HB

21

<TARGET><BILL>HB 21</BILL><SUBJECT>HB
21</SUBJECT><COMM>HEDC28</COMM></TARGET>

ALASKA STATE LEGISLATURE

Interim:
P.O. Box 109
Wrangell, AK 99929
Phone: (907) 874-3088
Fax: (907) 874-3055

Session:
State Capitol, Room 406
Juneau, AK 99801-1182
Phone: (907) 465-3824
1-800-686-3824
Fax: (907) 465-3175

REPRESENTATIVE PEGGY WILSON
HOUSE DISTRICT 33

SPONSOR STATEMENT
HB 21

"An Act relating to the length of a school week; and providing for an effective date."

HB21 would allow a pilot program for one rural school district to implement a 4 day school week.

There is continued concern of poor student performance in our schools. We should be actively seeking alternative solutions that may improve district results. There are over 22 states in the US that have implemented a 4 day week in rural districts.

For most schools this has been a positive achievement - increased morale for students and teachers, reduced absenteeism and allowing teachers and students to have more direct contact time which then leads to better understanding of educational materials.

Provisions in HB 21 require the district to show that the majority of the community, students and teachers support the implementation of this program. Additionally, the district will have to prove that the students are receiving the equivalent of a 5 day school week. They will also be required to file quarterly reports to the Department of Education on student and teacher performance and the effect of the program. Specifically an annual report will be required to be submitted to the legislative education committee on the progress and performance ratings from the school district. This report will be due no later than January 15th and must include a comparison of the performance ratings before and after implementation of the 4 day week.

This bill is specific for a 3 year pilot program; at the end of that time period, the State Board of Education will evaluate the program and determine if it is beneficial to the district.

Fiscal Note

State of Alaska
2013 Legislative Session

Bill Version: HB 21
Fiscal Note Number:
() Publish Date:

Identifier: HB021-DOA-DRB-2-11-13
Title: FOUR-DAY SCHOOL WEEK
Sponsor: ** P.WILSON, T.WILSON
Requester: House Education

Department: Department of Administration
Appropriation: Centralized Administrative Services
Allocation: Retirement and Benefits
OMB Component Number: 64

Expenditures/Revenues

Note: Amounts do not include inflation unless otherwise noted below. (Thousands of Dollars)

	FY2014 Appropriation Requested	Included in Governor's FY2014 Request	Out-Year Cost Estimates				
OPERATING EXPENDITURES	**FY 2014**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**
Personal Services							
Travel							
Services							
Commodities							
Capital Outlay							
Grants & Benefits							
Miscellaneous							
Total Operating	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Fund Source (Operating Only)							
None							
Total	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Positions							
Full-time							
Part-time							
Temporary							
Change in Revenues							

Estimated SUPPLEMENTAL (FY2013) cost: 0.0

Estimated CAPITAL (FY2014) cost: 0.0

ASSOCIATED REGULATIONS

Does the bill direct, or will the bill result in, regulation changes adopted by your agency? No
If yes, by what date are the regulations to be adopted, amended or repealed?

Why this fiscal note differs from previous version:

Not applicable, initial version.

Prepared By:	Jim Puckett, Director	Phone:	(907)465-4471
Division	Division of Retirement and Benefits	Date:	02/11/2013 08:21 AM
Approved By:	Curtis Thayer, Deputy Commissioner	Date:	02/11/13
	Department of Administration		

FISCAL NOTE ANALYSIS

STATE OF ALASKA
2013 LEGISLATIVE SESSION

BILL NO. HB021

Analysis

HB 21 has no fiscal or actuarial impact on the Teachers' Retirement System (TRS) or the Division of Retirement and Benefits. However, this bill as currently drafted may negatively affect service accrual for teachers working a four-day school week who do not work at least 172 days out of the school year. TRS statutes AS 14.25.220(45) and AS 14.25.590(28) define a year of service to mean 172 days or more. Teachers working less than 172 days earn a fraction of a year of service, not a full year. It is our understanding school districts have school years about 36-38 weeks now. If a school district did not add weeks to their school year, a teacher working only 4 days a week could earn as little at 0.8 of a school year as the number of days could be as 152. Teacher's working longer school days do not accrue additional service credit as service is credited based on days worked.

Fiscal Note

State of Alaska
2013 Legislative Session

Bill Version: HB 21 (N)
Fiscal Note Number:
() Publish Date:

Identifier: HB021-EED-TLS-2-7-13
Title: FOUR-DAY SCHOOL WEEK
Sponsor: ** P.WILSON, T.WILSON
Requester: House Education Committee

Department: Department of Education and Early Development
Appropriation: Teaching and Learning Support
Allocation: Student and School Achievement
OMB Component Number: 2796

Expenditures/Revenues

Note: Amounts do not include inflation unless otherwise noted below. (Thousands of Dollars)

	FY2014 Appropriation Requested	Included in Governor's FY2014 Request	Out-Year Cost Estimates				
OPERATING EXPENDITURES	**FY 2014**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**
Personal Services							
Travel							
Services							
Commodities							
Capital Outlay							
Grants & Benefits							
Miscellaneous							
Total Operating	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Fund Source (Operating Only)							
None							
Total	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Positions							
Full-time							
Part-time							
Temporary							
Change in Revenues							

Estimated SUPPLEMENTAL (FY2013) cost: 0.0

Estimated CAPITAL (FY2014) cost: 0.0

ASSOCIATED REGULATIONS

Does the bill direct, or will the bill result in, regulation changes adopted by your agency? No
If yes, by what date are the regulations to be adopted, amended or repealed?

Why this fiscal note differs from previous version:

Initial version

Prepared By:	Les Morse, Deputy Commissioner	Phone:	(907)465-8691
Division	Commissioner's Office	Date:	02/07/2013 02:30 PM
Approved By:	Mike Hanley	Date:	02/07/13
	Commissioner		

FISCAL NOTE ANALYSIS

STATE OF ALASKA
2013 LEGISLATIVE SESSION

BILL NO. HB21

Analysis

No fiscal impact to the department.

