STUDENT ACHIEVEMENT IN A FOUR DAY SCHOOL WEEK VS. FIVE DAY SCHOOL WEEK

By

COURTNEY SCHREIER

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The Educational Leadership Faculty
Northwest Missouri State University Missouri
Department of Educational Leadership
College of Education and Human Services
Maryville, MO 64468

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Abstract

This study was completed to see if there was a difference in student achievement in a four day school week compared to a five day school week. Several different factors are discussed in relation to a four day school week. The findings of this study show that students in a four day school week achieved higher on the MAP test than students in a five day school week. This information could be useful for schools looking at transitioning to a four day school week or schools that are deciding whether or not to stay with a four day school week schedule or go back to a traditional five day school week.
Introduction

Background, Issues and Concerns

Traditionally, a school year consists of 174 days and 1,044 hours. For many different reasons, a lot of school districts are transitioning or considering transitioning to a four day school week. A four day school week should consist of 142 days and 1,044 hours. Many people have concerns about the four day school week, but one of the biggest concerns deals with student achievement. There is concern that students are not going to achieve as well with only going to school four days a week.

Practice under Investigation

The practice under investigation is the length of the school week. With so many schools transitioning to a 4 day school week, concern is rising in which situation students will perform and achieve best in. There will be a study to determine whether students achieve better in a four day school week or a five day week.

School Policy to be Informed by Study

This study will inform teachers/administrators whether students achieve better in a four or five day school week.

Conceptual Underpinning

The traditional school calendar consists of a 5 day school week. In Missouri, the traditional school year consist of 174 days and 1,044 hours. A 4 day school week only
has 142 days and has 1,044 hours in Missouri. School districts are looking for ways to save money while still maintaining student achievement. Transitioning to a four day school week is one way that school districts are doing that. Along with financial advantages, there are several reasons why transitioning to a four day school week would be beneficial. A decrease in absences among teachers and students is an advantage that should be taken into consideration (Donis-Keller, Silvernail, 2011; Chamberlin & Plucker, 2003). When students have to miss school for a dentist appointment, they miss information in class. While having a day off each week, parents can schedule students’ appointments so that no school is missed. It is also said that there is a decrease in disciplinary actions with students (Donis-Keller & Silvernail, 2011). If the number of disciplinary reports is lower, then more time is spent on class work. Student achievement is ultimately the goal of any educator. Although students will be going to school one less day, they will still be attending the same number of hours. With fewer absences and disciplinary reports within a four day school week, there is no reason why students should not achieve just as well, if not better, than a five day week.

Statement of the Problem

There is a high amount of controversy behind the decision of whether or not schools should transition from a traditional five day school week to a four day school week. Although there are many financial, student, parent and teacher advantages to a four day school week, stakeholders are concerned that students may not achieve as well in a four day school week than they would in a five day school week.
Purpose of the Study

The purpose of this study is to determine whether student achievement differs between students participating in a four day school week from students participating in a traditional five day school week.

Research Question

RQ 1: Is there a difference in student achievement between students in a four day school week in comparison to those in a five day school week?

Null Hypothesis

There is no difference in student achievement between students participating in a four day school week and students in a traditional five day school week.

Anticipated Benefits of the Study

From doing this study, school districts who are debating on whether or not to make the transition to a four day school week will benefit. This study will show the difference in student achievement, if any, from students who are participating in a four day school week compared to those in a five day school week.

Definition of Terms

- Traditional school year- 5 day school week; in Missouri the school year consists of 174 days and 1,044 hours.
• 4 day school week- classes are only held 4 days a week; in Missouri the school year consists of 142 days and 1,044 hours

• MAP-Missouri Assessment Program, standardized test

• DESE- Department of Elementary and Secondary Education, resource for Missouri teachers

Summary

This topic was chosen because so many schools are transitioning to the 4 day school week. There is a common curiosity to know if going to a 4 day school week would affect student performance and achievement. MAP scores were compared from a school that recently transitioned to a four day school week to determine if student achievement was effected. Upon completion of this study, the findings may be utilized in helping school districts decide if transitioning to a four day week is right for them.
Review of Literature

Four day school weeks seem to be becoming more common yet still under great debate. In the past, it has been rural school districts that have transitioned to a four day school week for one reason or another but now that trend may be changing. School districts are transitioning for many different reasons with the biggest reason being the foreseeable financial advantages a four day school week could possibly bring. For whatever reasons a district transitions to a four day school week, the main focus still remains student achievement; will students perform and achieve as well in a four day school week?

There are multiple models of a four day school week. The three primary models are:

- 4 day week in winter months only
- 4 day week every other week
- 4 day week during the entire school year (Donis-Keller & Silvernail, 2011).

