SCHOOL ATTENDANCE RELATIONSHIP TO STUDENT ACHIEVEMENT ON STATE STANDARDIZED TEST

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Abstract

This research was conducted to see if there was a relationship between school attendance and student achievement. The study looked at 69 fourth graders in an urban elementary school. The research findings answer the question, “Does school attendance relate to student achievement as perceived on the Communication Arts MAP test and the Math MAP test scores?”

The research was conducting by doing a correlation analysis on the students’ school attendance percentage for the 2012-2013 school year and their 2013 Communication Arts MAP test scores and their 2013 Math MAP test scores. The results of this study show that there is a positive relationship between school attendance percentages and student achievement based on the Communication Arts MAP test and the Math MAP test. The conclusion based on this research is that school attendance has a significant effect on student achievement. Therefore, school districts should further educate their parents and community on the importance of regular attendance. There should also be a better form of tracking chronically absent students and providing support of them.
Introduction

Background, Issues and Concerns-

Standardized tests have been used to determine the level of achievement of a school district for several years. School districts are judged based on the performance of students on the test and consequently rewarded or reprimanded for their performance. This is now trickling down to each and every teacher. With the new teacher performance based evaluation, students’ performance on the standardized test will play a part in the teacher’s evaluation. On top of that, there is ever present pressure to base a teacher’s salary based on these evaluations. Therefore, there is great concern as to how to help students meet the state’s standards as laid out on these tests.

School districts and teachers have been basing their decisions on curriculum, time spent on each subject, and teaching methods to further enhance each student’s performance on the test. With every school district doing as much as they can to help students succeed, there is also concern as to how the parents and students can help themselves succeed. One of these ways is attendance. The concern that the students who miss school also do not do as well on the standardize test is something that has been on the mind of many school districts. Therefore, in this study the relationship between student attendance and student achievement based on their state standardized test scores will be evaluated.

Practice under Investigation

The practice under investigation is good attendance equates to higher student achievement.
School Policy to be Informed by Study

The Compulsory Attendance Law in Missouri states that a child in between the age of 7 and 17 should attend school regularly. The school district handbook states that regular school attendance is necessary. It also states that excessive absences from school could have a negative effect on a student’s academic progress and social growth. These statements in the school district’s handbook will be informed by the study.

Conceptual Underpinning

Attendance has been a topic of interest for quite awhile in the education world. With all schools trying to meet federal mandated results on standardized assessments and End-of-Course exams, the pressure to get children to school and keep them there has increased. This is based off of the theory that the best place for a child is in school where he/she will be learning while there. Therefore, if the child is at school, he/she is improving their skills and will have higher student achievement. Missouri’s Compulsory Attendance Law Section 167.031, RSMo, states that any parent, guardian or other person having custody or control of a child between the ages of seven (7) and the compulsory attendance age for the district, must ensure that the child is enrolled in and regularly attends public, private, parochial school, home school or a combination of schools for the full term of the school year. It further states that a parent, guardian or custodian of a child or children who do not regularly attend school may be reported to the Department of Social Services, Children's Division, or to the county prosecutor's office. A violation of the compulsory attendance law is a class C misdemeanor. This law is further evidence that it is believed that it is extremely important for students to be at school where they are furthering their education.
Attendance is required for each child so that they may have an even playing field in the area of student achievement.

As stated above, school is believed to be the best place for a student. There is also a belief that students who have higher school attendance also have higher scores on the standardized tests. Therefore, one could say that better school attendance leads to higher student achievement. A study by Balfanz and Byrnes (2012) supports this theory by reporting that school attendance strongly affects standardized test scores and graduation and dropout rates. The study further enhances the idea that a student needs to be in school to be able to better their student achievement. This is something that has been encouraged by the state, district, and teachers throughout the United States by different laws and incentives to be in class. Students who are absent are believed to never regain what they missed during a lesson. Therefore, attendance is encouraged and needed for student achievement.