Section 1
This legislation relates to allowing one school district in the state to pilot a four day school week for three years. The request would come from the governing body of the local school district within 30 days after the effective date, and notwithstanding the requirements of AS 14.03.030 and 14.03.040, which outline the requirements for the length of a school year and school day. The legislation requires the governing body of the district to provide evidence to the State Board that students will receive the equivalent of a five day school week that students, teacher and the community were involved in the decision to make the request, and that public comment supports the request. The district is required to submit quarterly reports to the department regarding the effects on teacher and student performance and file annual reports with the legislative committees whose primary responsibility is education.

The State Board of Education & Early Development may approve the four-day school week for not more than one school district.

Section 2
This legislation repeals the act on June 30, 2018.

Section 3
The effective date of this act is July 1, 2013.

Andrew Young School of Policy Studies
Research Paper Series

Working Paper 12-06
February 2012

Department of Economics
W.J. Usery Workplace Research Group

Does Shortening the School Week Impact Student Performance? Evidence from the Four-Day School Week

D. Mark Anderson
Montana State University

Mary Beth Walker
Georgia State University

Georgia State University | Andrew Young School of Policy Studies

W.J. Usery Workplace Research Group Paper Series

Working Paper 2012-2-1
February 2012

Does Shortening the School Week Impact Student Performance? Evidence from the Four-Day School Week

D. Mark Anderson
Montana State University

Mary Beth Walker
Georgia State University

This paper can be downloaded at: http://aysps.gsu.edu/uwrg-research.html

Georgia State University | Andrew Young School of Policy Studies

Does Shortening the School Week Impact Student Performance? Evidence from the Four-Day School Week

D. Mark Anderson
Department of Agricultural Economics and Economics
Montana State University
dwight.anderson@montana.edu

Mary Beth Walker
Andrew Young School of Policy Studies
Georgia State University
mbwalker@gsu.edu

February 2012

Abstract

Public schools face difficult decisions on how to pare budgets. In the current financial environment, school districts employ a variety of policies to close budget gaps and stave off teacher layoffs and furloughs. An increasing number of schools are implementing four-day school weeks hoping to reduce overhead and transportation costs. The four-day-week policy requires substantial schedule changes as schools must increase the length of their school day to meet state-mandated minimum instructional hour requirements. Although some schools have indicated that this policy eases financial pressures, it is unknown whether the restructured schedule has an impact on student outcomes. In this study, we use school-level longitudinal data from the state of Colorado to investigate the relationship between the four-day school week and academic performance among elementary school students. We exploit the temporal and spatial variation in the four-day school week using a difference-in-differences empirical strategy. Our results suggest that student academic achievement has not been hurt by the change in schedule. Instead, the evidence indicates that the adoption a four-day school week shares a positive and often statistically significant relationship with performance in both reading and mathematics; the math results in particular are generally robust to a range of specification checks. These findings have policy relevance to the current U.S. education system, where many school districts must cut costs. The four-day school week is a strategy currently under debate.

"There's no way a switch like that wouldn't negatively affect teaching and learning."
-Tim Callahan, spokesman for the Professional Association of Georgia Educators (*Wall Street Journal*)

"We took our budget savings and plowed it right back into instructional content."
-Riley Ramsey, Webster County, Kentucky school district director of personnel and technology (*TIME Magazine*)

1. Introduction

A surprising number of schools have changed from the traditional Monday through Friday school week to a four-day-week schedule. This policy has been in place for many years in rural school districts in western states such as Colorado and Wyoming and it appears to be spreading, with school districts from Oregon to Missouri to Florida currently considering it.[1] Although there are alternative ways to implement the policy, typically the four school days are lengthened in order to meet state-mandated minimum instructional hour requirements.[2]

The motivation for the schedule change is most often stated as financial, with savings related to transportation and overhead costs. For example, Kentucky's Webster County school district reported substantial savings on transportation, utility, and insurance costs after adopting a Tuesday through Friday schedule (Kingsbury 2008). The shortened week has helped the Peach County, Georgia school district decrease spending on custodial and cafeteria workers in addition to transportation expenditures and utilities (Herring 2010).[3]

This policy change yields a number of implications that should be evaluated to understand the cost/benefit impact of the four-day week. For example, how much does a four-

[1] Newspaper articles from the Tampa Bay Times (December 18, 2011), the NewsPress NOW in St. Joseph, Missouri (December 25, 2011), and the Seattle Times (December 27, 2011) describe the current public discussion of a proposed schedule change.

[2] Generally, no classes are held on Friday; however, a small minority of schools operating on the four-day week take Monday as their day off.

[3] For additional evidence on financial savings, see Blankenship (1984) and Grau and Shaghnessy (1987).

day week actually affect school expenditures? If school buildings and gymnasiums are opened on Fridays to accommodate extra activities (e.g. athletic events), cost savings could be modest.[4] How do teachers react to a four-day schedule, is there less turnover, increased teacher satisfaction? Spillover effects on communities could also be present; teens out of school on Friday might engage more in crime or other risky behaviors.

Finally, and perhaps more critical than the aforementioned issues is the question of the effect on student achievement. How do students fare under the altered schedule? Anecdotally, results and opinions are mixed. Some educators and parent groups complain the shorter week harms students academically (Herring 2010), while others have reported higher grade-point averages and test scores after switching to the shortened week (Toppo 2002; Turner 2010). Some accounts indicate that savings on transportation and utilities costs have been redirected to instructional uses (Kingsbury 2008). Interestingly, the empirical research on the four-day week generally supports the notion that student achievement is not adversely affected by the alternative schedule.[5] This research is entirely descriptive in nature, however, and often consists of case studies focusing on only one or a few school districts. There has been no research on the relationship between the four-day school week and academic performance that incorporates more rigorous controls for potentially confounding factors.

