary20	)
Conclusions20	)
Recommendations2	21
reepences 2	13

# LIST OF TABLES

Page
Table 1, $x^2$ test of $10^{th}$ grade absences and successful passage of WASL in Spring
2006
Table 2, $x^2$ test of female $10^{th}$ grade absences and successful passage of WASL in
Spring 2006
Table 3, $x^2$ test of male $10^{th}$ grade absences and successful passage of WASL in
Spring 200616

#### CHAPTER 1

#### Introduction

## Background for the Project

Student achievement and attendance have always been important issues in education. Students in Washington State were expected to pass the Washington Assessment of Student Learning in order to graduate in 2008. There has been a continued effort to find strategies that would be beneficial to student academic performance.

This rural high school met Adequate Yearly Progress in 2005. The percentage of sophomore students that passed the WASL in reading was 68.2% in 2005, which was up from 56.3% the previous year. In writing 65.4% of students passed the WASL, 44.1% passed in math, and 32.4% in science. There was an increase in the number of students that passed in all areas (OSPI, 2006).

In 2005 the high school adopted a new attendance policy. In this policy students absent more than ten days in any class would not get credit for the class unless the time was made up in Saturday School. For every hour spent in Saturday School, one absence was made up. Time in Saturday School was spent working on missing assignments. Students could also make up the time with individual teachers.

#### Statement of the Problem

The researcher wanted to study the effect of school attendance on WASL achievement. With the implementation of a new attendance policy, the problem of poor attendance became very apparent. The researcher wanted to know if

students with good attendance achieved higher scores on the WASL than students with poor attendance.

# Purpose of the Project

The researcher built a comparison between student attendance and the ability to pass the WASL. The WASL test has been set as a graduation requirement for Washington state high school students. The researcher attempted to find a relationship that would influence policies and procedures to increase students' WASL achievement.

## **Delimitations**

The high school profiled in this study was in a rural central Washington town. The high school's enrollment in October 2004 was 675, with 83.7% White, 14.4% Hispanic, 0.7% Black, 0.6% Asian, and 0.6% Indian. The special programs included 8.9% special education, 6.3% transitional bilingual, and 0.6% migrant. Free and reduced lunch was received by 25.4% of the students. The annual dropout rate in 2004 was 2.7% and on-time graduation rate was 88% ("Report Card", 2006).

The researcher conducted the research on students from a single central Washington high school. All students were from the class of 2008, these students had taken the WASL the previous year. A more reliable correlation could be found from a larger student sample collected from a variety of geographically located Washington schools. This central Washington high school used an attendance program called Skyward, which was web based. Skyward provided the

attendance records of students, but did not provide information on excused absences and other extenuated circumstances.

# **Assumptions**

Attendance in addition to achievement of the WASL test have been an on going problem for the central Washington high school where the research was conducted. A new attendance policy has been implemented at the high school that required students to attend Saturday school in order to excuse absences during the week. The assumption has been made that school attendance was strongly correlated with academic success.

# Hypothesis or Research Question

High school students with good attendance pass the WASL at a greater rate than students with poor attendance as measured by a non-parametric test of Chi Square.

# Null Hypothesis

High school students with good attendance do not pass the WASL at a greater rate than students with poor attendance as measured by a Chi Square.

# Significance of the Project

The researcher made a comparison between student attendance and ability to pass the WASL. The WASL test has been set as a graduation requirement for Washington state high school students. Any positive relationship between consistent attendance at school and WASL achievement could have impacted policies and procedures implemented by school districts.

#### Procedure

The researcher compiled attendance records of male and female students. Student attendance data from the class of 2008 were analyzed as arranged by the Skyward Attendance Program used by the school district. The program was utilized in keeping daily and yearly attendance records. The 75 male students and 49 female students from the class of 2008 were utilized as arranged by the Skyward Attendance Program. The researcher compiled WASL scores of the same students selected by the Skyward Attendance Program. Attendance and WASL achievement was measured in a non-parametric test of chi-square.

# **Definition of Terms**

<u>Skyward Attendance Program.</u> An internet based program that was used to record daily student attendance as well as grades.

<u>Saturday School.</u> A program in which students went to school on Saturday to make up for days missed during the week.