Statement of the Problem

If attendance does improve student achievement, the students and parents need to be educated so they have a renewed commitment to being at school.

Purpose of the Study

The purpose of this study is to determine if attendance affects student achievement.

Research Question

Is there a correlation between school attendance and student achievement?
Null Hypothesis

There is no correlation between school attendance and student achievement.

Anticipated Benefits of the Study

The anticipated benefit of the study is to be able to conclusively determine whether attendance correlates to student achievement. If it does, the school district would be able to educate parents on the importance of their child being at school.

Definition of Terms

Chronic absenteeism: Chronic absenteeism is a student who misses 10% or more of the school year with excused or unexcused absences.

MAP: MAP is the Missouri Assessment Program.

Standardized Tests: Standardized tests are same tests given in the same manner to test takers.

Summary

The study will compare Fourth grade students in an urban school district. Their performance on the Communication Arts MAP test and the Math MAP test will be compared to their overall school attendance for the year. Student achievement in this study will be determined
by their test scores on the Communication Arts MAP test and the Math MAP test. Through this study, the correlation between student achievement and school attendance will be determined. If the study finds that student achievement and school attendance relate, the correlation will help the school district decide on a course of action to improve school attendance in upcoming years.
Review of Literature

Compulsory education laws date back to 1642 when the Massachusetts Bay Colony first enacted this type of law (Katz, 1976). This shows that starting from an early time in our country that school attendance has been important. According to DESE (Department of Elementary and Secondary Education), Missouri passed the State Compulsory School Attendance Law in 1903. This law states that “a child between the ages of seven (7) and the compulsory attendance age for the district, must ensure that the child is enrolled in and regularly attends public, private, parochial school, home school or a combination of schools for the full term of the school year.” (dese.mo.gov, 2013, para. 1) As one can see compulsory school attendance laws have been around for a very long time. With the ever present focus nowadays on improving student achievement; school attendance has been viewed as a possible solution to the achievement gap. This review will focus on how school attendance is defined, the best practices of school attendance, and research on how school attendance relates to student achievement.

As stated above, school attendance is when a child regularly attends a public, private, parochial school, home school, or combination based on the Compulsory School Attendance Law in Missouri (dese.mo.gov, 2013). According to the Random House Dictionary, attend means to be present at. Being present is a much larger issue than most people think. According to the National Center for Children in Poverty research released in 2008, one in 10 kindergarten and 1st grade students misses at least a month of school every year (“Attendance is,” 2009). When a child this age misses 10 percent (nearly a month) of school, this is considered chronic early absence (“The High,” 2008). This chronic absenteeism can have a negative effect on student achievement.
When a student misses enough school to be considered chronically absent, it has negative effects on their achievement. According to research in Kuwait by Al-Shammari (2011), attendance is a fundamental factor in enhancing student achievement in learning settings. For example, a student who is chronically absent in kindergarten demonstrates lower academic performance than their peers in 1st grade (Chang, 2010). In other research by Gottfried and the Society for Research on Educational Effectiveness (2009), Attendance was found to be positively and significantly related to student performance in Louisiana’s public elementary and secondary schools. Absenteeism has a greater effect on students from poor families. These families are generally not able to help their own children when they have missed school so the student falls further behind. Research shows that students from poor families who miss in kindergarten predict the lowest level of achievement at the end of fifth grade (Chang and Romero, 2008). Chronic early absenteeism is also an early warning sign of academic risk and school dropout in later years (Bruner, Discher, & Chang, 2011). On another side, we usually think of absenteeism only affecting the student that is absent but that is not the case. According to Chang & Romero (2008), it adversely affects the other students in the class because it causes the teacher to reteach subjects. Research has shown many times that absenteeism does affect student achievement.