This study estimates the impact of the four-day school week on student achievement using 4th grade reading and 5th grade mathematics test scores from the Colorado Student Assessment Program (CSAP). Over a third of school districts in Colorado have adopted the

[4] If buildings are closed and placed on a weekend cycle, then savings equivalent to a three-day weekend are possible. However, it is often the case that buildings are kept open for extra activities and for staff use (Dam 2006).

[5] Daly and Richburg (1984), Sagness and Salzman (1993), Feaster (2002), Lefly and Penn (2009), and Hewitt and Deny (2011) found little evidence that the four-day week had an impact on test performance. On the other hand, McCoy (1983), Grau and Shaughnessy (1987), and Yarborough and Gilman (2006) found some evidence of higher test scores.

four-day schedule. Our primary empirical strategy is a difference-in-differences estimation that exploits the temporal and spatial variation in the adoption of four-day-week schedules. Our results suggest that student academic achievement has not been compromised by the change in schedule. Instead, the evidence indicates that the adoption of a four-day school week shares a positive and often statistically significant relationship with performance in both reading and mathematics; the math results in particular are generally robust to a range of specification checks.

These findings have clear policy relevance to the current situation in the U.S. education system, where many school districts must find ways to cut costs but, of course, do not want to hamper student achievement. An important caveat is that our results speak only to impacts for smaller and more rural districts; a wider adoption of the policy across more densely populated areas would be required to allow a broader understanding of the effects.

The remainder of this paper is organized as follows: Section 2 provides background information, including a description of the adoption of the four-day week in Colorado, a review of the relevant academic literature, and a brief discussion on the possible advantages and disadvantages of the policy; Section 3 describes the data; Section 4 lays out the empirical strategy; Section 5 discusses the results; Section 6 concludes.

2. Background

2.1 Background of the Four-Day Week

It is reported that school districts in South Dakota in the 1930s were the first to use a four-day-week schedule (Donis-Keller and Silvernail 2009). It was not until the energy crisis of the early 1970s, however, that the shortened school week gained popularity (Ryan 2009). As

transportation and utilities costs dramatically increased, schools in Maine, Massachusetts, New Jersey, New Mexico and Washington experimented with the four-day week (Gaines 2008; Donis-Keller and Silvernail 2009).[6] Schools in Colorado began adopting four-day weeks following the legislature's decision in 1985 to alter the minimum school year requirement from 180 days to 1080 hours for secondary schools and 990 hours for elementary schools (Dam 2006).[7] This change allowed schools to meet the minimum instructional hour requirements by increasing the length of their school day and shortening their days per week.

As of 2008, as many as 17 states have school districts operating on a four-day-week schedule (Gaines 2008).[8] The four-day week is currently most prevalent in Colorado, New Mexico, and Wyoming (Dam 2006; Darden 2008). In Colorado, over 60 of the 178 school districts utilize a four-day week.[9] This constitutes over 30% of the school districts in Colorado but only about 3% of the state's student population is covered by the alternative schedule, reflecting the fact that most four-day-week schools are in rural and sparsely populated districts (Lefly and Penn 2009).

A 2010 survey conducted in Colorado by the Department of Education solicited information from school administrators who had applied to either switch their school's schedule to a four-day week or to renew their current four-day-week status. The results are tabulated in

[6] Cimarron School District in New Mexico has the longest history of the four-day-week schedule; they switched to the shortened week in 1973-1974 and have used it consistently since (Feaster 2002).

[7] Although most of the schedule changes occurred after this amendment, some schools were allowed to pilot the four-day week prior to 1985 (Dam 2006).

[8] See Gaines (2008) for a list of these states. In addition, Hawaii recently implemented 17 mandatory "Furlough Fridays" for state public schools and the Peach County district in 2010 was the first in the state of Georgia to switch to the four-day week (Herring 2010).

[9] All four-day schools in Colorado regularly hold school on Tuesday, Wednesday, and Thursday. The majority of these schools conduct no class on Friday, but some choose Monday as their day off (Dam 2006). The change to a four-day week usually occurs at the district level; however, there are a few Colorado districts that have individual schools, but not the entire district, on the shortened week (Lefly and Penn 2009).

Table A1; more than two thirds of the respondents stated that financial savings were a motivation for the altered schedule, with another third citing community support.

2.2 Advantages and Disadvantages of the Four-Day Week

There are a host of possibilities that could allow for a changed weekly schedule to affect student achievement. First, consider how teachers might respond to the changed schedule. It has been conjectured that longer class periods give teachers flexibility to organize particular lessons more effectively and incorporate more varied teaching methodologies (Rice et al. 2002). Yarbrough and Gilman (2006) reported that teachers claimed the four-day week cut out wasted time and forced them to focus their instruction more successfully. Durr (2003) found that teachers actually reported covering more content under the shortened school week. In some districts, the day off is devoted to teacher planning and enhances faculty collaboration (Yarbrough and Gilman 2006). An additional teacher effect could be reduced turnover and absenteeism; teacher turnover has been shown to have an impact on student achievement gains (Ronfeldt et al. 2011). While it is unclear whether the four-day week has reduced turnover, many school districts have reported fewer teacher absences after switching to the alternative schedule (Chamberlain and Plucker 2003). Lastly, a different effect could be that teachers are happy with the four-day weeks, and this leads to higher productivity while on the job. This would be in accordance with the literature from psychology on the relationship between the four-day workweek and employee satisfaction (Baltes et al. 1999).[10]

Although the four-day school week might lead to teacher effects that improve student achievement, potential drawbacks exist. Critics note that teachers could initially face difficulties

[10] It has also been shown that the compressed workweek can lead to decreased employee absenteeism (Pierce et al. 1989).

adapting their lesson plans to the change of schedule (Chamberlain and Plucker 2003). A survey from an Idaho school district indicated that 24% of teachers reported greater stress and fatigue due to the longer school days under the shortened week (Sagness and Salzman 1993).