#### **Acronyms**

WASL. Washington Assessment of Student Learning

NCLB. No Child Left Behind

AYP. Adequate Yearly Progress

EALR. Essential Academic Learning Requirements

#### CHAPTER 2

#### Review of Selected Literature

## Introduction

Legislation passed at the national level have influenced educational policies and procedures at the state level. Attendance in school has been one of several areas evaluated in searching for factors affecting student academic success as measured by the WASL. Though attendance has been understood to influence student performance, little research has been conducted to make a relationship between attendance and achievement. Universities have evaluated projected student performance through high school success and entrance exams. According to Moore (2005), "high school GPA and SAT scores, did not prove to be a significant predictor of collegiate achievement" (p. 34). The following research reviewed addressed attendance as applied to student performance, absenteeism tendencies, and policies in place.

#### No Child Left Behind

President George W. Bush signed the No Child Left Behind Act (NCLB) in 2002. This act included four pillars of focus, accountability, flexibility, research based education, and parent options (OSPI, 2006). A major part of the accountability piece was Adequate Yearly Progress (AYP). Each state developed a definition of AYP in 2003 ("Key policy letters.", 2006). In Washington State that included the WASL which was in uses since 1993. In order to make AYP students needed to show growth in WASL scores from year to year in reading and

mathematics. Another indicator for AYP in high schools was on-time graduation rate ("What is AYP?", 2006).

## **Graduation Requirements**

The Office of the Superintendent of Public Instruction (OSPI) in Washington State has implemented four requirements for high school graduation scheduled to begin with the 2008 graduation class. The first requirement was for Washington students to have developed a plan to meet high school graduation requirements. The plan must have connected high school classes needed in preparation for the student's future plans from college to the workforce. (2007)

The second Washington State high school graduation requirement was "students pass a required number of classes and earn credits in English, mathematics, science (including one lab), social studies, health and fitness, visual or performing arts, occupational education and electives" (OSPI, p. 2, 2007) Each school district determined the number of credits required.

The third Washington State high school graduation requirement was for students to have earned a Certificate of Academic Achievement or Certificate of Individual Achievement (OSPI, 2007). A Certificate of Academic Achievement could be earned by a student after completing the tenth grade Washington Assessment of Student Learning (WASL) in reading, writing, and math at a level 3 or 4. A Certificate of Individual Achievement could have been obtained by special education students through a portfolio.

The final graduation requirement was for Washington high school students to have created a culminating project. The focus of the culminating project was for students to make a connection between what the students have gained through high school education and what was to be expected in the future (OSPI, 2007). WASL

The WASL was implemented in 1993 in response to Washington State's Education Reform Law. The law required the state to assess all public school students including those with disabilities. The assessment needed to be administered annually and measured the state's learning standards. The assessment also needed to serve as a basis of accountability for students, schools, and districts. The WASL also met the requirements of the federal NCLB law which went into effect in 2002 (OSPI, 2007).

The WASL tested the standards contained in the EALR's in reading, writing, mathematics, and science. Questions on the WASL included multiple-choice, short-answer, and essay questions. The WASL was scored by Washington educators and was monitored by a testing contractor. Students were scored in reading, math and science by a machine on multiple choice questions. All openended questions were scored by trained raters using specific scoring criteria. Students performance was reported as Advanced (Level 4), Proficient (Level 3), Basic (Level 2) and Below Basic (Level 1). Students who scored a Level 1 or Level 2 did not pass. Students who scored a Level 3 barely met the standard, and students who scored a Level 4 have exceeded the standard (OSPI, 2007).

## Absenteeism and Truancy

Absenteeism and truancy have been a major concern for those involved in the educational system. Evidence has shown the practice of truancy and absenteeism

among students began with increasingly younger students (Reid, 2005). Reid (2005), attempted to explain why students missed school and evaluated the factors that contributed to absenteeism and truancy.

The main causes of truancy were: "the influence of friends and peers, relations with teachers, the content and delivery of curriculum, family aspects, bullying, and classroom aspects" (Reid, p.59, 2005). The researcher also included a list of twenty-one predetermining factors to student's absenteeism. Among the top of the list were: "having been severely punished recently, having been excluded, moody or tearful, gone up or down a year and having moved to a school mid-year through" (Reid, 2005).

## Becca Bill

The Becca Bill was a truancy petition process. As mentioned by *the truancy petition*, "School shall inform parents in writing or by phone of the potential consequences of additional unexcused absences" after the first unexcused absence (2007). After the second unexcused absence in a month, the school was required to conference with parents in an effort to reduce absences. When the absences continued to five unexcused absences in one month, the school was required to: enter into an agreement with the students and parents establishing attendance requirements, refered student to community truancy board, or the district filed a petition (*the truancy petition*, 2007).