Donis-Keller & Silvernail (2009) state, “Most of the school districts that have implemented four-day school weeks take either Monday or Friday off, but do so at different intervals and for different reasons” (p. 3). Districts looked at different activities that were going on during the week to determine what day to take off; for instance, a lot of schools chose to have Monday off because many times the school gymnasium needs to be lit and heated on Friday nights to accommodate for sports and activities.

In the varying four day models, the use of the fifth day varies depending on the district. Some districts are simply closed on the fifth day while others use the day for extracurricular activities, enrichment activities, or professional development for teachers.
Parents often schedule doctors’ appointments or other appointments that would have caused students to miss school in a five day school week on the day that students have off which prevents students from being absent.

Brad MacLaughlin, a four day school week superintendent stated, “We used Mondays as opportunities for learning. The last Monday of each month was a professional development day for teachers to work with their vertical and horizontal curriculum teams, meet to discuss student data and generate individual success plans for students, among many other opportunities” (B. MacLaughlin, personal communication, June 19.2013). MacLaughlin also added, “Several students used the other Mondays as learning opportunities as well. We provided transportation and meals for a comprehensive tutoring program during that time. We also offered a fully licensed day care option for parents that included lessons and meals” (B. MacLaughlin, personal communication, June 19.2013).

As with everything, there are both advantages and disadvantages to the four day school week. One of the main reasons that a lot of districts have transitioned to a four day school week, or are considering it, is because of the foreseeable financial savings. “Anticipated savings are typically in transportation, food and food service staff, hourly staff, as well as facilities energy costs and substitute pay” (Donis-Keller & Silvernail, 2011, p. 5). Research shows that “the average district could produce a maximum savings of 5.43% of its total budget by moving to a four day week” (Griffith, 2011, p.1).

Although the teachers’ salaries will not be reduced, the instructional costs can be reduced by decreasing the number of substitute teachers that are needed. With teachers
being able to schedule appointments on the fifth day that they don’t have school, they miss fewer days of school resulting in fewer substitute teachers (Griffith, 2011).

Maintenance and operations costs can be reduced by transitioning to a four day school week. If a school can go without its maintenance staff on its “off” day, they can save in this area, but most schools continue to keep the maintenance staff at five day schedules or lengthen their hours on a four day schedule (Griffith, 2011).

Transportation is another area where districts can save. Transportation costs could be reduced up to 20%, but most districts see less. Some schools can cut out transportation all together on their off day, but most schools continue to have some kind of transportation for students for extracurricular activities or other educational programs that may be taking place (Griffith, 2011; Dam, 2006; Chamberlin & Plucker, 2003).

Food service is also an area where school districts can save money if they transitioned to a four day school week. If school is closed one day of the week, that is one day that food does not have to be provided to students; therefore one day that the cooks do not have to be there and get paid (Griffith, 2011; Dam, 2006; Chamberlin & Plucker, 2003).

The four day school week also shows more flexibility for scheduling. For example, if school is cancelled due to snow, the days can be made up without having to change the original ending date for school. With this, when school is made up on the schools’ “off” day, students are gaining the knowledge they need before standardized testing takes place in the spring instead of after in a traditional school calendar (Anderson & Walker, 2012).
Another positive factor that four day school districts have seen is a decrease in absences among students and teachers (Donis-Keller & Silvernail, 2011; Chamberlin & Plucker, 2003). Having a day off during the week allows parents of school aged children to schedule appointments that keep their child from missing school, and the same for teachers. This prevents students from missing work in their classes that would have been missed in a traditional five day school week. Along with a decrease in absences, schools have also reported a decrease in disciplinary reports with students (Donis-Keller & Silvernail, 2011). With their being fewer disciplinary incidents, students and teachers have fewer distractions during lessons which makes for a better learning environment.

Fewer absences and fewer disciplinary reports are two things that could affect students’ performance and achievement, which is the biggest concern to stakeholders. Donis-Keller & Silvernail (2011) state, “Critics worry that the reduction in instructional days will negatively affect student learning” (p. 7). On the Missouri Department of Elementary and Secondary Education website (2013), it is stated, “each school board shall prepare a calendar for the school term, providing a minimum term of at least one hundred seventy-four days for schools with a five-day school week or one hundred forty-two days for schools with a four-day school week, and one thousand forty-four hours of actual pupil attendance” (para. 2). Regardless of the number of days school is in session, the number of hours that students must be in attendance is the same in both a four day school week and a five day school week. Mary Gregoski (2004) states, “schools using the four day school week add time to the school days to comply with their state’s education requirements” (p. 7). Class times are lengthened for students allowing teachers
to have more in depth lessons that reach all learning styles in the classroom and allow
time for students to work on homework assignments with a teacher nearby for needed
help.