From the standpoint of the students, a four-day week might lead to better attendance and anecdotal evidence suggests this is the case (Toppo 2002; Kingsbury 2008; Turner 2010). Not surprisingly, higher student attendance has been associated with better performance on standardized tests (Ehrenberg et al. 1991). It has also been reported that students are less distracted, exhibit improved morale, and behave better on the shortened weekly schedule (Koki 1992; Shoemaker 2002; Dam 2006; Donis-Keller and Silvernail 2009). All of these factors have the potential to improve academic performance.[11] In addition, students with long commutes might fare better on a schedule with fewer trips (Ryan 2009).

On the other hand, the four-day school week has potential disadvantages from a student perspective. For example, some worry that it is more difficult for students to retain subject matter when given an extra day off (Gaines 2008). Perhaps the biggest concern is that the longer school day requires extended focus and attention, and this could be especially relevant for younger students (Dam 2006; Gaines 2008; Ryan 2009).[12]

Aside from the possible advantages and disadvantages listed above, there are several reasons why the alternative schedule might actually increase the total amount of instructional time students receive. First, the shortened school week gives parents the opportunity to schedule medical and other necessary appointments on their school's day off instead of on a regular

[11] Sixty-three percent of 4th through 7th graders from the Shelley School District in Idaho reported that they felt they "learned more in school" after their district switched to the four-day school week (Sagness and Salzman 1993).

[12] Some schools have helped elementary students adjust to the longer school days by providing breakfast and serving lunch later in the day (Hazard 1986).

school day (Grau and Shaughnessy 1987). This has the potential to reduce student absenteeism and is particularly important for those who live in rural communities where long travel distances for appointments are common (Richberg and Sjogren 1983; Dam 2006).[13] Second, travel for sporting events results in missed school time for student athletes. The four-day school week alleviates absenteeism in this regard as many schools schedule athletics and other extra-curricular activities on their day off (Dam 2006).[14] This is less relevant for our study, however, because we focus on the academic performance of elementary school students. Lastly, the four-day schedule permits flexibility in the event of weather-related school cancellations; schools can reschedule missed days without increasing the length of the school year (Donis-Keller and Silvernail 2009). This is important for our research because the CSAP tests are administered during the spring. As a result, if school is cancelled due to winter weather, then students will generally make up lost time before taking the standardized tests rather than after.[15]

Although the data used in this study do not allow us to identify the mechanisms through which the changed schedule may affect academic performance, it is useful to delineate the possibilities in the hopes that future research can confirm or reject these hypotheses.

2.3 Relevant Literature on School Schedule Changes

While none of the schedule changes that have been rigorously empirically scrutinized match precisely with the schedule change created by the four-day school week, there are at least three relevant areas of inquiry. First, some research deals with block-scheduling, the reallocation

[13] The same argument applies to teacher absenteeism. Decreases in teacher absenteeism have been reported as a source of financial savings in terms of substitute teacher costs (Grau and Shaughnessy 1987).

[14] This is especially relevant for rural areas because students at these schools are more likely to participate in school-sponsored sports activities than students who attend urban schools (Lippman et al. 1996).

[15] One school district estimated that students were in school approximately one week more per year after switching to the four-day school week (Richburg and Sjogren 1983).

of fixed amounts of classroom time into longer blocks for some subjects. Implemented at the high school level, the block schedule is designed to allow for more variety in instructional formats, encourage more active teaching strategies, decrease disruptions during the school day, and ultimately better prepare students for college work (Rice et al. 2002; Hughes Jr. 2004). This educational policy change is appealing because overall class hours are not increased, so that no new resources are required. However, the evidence is mixed regarding the ability of block scheduling to enhance student performance (Rice et al. 2002; Hughes Jr. 2004).

Second, other research has examined the impacts of year-round schooling.[16] Similar to students on the four-day school week, students at year-round schools are typically expected to receive the same amount of instructional time as students on traditional schedules. This alternative school calendar simply consists of a set number of instructional hours spread over the entire year. While past reviews of the research on year-round schooling are inconclusive (Merino 1983; Cooper et al. 2003), recent work by Graves (2010, 2011) indicates the year-round calendar may have detrimental effects on academic performance.[17]

Lastly, a number of studies have investigated the effects of an overall increase in instructional time (see, e.g., Brown and Saks 1986, 1987; Link and Mulligan 1986; Coates 2003; Marcotte 2007; Marcotte and Hemelt 2008; Bellei 2009).[18] Generally, this research suggests that

[16] Related to research on year-round schooling, others have examined the effects of mandatory summer schooling on subsequent achievement. For example, Matsudaira (2008) uses a regression discontinuity design based on cutoff scores on year-end exams to show small improvements in academic performance for those attending summer classes.

[17] Graves (2010, 2011) specifically focuses on multi-track year-round school calendars. These calendars have the potential to mitigate school overcrowding by serving more students within the same facility than is possible under traditional or single-track year-round calendars.

[18] Along these lines, research has also considered the effects of full-day as opposed to half-day kindergarten (DeCicca 2007; Cannon et al. 2011).

a positive relationship exists between instructional time and academic achievement, and that instructional time is subject to diminishing returns.

3. Data

3.1 Data on Test Scores

We use test score data from the Colorado Student Assessment Program (CSAP) to measure student performance.[19] The CSAP tests are administered each spring and every public school student within specified grades is required to take the exams.[20] The tests are graded based on one of four possible achievement levels: unsatisfactory, partially proficient, proficient, and advanced. Our measures of interest are the percentage of students scoring proficient or advanced in reading and the percentage of students scoring proficient or advanced in mathematics.[21] These measures represent some of the achievement benchmarks used to evaluate school performance under No Child Left Behind (NCLB).