When the previous steps failed, the court system ordered the student to take a number of steps in an attempt to return the student to regular school attendance. Failure of the student to comply with the court order resulted in the district's

notification of the court. When the court has been notified of such actions, the court "may: order student to report to county detention, impose alternatives to detention such as community service, or order parent(s) to perform community service or pay fine up to 25 dollars a day for each unexcused absence" (*The truancy petition*, p.1, 2007).

## Effects of Absenteeism

The following research illustrated a strong correlation between class performance and attendance. Moore implemented four different attendance policies for four different sections of a Biology course. All sections of the course received instructions in regards to students being expected to attend class in addition to the instructor informing the students of a strong correlation between attendance and class performance.

The following alterations took place between the four sections of the course. No additional emphasis on attendance and no penalty for absences were given for the first section of the course. No additional emphasis on attendance, and penalty for absences were given to the second section. The third section received additional emphasis on attendance with no penalty for absences. The forth section had additional emphasis on attendance and penalty for absences (Moore, 2005).

The third and forth sections of the class received slightly lower absences. Further investigation took place in regards to the correlation between attendance and student grades. Moore explained, "Students who earned A's had the highest average rates of attendance. Students who earned lower grades had progressively lower rates of attendance" (2005).

Moore also addressed the pattern of attendance among students. "Attendance rates were high for the first two to three weeks of the semester, after which it gradually declined throughout the remainder of the term" (Moore, 2005).

When is Attendance a Problem?

Silvestri designed a correlative study to find the relation between 277 preservice teachers' attendance in methods classes and the students' grades over a three semester grading period. Silvesrti assumed, "attendance in class is related to commitment to school" (2003).

After attendance and grades were collected, the researcher continued to evaluate the data by separating students who had missed less than four days of class and students who missed four or more. Silvestri found, "there is a relation between absences and final grades. Apparently subjects were able to miss up to three classes before their semester grade was affected" (2003).

Gump (2005), found significant data in a similar study comprised of three hundred students enrolled in Introduction to Japanese Culture. The researcher found average final grades decreased consistently as absenteeism increased.

Gump (2005) also revealed as class sizes increased, so did absences.

# **Summary**

With legislation passed and state requirements set, student success has continued to be a focus of research. Students and education have made many changes in the past. This would imply continued research focused on correlations between achievement of students and affecting factors. Several studies have been done at the college level where attendance was not usually assigned a point value.

Few studies have been conducted to establish a correlation between high school attendance and test performance.

#### **CHAPTER 3**

# Methodology and Treatment of Data

## Introduction

The researcher found a need to find the relationship between student attendance and performance on the WASL test. The researcher utilized a Chi Square test to find a relationship between student attendance and the ability to pass the reading, writing, and math portions of the WASL.

## Methodology

The researcher used a descriptive research method. First, data was collected from the 2006 math, reading, and writing WASL results. Next, the researcher looked through attendance records for each student that had taken all three sections of the WASL. The researcher recorded whether the student had less than 10 absences or more than 10 absences. Finally, the data was recorded into tables and a test of  $x^2$  was conducted with .05 set as the level of significance.

# **Participants**

The participants in the study consisted of all students who took the reading, writing, and mathematics WASL during 10<sup>th</sup> grade in the year 2006. The total number of students tested was 124. The total of female students was 49. The total of male students was 75.

#### **Instruments**

The researcher required a number of instruments to conduct the research. The first instrument was the WASL results provided in the form of an Excel spreadsheet provided by the Washington school district's curriculum office for the

year 2006. Another instrument that was used was the attendance records of all students provided by the Skyward program. The researcher also used a computer to record data using Microsoft Excel, and StatPak software to conduct a test of  $x^2$ .

## **Design**

The researcher designed the study around existing WASL results and attendance records. The data collected was used to compare WASL scores with the number of school absences.

#### Procedure

The researcher began the study by collecting WASL data for the year 2006.

Next, the researcher separated the students by sex and entered each student's name into a Microsoft Excel spreadsheet. The student's WASL scores and attendance records were then added to the spreadsheet. Separate tables were then created for males, females and total students. The researcher counted the number of students with 10 or less absences and whether the students passed or failed the WASL, and the numbers were then entered in the table.

#### Treatment of the Data

The researcher used StatPak software to complete a  $x^2$  to find significance between attendance of male and female students in a rural, central Washington high school and tendencies of the same students in passing the WASL.