The research has shown that student achievement lacks when a child misses school. There are ways for schools, school districts and states to help the plight to increase attendance. The daily routine in elementary schools is to have attendance taken at the beginning of the day and to go on with the day. The question is posed; what can we do to further support students who are chronically absent? The first step is for school districts to commonly define chronic absenteeism and then make an effort to track each student’s daily attendance (“The High,” 2008).
Then, educating parents and students about the importance of being in school and making sure every absence receives a response (Chang, 2010). Another key aspect to improving attendance is finding the root of the problem as to why the student isn’t making it to school; Chang (2010) states that often chronic absenteeism is tied to poverty where families don’t have reliable transportation, little access to health care, unstable housing or no housing at all. These areas are a great opportunity for the school, parents, and community to work together to provide some of these resources the student is lacking. Chronic absenteeism does not only affect the particular student but can end up affecting so many more people. Research by Kane found that older students who were chronically absent have higher dropout rates, antisocial behaviors, and unemployment rates (as cited Gottfried, 2009, p. 5). This shows that chronic absenteeism doesn’t only affect the student but can affect the entire community and economy. Finally, chronic absenteeism also affects those children who attend regularly due to the teacher spending more time catching up the students who have missed substantial amount of school (Chang & Romero, 2008). Chronic absenteeism is shown to have negative effects on student achievement for the student and other negative effects on other students and the community; therefore, it would be beneficial for the state to also push for regular attendance. The imperative move of increasing attendance is a group effort by the school, parents, and community.
Research Methods

Research Design

This research design was a correlation study to determine the relationship between school attendance and student achievement as seen on test scores from the Communication Arts MAP test and Math MAP test. The dependent variable is the Communication Arts MAP test scores and the Math MAP test scores. The independent variable is the school attendance percentage. The Alpha level was set at 0.25 for all tests in the study. The correlation study will evaluate if there is a relationship between school attendance and student achievement in this study.

Study Group Description

The study group consists of 69 fourth grade students at an urban school district. This school district consists of three high schools (9th-12th graders), four middle schools (6th-8th graders), and nineteen elementary schools (Kindergarten-5th grade). Based on recent demographic data found on Missouri Department of Elementary Secondary Schools’ website, the school district serves 13,937 K-12 students. Furthermore, 68.5% of students in the school district qualify for Free or Reduced Lunch and the district’s graduation rate was 77.10% in 2013. The urban school had an ethnicity break down of 9.9% Black, 11.3% Hispanic, and 69.4% White population.
Data Collection and Instrumentation

Data was collected by retrieving the percentage of absences for each fourth grade student at an urban school district during the 2012-2013 school year and then comparing it to each student’s 2013 Communication Arts MAP test scores and Math MAP test scores.

Statistical Analysis Methods

A Statistical Package (ASP) was used to calculate the statistics in this study. The statistical analysis method used was a Correlation Analysis comparing the two variables. The independent variable is the students’ attendance or percentage of absences for the school year. The dependant variable is the students’ score on the Communication Arts MAP test and the Math MAP test. The alpha level was 0.25.
Findings

One of the elementary schools’ entire fourth grade was used for this study. Through the correlation analysis, the following tables and narratives decipher the relationship between the students’ school attendance and their student achievement based on their Communication Arts MAP test scores and Math MAP test scores.

Table 1: Correlation Study School Attendance vs Communication Arts MAP test scores

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>r</th>
<th>R²</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>School Attendance</td>
<td>69</td>
<td>97.4%</td>
<td>0.14</td>
<td>2%</td>
<td>0.25</td>
</tr>
<tr>
<td>CA MAPscores</td>
<td>69</td>
<td>2.57</td>
<td>0.14</td>
<td>2%</td>
<td>0.25</td>
</tr>
</tbody>
</table>

Note significance = or < .25

As shown in Table 1, Pearson correlation was calculated examining the relationship between School Attendance percentages and Communication Arts test scores. A weak positive correlation that was significant and not practical was found ($r = 0.14, R^2 = 2\%, p = 0.25$). School attendance is weakly related to the Communication Arts MAP test scores. Even though it is a weak relationship, school attendance does have a significant impact on the Communication Arts MAP scores. The results of the study show that the $r$ value is a positive value. This means that the relationship between school attendance percentages and Communication Arts MAP test scores relate to one another. Therefore, when the school attendance percentages go up the Communication Arts MAP test scores would go up as well. This is the meaning of having a positive correlation. Also, the results of the study show that the correlation was significant. This
is determined by comparing the p-value to the alpha level. The p-value was 0.25 which is equal to the alpha level (0.25) which results in a significant correlation between school attendance percentages and Communication Arts MAP test scores.