In particular, we focus on 4th grade reading and 5th grade mathematics scores. These data are reported consistently over time and represent the longest time-series of available test scores for Colorado public schools. Currently, students in grades 3 through 10 are required to complete the reading and math assessments; but this was not always the case. In 1997, the reading exam was only taken by students in the 4th grade. For math, the exams were first administered in elementary schools in 2001 to 5th grade students. In addition, because there are many more

[19] These data are publicly available from the Colorado Department of Education.

[20] Schools are required to administer the tests during the period beginning on the second Monday in March and ending on the third Monday in April. Additional details on the test schedules are available at http://www.cde.state.co.us/cdeassess/co_law.html#Bullet3.

[21] Although not our primary focus, we also consider results for all four possible test outcomes (see Table 6).

elementary schools than middle or high schools, these data are perhaps the most appropriate for examining the causal effects of the four-day week on student achievement. Our final data set consists of a school-level panel for the periods 2000-2010 and 2001-2010 for reading and mathematics, respectively.[22]

Table 1 provides descriptive statistics for the test scores. A comparison of sample averages for schools on four-day-week schedules to those for schools on traditional schedules indicates that schools on the four-day week have lower percentages of 5th graders scoring proficient or advanced in mathematics. The mean percentage of 4th graders scoring proficient or advanced in reading is also slightly lower for schools on the four-day schedule, but this difference is not statistically significant.

Table 2 illustrates test score results for the schools that changed their schedules to the four-day week during our sample period. For the 5th grade math and 4th grade reading samples we observe 14 and 17 schedule changers, respectively. We report means for the percentage of students scoring proficient or advanced for the two years prior to the schedule change, the year in which the schedule change took place, and the two years after the schedule change. Figures 1 and 2 plot the means from Table 2. In addition, these figures also plot means for the schools in our control group (i.e. schools on traditional schedules). We randomly assigned a year of a schedule change to these schools.[23] For both math and reading, test scores appear stable for the control group for the pre- and post-schedule change periods. However, for schools that switched to a four-day week, there is a discrete increase in the percentage of students scoring proficient or

[22] We do not present reading results for the period 1997-2010 because some of the covariates were not available for the late 1990s. However, it should be noted that results from models with school and year fixed effects for the period 1997-2010 are similar to those presented below.

[23] In each figure, a vertical line distinguishes the years before the schedule change from the year of the schedule change and the years after the schedule change.

advanced in math during the year in which the schedule change took place. For reading scores, there also appears to be a discontinuous increase in performance for the four-day-week schools, but this occurs one year after switching schedules.

3.2 Covariates

Table 1 also shows descriptive statistics for the remaining variables used in this paper. The independent variable of interest is the *Four-Day Week* indicator. The Colorado Department of Education provided the majority of information on school schedules and the timing of schedule changes. For the few cases where schedule information was incomplete, we contacted school districts individually to fill in the missing data.

At the county level, we control for the percent living in poverty and population density.[24] Given that four-day-week schedules are implemented primarily for financial reasons in rural areas, these variables are of particular importance.

We also control for several variables measured at the school district level. Instructional expenditures per student are included as a standard input to the education production function.[25] Other district-level controls include the percentage of teachers who are male, the percentage who are white, and the percentage who are Hispanic.[26] These demographic characteristics vary across districts and are likely to be correlated with unobservables that influence academic outcomes.[27]

---

[24] More specifically, the poverty measure represents the percentage of people aged 0 to 17 in families living in poverty. This variable was imputed for 2010. The poverty and population density data are from the U.S. Census Bureau.

[25] The literature on the relationship between expenditures and student performance is extensive. For examples, see Hanushek (1986), Dolan and Schmidt (1987), Lopus (1990), and Papke (2005).

[26] All district-level data are from the Colorado Department of Education.

[27] Some research suggests that teacher demographic characteristics such as gender and race directly influence student achievement (Dee 2005; Hoffman and Oreopolous 2009).

Lastly, we control for the following school-level variables: total enrollment, pupil-to-teacher ratio, percentage of students who receive free lunch, percentage of students who are white, and percentage of students who are Hispanic.[28] While the county- and district-level variables control for important time-varying characteristics, the school-level variables perhaps better capture environmental factors that impact test scores and are associated with four-day-week status.

Because the four-day-week schedule is implemented in rural areas and sparsely populated school districts, we base our estimation sample on restrictions to the *Population density* and *Total students* variables. Our control group includes only schools with *Population density* and *Total students* values that are less than the maximum values for these variables for the four-day-week schools. Specifically, we restrict our focus to schools with enrollments not exceeding 1,100 students and that are in counties with less than 300 persons per square mile.[29] We evaluate the sensitivity of our results to alternative sample selection criteria in the robustness checks below.

Table 1 indicates that, despite the sample selection criterion, differences across schools persist. For example, schools on the four-day-week schedule are generally smaller and in poorer areas. The four-day-week schools also have slightly lower student-teacher ratios and somewhat lower percentages of Hispanic students than the traditional schedule schools. Again, because of these differences, we examine the robustness of our results to alternative control group specifications.

---

[28] The school-level data are from the National Center for Education Statistics' *Common Core of Data.*

[29] Frontier Academy is the largest four-day-week school with 1,108 students in 2010. Ellicott Elementary is the four-day-week school in the most densely populated county with over 290 persons per square mile in 2010. We also drop observations from schools that have fewer than 5 years of available test score data.