#### **Summary**

The researcher used 10<sup>th</sup> grade WASL data for the year 2006 along with attendance records to find a relationship between WASL achievement and number of absences.

#### **CHAPTER 4**

## Analysis of the Data

## Introduction

The author was aware that the class of 2008, as a graduation requirement, needed to pass the WASL. The author decided to determine if student attendance had an effect on a student's ability to pass the WASL by conducting a study.

## Description of the Environment

The high school profiled in this study was in a rural central Washington town. The high school's enrollment in October 2004 was 675, with 83.7% White, 14.4% Hispanic, 0.7% Black, 0.6% Asian, and 0.6% Indian. The special programs included 8.9% special education, 6.3% transitional bilingual, and 0.6% migrant. Free and reduced lunch was received by 25.4% of the students. The annual dropout rate in 2004 was 2.7% and on-time graduation rate was 88% (OSPI, 2006).

The researcher conducted the research on students from a single central Washington high school. All students were from the class of 2008; the students had taken the WASL the previous year. A more reliable comparison could be found from a larger student sample collected from a variety of geographically located Washington schools. This central Washington high school used an attendance program called Skyward which was web based. Skyward provided the attendance records of students, but did not provide information on excused absences and other extenuated circumstances.

# Hypothesis/Research Question

High school students with good attendance pass the WASL at a greater rate than students with poor attendance as measured by a non-parametric test of Chi Square.

# Null Hypothesis

High school students with good attendance do not pass the WASL at a greater rate than students with poor attendance as measured by a Chi Square.

## Results of the Study

Table 1  $x^2$  test of  $10^{th}$  grade absences and successful passage of WASL in Spring 2006

Absences	Level 1 & Level 2 (not passing)	Level 3 & Level 4 (passing)
0-10	16	37
11+	35	36

df= 1 
$$x^2 = 7.0921$$
 p<.01

The null hypothesis was rejected. Tenth grade students with absences less than 10 during the year showed greater success in passing the WASL in Spring 2006 than students with eleven or more absences as measured by x2.

Table 2 x<sup>2</sup> test of female 10<sup>th</sup> grade absences and successful passage of WASL in Spring 2006

Absences	Level 1 & Level 2(not passing)	Level 3 & Level 4 (passing)
0-10	8	12
11+	12	17
df=1	$x^2 = 1.6621$	p>1.0

The null hypothesis was accepted. Tenth grade female students with absences less than 10 during the year did not show greater success in passing the WASL in Spring 2006 than those females with eleven or more absences as measured by chi square.

Table 3 x<sup>2</sup> test of male 10<sup>th</sup> grade absences and successful passage of WASL in Spring 2006

Absences	Level 1& Level 2 (not passing)	Level 3 & Level 4 (passing)
0-10	8	25
11+	23	19
······································		

df=1 
$$x^2 = 8.0762$$
 p<.01

The null hypothesis was rejected. Tenth grade male students with absences less than 10 during the year showed greater success in passing the WASL in Spring 2006 than males with eleven or more absences as measured by  $x^2$ .

## **Findings**

Given the analysis of the data and the testing of the null hypothesis or, a limited number of findings become apparent. The author found significance in the Chi Square for combined male and female students who have missed ten or less days of school in the school year and the tendencies of passing the WASL. Evidence supported male and female students who missed ten or fewer days of school had a significantly better chance of passing the WASL.

The researcher also found through a Chi Square female students who missed ten or fewer days would have no better chance of passing the WASL than females who missed eleven or more days. Though when females were combined with male students, findings showed significance in students' abilities to pass the WASL when ten or fewer days were missed through out the school year. The researcher found significant data to show male students who had missed ten or fewer days had a better chance of passing the WASL.

## Discussion

Statistical significance was found in the Chi Square test where male and female students were combined and when male students were separated from the female students. Significance was not found for female students who missed ten or less days and their ability to pass the WASL over female students who missed eleven or more days.

#### Summary

The author found a need to establish a correlation between student attendance and student tendencies to pass the WASL. The researcher found statistical significance for male students and combined male and female students who missed fewer than eleven days of school to have a significantly better chance to pass the WASL. Significance was not found for female students who missed ten or fewer and the female's ability to pass the WASL.