Although student achievement in the four day school week is what stakeholders
are concerned with, there is limited research that has been conducted in this area. Some
school districts that are participating in a four day school week have kept track of some
data within their own districts. “In Merryville, Louisiana, ACT scores were above the
state average and continued to rise from 18.7 to 20 over the four years that the school was
on the four day week” (Gregoski, 2004, p. 8). It was noted that, “overall, students on the
four-day school week scored at least as well as students on a traditional five-day week”
(Hewitt and Denny, 2011, p. 26). “The general feeling is that students do no worse on
the four-day week than on the traditional schedule” (Dam, 2006, p. 8).

There are very different opinions on the subject of four day school weeks. Some
parents have major concerns with child care. With most parents working, it is sometimes
difficult to find a babysitter for one day a week (Dam, 2006). After being on a four day
schedule for one year, Amanda Bertz said, “My kids are motivated and more willing to
get up in the morning and go to school with the four day school week. It’s less of a
struggle this year than it was last year, they just don’t seem to mind going” (A. Bertz,
personal communication, June 13, 2013). Christy Rasa, a parent of a high school student,
says, “As a parent, I love the four day school week. I think it gives the kids a little bit of
a break. I feel like they get more accomplished during the day in a four day week and
spend less time on homework giving them time to be kids” (C. Rasa, personal
communication, June 13, 2013).
Research Methods

Research Design

MAP test scores were utilized in this study. The last year of a 5 day school week and the first year of a 4 day school week scores was compared to determine which schedule students perform and achieve better in. The independent variable used in this study was 4 or 5 day school week and the dependent variable was the MAP test scores.

Study Group Description

The information that was collected came from a rural Midwestern school district. In 2011, 95.4% of the students in the district were white. The percentage of students who received free or reduced lunch (as of 2011) was 33.8%.

Data Collection and Instrumentation

A superintendent of a rural Midwestern school district was contacted and asked if test scores from the last year of a five day school week and the first year of a four day school week could be compared. Test scores were analyzed and a t-test was conducted.

Statistical Analysis Methods

The information collected to determine student achievement in both models was put into Microsoft Excel. The information was analyzed through the ASP program using a t-test.
Findings

A t-test was conducted to determine whether there was a difference in student achievement in a four day school week in comparison to a five day school week. The MAP test scores come from 2010 and 2011 from the Lathrop school district. 2010 scores were from the last year the district was in a five day school week and 2011 scores were from the first year of a four day school week. The following table and graph show the findings based on the information collected from the Lathrop school district.

The above table shows a comparison of achievement levels within the four day school week and five day school week. A t-test was conducted to determine in which schedule students achieved the best in.
t-Test Analysis Results for MAP scores from a 5 day school week vs. a 4 day week

<table>
<thead>
<tr>
<th>Source</th>
<th>Mean</th>
<th>Mean D</th>
<th>t-test</th>
<th>df</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 day week (n=83)</td>
<td>3.65</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 day week (n=71)</td>
<td>3.79</td>
<td>-0.14</td>
<td>-1.16</td>
<td>152</td>
<td>0.248</td>
</tr>
</tbody>
</table>

Note: Significant when p<=0.25

The number of student scores that were analyzed in the five day school week was 83. The number of student scores that were analyzed in the four day school week was 71. Students scored an average of 3.65 in a five day school week on the MAP test. In a four day school week, the average of student scores was slightly higher at 3.79. The Mean D or difference between the average scores was -0.14. The t-test value was -1.16. The df or degree of freedom was 152. The p-value was 0.248 while the alpha level was 0.25.

The null hypothesis stated that there was no difference in student achievement between students participating in a four day school week and students in a traditional five day school week. However, the null hypothesis was rejected because the p-value was less than the alpha level. Students that participated in a four day school week scored better on the MAP test than students that participated in a five day school week. Students achieve higher in a four day school week.
Conclusions and Recommendations

The findings from this study report that students achieved higher in a four day school week setting than in a five day school week. The study shows that there is a significant difference in student achievement in the four and five day school week. When a t-test was conducted, the average score for the first year was 3.65 while the average for the second year was 3.79. The p-value was 0.248 with an alpha level of 0.25. The null hypothesis said that there was no significant difference in student achievement in a four day school week compared to a five day school week. Students in a four day school week achieved higher scores on the MAP test in comparison to students in a five day school week.

With the advantages that a four day school week bring, it is not surprising that students perform better in the four day school week. With fewer absences, students missed school less which means they miss less work in their classes. There were also fewer disciplinary actions that were reported. With teachers spending less time redirecting students and dealing with discipline problems, they can focus more on teaching which in turn benefits student achievement.

Further studies could be done to determine if students continue to achieve higher in a four day school week. With the four day school week becoming more common, studies could be continued to determine if student achievement continued to be higher in a four day school week.

The different four day school week models could be analyzed to determine in which model students achieve the highest. There are various models that could be used in a school setting. In each of these models, there are various factors to consider that
could affect student achievement. Student achievement is ultimately the main goal of any schedule that is used.
References


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