4. Empirical Strategy

A standard difference-in-differences (DD) approach is used to estimate the effect of the four-day school week on student performance. This method allows us to exploit the panel nature of our data by estimating a model that includes school fixed effects and year effects. The baseline estimating equation is:

$$(1) \qquad \%\ Proficient/Advanced_{st} = \beta_0 + \beta_1 Four\text{-}Day\ Week_{st} + \boldsymbol{X}_{sdct}\boldsymbol{\beta_2} + v_s + \omega_t + \varepsilon_{st},$$

where *% Proficient/Advanced* is the percentage of students in a specific grade at school s and year t who score proficient or advanced in a particular test subject (math or reading).[30] The variable *Four-Day Week* indicates whether a four-day-week schedule was in place in school s and year t. The coefficient of interest, β_1, represents the marginal effect of switching to a four-day week. Standard errors are adjusted for correlation at the district level (Bertrand et al. 2004).[31]

The vector $\boldsymbol{X}$ is comprised of the time-varying school (s), district (d), and county (c) characteristics described above. The school fixed effects and year effects are represented by v_s and ω_t, respectively. The school fixed effects control for differences across schools that are time-invariant, while the year effects control for differences across time that are common to all schools.

[30] Marcotte (2007), Marcotte and Hemelt (2008), and Papke (2005) use a similar dependent variable to evaluate student performance at the school level.

[31] Inference is similar when standard errors are adjusted for correlation at the school level.

A potential source of selection bias comes from the possibility that certain types of parents might opt to enroll their child in a four-day-week school. For example, a shortened school week could increase the expense of childcare arrangements, so that this schedule could appeal more to parents who are relatively less burdened by childcare costs.[32] If children from these families perform systematically better (or worse) in school than others, then estimates of the effect of the four-day week on test scores will be biased. The chances of parents moving their children to schools on the four-day week, however, are limited due to the rural location of most four-day-week schools.[33] School selection is also limited by restrictions on within-district transfers. School fixed effects would account for this type of bias for schools that used the four-day-week schedule throughout the sample period.

A second selection bias could result from the fact that school districts choose their schedule. If only schools with financial issues change to a four-day-week schedule, then an observed relationship between the four-day week and test scores might simply reflect the financial situation of the school. School fixed effects would purge our estimates of this type of bias.

School fixed effects cannot account for unobserved time-varying factors that simultaneously influence student performance and the school's choice of schedule. In addition, it is possible a school could switch to a four-day week in response to a downward trend in test scores. To address these issues, we include district-specific time trends in a sensitivity analysis below.

---

[32] Higher income households, families with a stay-at-home parent, or farm and ranch households may find the four-day-week schedule appealing.

[33] Within our data, we found little evidence that student enrollments increased after schools switched schedules.

5. Results

5.1 Primary Results

Table 3 presents our baseline OLS estimates of the relationship between the four-day school week and the percentage of students scoring proficient or advanced on 5th grade math tests. Each column illustrates results from a separate regression and all models include school-level fixed effects.

These results are striking; even when controlling for county-, district- and school-level differences in socio-economic characteristics, the four-day school week is associated with an increase of over 7 percentage points in the percentage of students scoring proficient or advanced on the math achievement tests, and this result is estimated with precision. This represents roughly a 12 percent increase from the mean test scores for schools on traditional schedules (7.43/63.2 = 0.12).

Table 4 contains the results of similar models estimated using the percentage of students scoring proficient or advanced on 4th grade reading tests. The estimated impact of the four-day week is generally smaller and less precisely estimated, but even when all covariates are included, we still find a positive point estimate of over three percentage points.[34]

In Table 5, we present regression results designed to provide some insight into the dynamic pattern of test scores prior to and following the change to a four-day school week. Specifically, we replace the *Four-Day Week* variable with two lead indicators, an indicator for the year of the schedule change, and three lag indicators. The omitted category is 3+ years before a schedule change occurred. Column (1) shows results for the math scores. The estimated coefficients prior to the policy change are positive, though not statistically significant,

[34] It is fairly common to find stronger effects on math scores than on reading scores; see, for example, Dee and Jacob (2011).

whereas the point estimates post-change are much larger and estimated with precision. These results, to an extent, quell concerns that academic adjustments were made in anticipation of schedule changes. Further analysis of the sensitivity of our baseline results to pre-existing trends is included in the robustness checks below. The results in column (2) provide some evidence that performance in reading goes up after schools switch to a four-day week; although, only the estimates for the final two lags are individually statistically significant at conventional levels. The indicator for the year of the schedule change and the three lag indicators are weakly jointly significant.

Because our results indicate that the percentage of students achieving proficient or advanced scores increases when schedules are changed, it is interesting to consider which group of students accounts for the improvement. As mentioned above, the Colorado Department of Education tabulates student scores according to four possible achievement levels: unsatisfactory, partially proficient, proficient, and advanced. Table 6 shows results of regressions where each achievement level is considered as a separate outcome and is regressed against the policy indicator and the full set of covariates. These results tell an interesting story. For math, we find that the biggest share of the improvement comes from the students formerly classified as partially proficient, this group falls by an estimated 4.6 percentage points following the schedule change. As a result, we see a large and statistically significant increase in the percentage of students scoring at the proficient level. For reading, the only statistically significant results occur in the lowest and the highest categories. The results show that the percentage of students rated unsatisfactory fell by nearly 2.5 percentage points after the schedule change whereas the percentage of students in the advanced category rose by over two percentage points. Of course, this does not necessarily imply that formerly unsatisfactory students are now scoring at the

advanced level. It may simply be that the four-day week resulted in a relatively uniform shift upward in test scores across all achievement levels.

5.2 Robustness Checks

We first perform a robustness check based on Luallen (2006). Specifically, we create a placebo *Four-Day Week* indicator using a random number generator based on the uniform distribution. Because 14 schools switched to a four-day week during our sample period for math scores, we assign 14 placebo policies for each trial run. For the reading sample, we assign 17 placebo policies.[35] We run 25 trials for each test score outcome.