### Table 2: Correlation Study School Attendance vs Math MAP test scores

<table>
<thead>
<tr>
<th>N</th>
<th>Mean</th>
<th>r</th>
<th>R²</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>69</td>
<td>97.4%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>69</td>
<td>2.36</td>
<td>0.23</td>
<td>5%</td>
<td>0.06</td>
</tr>
</tbody>
</table>

Note significance = or < .25

As shown in Table 2, Pearson correlation was calculated examining the relationship between School Attendance percentages and Math MAP test scores. A weak positive correlation that was significant and not practical was found ($r = 0.23$, $r^2 = 5\%$, $p = 0.06$). School attendance is weakly related to the Math MAP test scores. Even though it is a weak relationship, School Attendance percentage rate does have a significant impact on the Math MAP test scores. The results of the study show that the r value is a positive value. This means that the relationship between school attendance percentages and Math MAP test scores relate to one another. Therefore, when the school attendance percentages go up the Math MAP test scores would go up as well. This is the meaning of having a positive correlation. Also, the results of the study show that the correlation was significant. This is determined by comparing the p-value to the alpha level. The p-value was 0.06 which is less than the alpha level(0.25) which results in a significant correlation between school attendance percentages and Math MAP test scores.
Conclusions and Recommendations

The null hypothesis in this study stated that there was no correlation between school attendance and student achievement. The results of the study showed that there is, in fact, a correlation between school attendance and student achievement. When looking at the Communication Arts MAP test scores, it weakly related to the school attendance. During the correlation analysis for the Communication Arts MAP test scores and student attendance, the $r = 0.14$ which means that there is a weak, positive relationship. Also when looking at the Math MAP test scores, it was weakly related to the school attendance as well. During the correlation analysis for the Math MAP test scores and the student attendance, the $r = 0.23$ which means that there is a slightly stronger, positive relationship between the two items. This positive relationship means that whenever a student’s school attendance percentage goes up, their test scores go up as well. It also means that if the student’s school attendance percentage goes down, then their test scores go down as well. Therefore, during this study it was proven that school attendance does play a significant role in both the Communication Arts MAP scores and the Math MAP scores.

The research of this study further back up the theory that the best place for a student is at school. States have required regular student attendance throughout their history showing that the government felt that it was important for students to further enhance their education by attending schools. The research results from this study show that it truly does make a difference on a student’s achievement by regularly attending school.

After conducting this study, there are quite a few things that could have been done differently. A further study that could be conducted would be taking the same data from all of the intermediate grades in the school, instead of just the fourth grade, and seeing if the results came up the same. A study could also be performed on all of the fourth graders in the school
district to see if the results stayed the same. Finally, another study that could be performed over a few years is to track the same students with their school attendance percentages and their MAP test scores throughout the grades that the MAP test is administered. This would show if a student is chronically absent in one grade, does it continually affect their student achievement or just affect it for the one year. These are a few different studies that could further enhance the current study.

After concluding this research, it could be concluded that school attendance does relate to school achievement. Therefore, districts need to be taking the steps to further enhance the attendance of students. As stated before, this can be done by educating the parents on how important regular school attendance is to their child’s level of academic achievement. Schools need to be keeping track of those students who are chronically absent and give them extra support. Finally, schools need to work with parents and the community to get resources for those families who have students who are chronically absent so that their main focus can be on attending school. Educating everyone will be the important factor on improving school attendance and therefore, improving student achievement.
References