Fifty-three of the 124 male and female tenth grade students had missed ten or fewer days of school. Of the 53 students, 16 students did not pass the WASL. Thirty-seven of the students who did not miss more than eleven days did pass the WASL. Of the seventy-one students who missed more than eleven days of school, thirty-five did not pass the WASL. The other 36 students who missed eleven or more days of school did pass the WASL. Statistical significance was found for male and female students who missed ten or fewer days and the tendencies to pass the WASL.

Twenty of the 49 female students recorded ten or less missed school days. Of these students, eight students did not pass the WASL. The other twelve female students who missed 10 or more days did pass the WASL. Twenty-nine female students did miss eleven or more school days. Twelve students did not pass the WASL from this group. Seventeen females from this group did pass the WASL. Findings showed no significance between female students who missed fewer than ten days and the ability to pass the WASL. Statistical significance between female students and the ability to pass the WASL in relation to attendance was not found.

Seventy-five tenth grade male students were utilized in a Chi Square to find significance between attendance and tendencies to pass the WASL. Thirty-three of the male students had fewer than eleven absences. Of the 33, 8 students did not

pass the WASL. The other 25 male students who did not miss ten or more days did pass the WASL. Forty-two male students did miss eleven or more days. Twenty-three of these students did not pass the WASL. The other 19 male students did pass the WASL. Statistical significance was found for male student who missed fewer than eleven days and ability to pass the WASL.

The researcher found support for the hypothesis among male tenth grade students and combined male and female tenth grade students. The  $x^2$  scores showed a relationship between attendance of male and female students and tendencies to pass the WASL. Although significance was found for female students when combined with males, no significance was found for female students who missed 10 or fewer days and the tendencies to pass the WASL.

#### **CHAPTER 5**

# Summary, Conclusions and Recommendations

#### Introduction

The researcher found a need to find a relationship between student attendance habits and tendencies of passing the WASL. The researcher began the study to provide students, parents and educational professionals with information on the importance of consistent student attendance. The information drawn from the research would also be utilized to support current attendance policies.

## **Summary**

The author began the study in an effort to find a relationship between student attendance and WASL achievement. The researcher hoped to find that students with better attendance did better on the WASL. The researcher collected data from the 10<sup>th</sup> grade WASL taken in 2006 as well as attendance records for the same year.

The researcher found a significant relationship between school attendance and WASL achievement in the whole group. When the students were divided by sex, only the males showed a significant relationship.

#### Conclusions

The researcher found that as a group, the students studied showed a significant relationship between student attendance and WASL achievement. Students with 10 absences or less were more likely to pass all three sections of the 10<sup>th</sup> grade WASL than those students with 11 or more absences. The data from the study supported the school attendance policy which allowed 10 absences.

#### Recommendations

The rural high school where the research was conducted had a ten absence maximum. Students who exceeded the ten absence maximum were required to attend Saturday school to make up for additional days absent. The researcher believes the policy is strengthened by the previous study, but would be interested in knowing the purpose behind the students' absences. A study could be done in reference to the purpose for the absences and the effect on the students' ability to pass the WASL. Research could be conducted to differentiate between an absence due to a student being truant and an absence due to a student attending an off campus school function or traveling overseas. Additional research could be conducted to find the difference in effect between student and parent views on the importance of school attendance. Does this have an affect on their ability to pass the WASL? Reid, (2005) noted:

One of the key issues when considering 'school absenteeism' and 'truancy' is to understand correctly the meaning and definition of the terms. This is not quite as simple as it sounds. There are various types of school absenteeism. They include specific lesson absence, post-registration absence, parentally condoned absence, psychological absence, school refusal absence and school phobia. This is where the 'problem' begins. For some, specific lesson absence, post-registration absence and parentally condoned absence are not truancy. For others they are, and are often re-titled specific lesson truancy. For some, 'absent without good reason' can be equated with truancy. For others, having a reason for the absence – for example, being a parentally condoned absentee – means by definition that this form of behavior is not truancy.

Another question the researcher would like to have answered is, does the absence effect specific disciplines more than others and is the effect different for different grade levels? The researcher also would like to conduct a similar study

consisting of students who have received the same instruction, but vary in the student attendance habits. Additional studies could be measured to find the effect of absence by measuring class performance rather than the standards based WASL test.

The effect of attendance on student performance has been conducted in a number of researches, but primarily at the University level. The previous study showed the effect of student attendance on the performance of a standards based test. A number of variations could be applied to this research. Although Reid, (2005) found "there is very little evidence on the relationship between ethnicity and non-attendance" (p. 59). The study was performed on University age students and ethnicity at the high school level could be a topic to research.

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