Table 7 illustrates the average coefficient estimates for the placebo *Four-Day Week* on the percentage of 5th graders scoring proficient or advanced in mathematics and the percentage of 4th graders scoring proficient or advanced in reading. In both regressions, the average estimate is very small in magnitude. Furthermore, in 25 trials, only one estimate was positive and statistically significant at the 5 percent level for math performance and only two estimates were positive and statistically significant at the 5 percent level for reading performance.[36] These results provide evidence that random assignment of the four-day-week schedule cannot generate our results.

As discussed above, the schools on the four-day-week schedule are different than schools on traditional schedules along several margins. In reality, the four-day week is not a randomly assigned policy. While the inclusion of school fixed effects controls for time-invariant

[35] A year for a schedule change was randomly selected between 2000 and 2010 for the reading test regressions and 2001 and 2010 for the math test regressions.

[36] For math performance, one estimate was negative and statistically significant at the 5 percent level. For reading performance, two estimates were negative and statistically significant at the 5 percent level.

heterogeneity across schools, it is useful to consider a propensity score matching technique used in conjunction with our difference-in-differences estimator.[37] This method essentially amounts to re-estimating equation (1) on a matched sample, a subset of the original sample.[38]

The goal for matching is to find a group among the comparison population (i.e. the schools that remained on the traditional schedule) that looks as similar as possible to the schools that changed schedules.[39] Thus, we predict whether a school switches to a four-day week during our sample period based on observable characteristics from 2001. Table A3 presents the probit results. Consistent with anecdotal evidence, schools with higher transportation expenditures are more likely to switch to a four-day week.

Table 8 illustrates results from the estimation of equation (1) on propensity score matched samples.[40] For math, the estimates are smaller than those shown in Table 3; however, they are still relatively large in magnitude and two of the three estimates are statistically significant at the 5 percent level even though the sample has shrunk by a factor of four. While the estimate for the case where $k = 5$ is positive and substantial in size, it is not statistically significant at conventional levels (p-value = 0.101). For reading, the magnitudes of the estimates are on par with those from Table 4 and two of the three estimates are weakly statistically significant.

---

[37] For a practical discussion on propensity score matching, see Becker and Ichino (2002).

[38] For research employing similar methods, see Heckman et al. (1997), Sabia (2006), Gilligan and Hoddinott (2007), and Debaere et al. (2010).

[39] Table A2 presents descriptive statistics for the propensity score matching analysis.

[40] Specifically, we use the *k*-nearest neighbor matching algorithm, an approach where each four-day-week school is matched to multiple schools from the comparison group.[40] We consider values of $k = 25$, $k = 10$, and $k = 5$; the choice of k involves a trade-off between reduced variance and increased bias. That is, variance is reduced when a higher value of k is chosen because more information is used to construct the counterfactual for each treated unit; but, increased bias results from poorer matches on average (Caliendo and Kopeinig 2005).

For completeness, we perform the following additional robustness checks. The sensitivity analyses for the math results are reported in Table 9. In column (1), the baseline estimate of the fully specified model (see column (5) of Table 3) is reported for comparison. Column (2) of Table 9 reports results from a model where the school fixed effects are replaced with district fixed effects. Not surprisingly, the coefficient estimate on the *Four-Day Week* indicator is larger in magnitude and highly statistically significant.[41]

Column (3) illustrates results where school district-specific linear time trends are added to the right-hand-side of equation (1). The district-specific trends are intended to control for the influence of difficult-to-measure factors at the district level that evolve smoothly over time. Although the coefficient size remains relatively large, it is measured with less precision and is no longer statistically significant at conventional levels.[42] Of course, because this model uses up degrees of freedom, less precision is to be expected.

The results in column (4) come from a regression weighted by the school-level student population.[43] Here, the coefficient estimate remains relatively large in magnitude and is statistically significant at the 5 percent level.

For the results in column (5), we restrict the sample to only schools that were on traditional schedules at the beginning of our sample period. Identification in our difference-in-differences framework comes from the schools that we observe switching schedules.

---

[41] As expected, the model with district fixed effects explains less variation in the percentage of students scoring proficient or advanced. This implies that school-level time-invariant unobserved characteristics explain much of the variation in test scores across schools.

[42] Results based on district-specific trends are presented as opposed to results based on school-specific trends because the policy change almost always occurs at the district level. As a result, it is conceivable that unobserved time-varying characteristics that drive the decision to switch to the four-day week are more likely to be district-level factors. However, it is important to note that results are similar when controlling for school-specific linear time trends (coefficient estimate on *Four-Day Week* = 5.95; standard error = 4.33).

[43] Weighted least squares helps to deal with heteroskedasticity that may arise because smaller schools are more likely to see greater swings in their percentage of students scoring proficient of advanced.

Consequently, our results should change little from baseline when excluding schools that enter our sample already on the four-day week. The estimate in column (5) confirms that this is the case.

Finally, we restrict our sample based on the U.S. Census's definition of "rural." While this selection criterion increases our sample size by over 80 percent, the results change little from baseline.[44]

The results from the sensitivity analyses for the reading scores are provided in Table 10. While the reading results are more sensitive than the math results to model specification and sample selection, all coefficient estimates remain positive in sign. With the exception of the column (3) result, the magnitudes of the coefficient estimates remain large. When district-specific trends are added, the estimate becomes much smaller and is not measured precisely.

6. Conclusion

In a time of tough budget situations for most public school systems, a variety of cost-saving measures have been adopted. To relieve financial pressures, a growing number of smaller and more rural school districts are switching from the traditional Monday through Friday school week to a four-day-week schedule. One concern, however, is that student academic performance may be compromised by such a switch. The results presented in this paper illustrate that academic outcomes are not sacrificed under the four-day week; in fact, we provide some evidence that math and reading achievement scores in elementary schools actually improve following the schedule change. The math results in particular are robust to a number of alternative specifications and checks.

[44] According to the Census, a "rural" county has a population density of less than 1,000 persons per square mile (Ricketts et al. 1998). Though not reported for the sake of brevity, it is important to note that results based on specifications with no sample restrictions are similar to the baseline estimates.

Specifically, using data from the Colorado Department of Education, we find that scores on math achievement tests increase by roughly 12 percent after the switch to a four-day-week schedule. The estimated impact of the four-day week on reading achievement is always positive in sign but is generally smaller in magnitude and estimated with less precision. Policy-makers and school administrators will want to take these potential gains in academic performance into consideration when weighing the costs and benefits associated with the four-day school week.

Although we discussed a variety of channels through which the four-day week may impact student performance, our school-level data leaves us silent as to which mechanisms are most important. It will be valuable for future work to determine whether factors such as teaching methods, teacher satisfaction, or student attendance account for improving student achievement.

There are a number of other possible implications of this schedule change that merit examination. In particular, this study looked only at 4^{th} and 5^{th} grade math and reading scores. One might conjecture that this policy change could have an even greater influence on older students. For high school students, four-day school weeks may make it easier to handle part-time jobs. An interesting line of inquiry would be the impact of this alternative schedule on drop-out rates.

Lastly, a key issue for consideration is whether our results generalize to larger and less rural districts. There has been some discussion that the four-day school week would not work as well in more urban areas due to issues concerning the increased demand for child care, special needs students, and delinquency (Fager 1997).

Acknowledgements

We would like to thank Tim Sass and seminar participants at Montana State University and the University of Washington for comments and suggestions. We also owe a special thanks to the Colorado Department of Education for providing data used in this paper.

References

Baltes, Borris; Briggs, Thomas; Huff, Joseph; Wright, Julie and George Neuman. 1999. "Flexible and Compressed Workweek Schedules: A Meta-Analysis of Their Effects on Work-Related Criteria." *Journal of Applied Psychology* 84: 496-513.

Becker, Sascha and Andrea Ichino. 2002. "Estimation of Average Treatment Effects Based on Propensity Scores." *Stata Journal* 2: 358-377.

Bellei, Cristian. 2009. "Does Lengthening the School Day Increase Students' Academic Achievement? Results from a Natural Experiment in Chile." *Economics of Education Review* 28: 629-640.

Bertrand, Marianne; Duflo, Esther and Sendhil Mullainathan. 2004. "How Much Should we Trust Differences-in-Differences Estimates? *Quarterly Journal of Economics* 119: 249-276.

Blankenship, Ted. 1984. "Update: These School Systems Swear by the Four-Day School Week Because Students Work Harder and Face Fewer Distractions." *American School Board Journal* 171: 32-33.

Brown, Byron and Daniel Saks. 1986. "Measuring the Effects of Instructional Time on Student Learning: Evidence from the Beginning Teacher Evaluation Study." *American Journal of Education* 94: 480-500.

Brown, Byron and Daniel Saks. 1987. "The Microeconomics of the Allocation of Teachers' Time and Student Learning." *Economics of Education Review* 6: 319-337.

Caliendo, Marco and Sabine Kopeinig. 2005. "Some Practical Guidance for the Implementation of Propensity Score Matching." IZA Discussion Paper No. 1588.

Cannon, Jill; Jacknowitz, Alison and Gary Painter. 2011. "The Effect of Attending Full-Day Kindergarten on English Learner Students." *Journal of Policy Analysis and Management* 30: 287-309.

Chamberlin, Molly and Jonathan Plucker. 2003. "The Four-Day School Week." *Education*

Policy Briefs 1: 1-3.

Coates, Dennis. 2003. "Education Production Functions Using Instructional Time as an Input." *Education Economics* 11: 273-292.

Cooper, Harris; Valentine, Jeffrey; Charlton, Kelly and April Melson. 2003. "The Effects of Modified School Calendars on Student Achievement and on School and Community Attitudes." *Review of Educational Research* 73: 1-52.

Daly, Joseph and Robert Richburg. 1984. "Student Achievement in the Four-Day School Week." Office for Rural Education, Colorado State University. Available at: http://www.eric.ed.gov/ERICWebPortal/search/detailmini.jsp?_nfpb=true&_&ERICExtSearch_SearchValue_0=ED252346&ERICExtSearch_SearchType_0=no&accno=ED252346.

Dam, Ai. 2006. "The 4 Day School Week." Colorado Department of Education. Available at: http://www.cde.state.co.us/cdeedserv/download/pdf/4dayweek06.pdf.

Darden, Edwin. 2008. "The Four-Day School Week: A Fuel's Paradise?" *Forecast* 6: 1-4.

Debaere, Peter; Lee, Hongshik and Joonhyung Lee. 2010. "It Matters Where You Go: Outward Foreign Direct Investment and Multinational Employment Growth at Home." *Journal of Development Economics* 91: 301-309.

DeCicca, Philip. 2007. "Does Full-Day Kindergarten Matter? Evidence from the First Two Years of Schooling." *Economics of Education Review* 26: 67-82.

Dee, Thomas. 2005. "A Teacher like Me: Does Race, Ethnicity, or Gender Matter?" *American Economic Review Papers and Proceedings* 95: 158-165.

Dee, Thomas and Brian Jacob. 2011. "The Impact of No Child Left Behind on Student Achievement." *Journal of Policy Analysis and Management* 30: 418-446.

Dolan, Robert and Robert Schmidt. 1987. "Assessing the Impact of Expenditure on Achievement: Some Methodological and Policy Considerations." *Economics of Education Review* 6: 285-299.

Donis-Keller, Christine and David Silvernail. 2009. "A Review of the Evidence on the Four-Day School Week." Center for Education Policy, Applied Research and Evaluation, University of Southern Maine. Available at: http://www2.umaine.edu/mepri/sites/default/files/CEPARE%20Brief%20on%20the%204-day%20school%20week%202.10.pdf.

Durr, Greta. 2003. "Four-Day School Week?" *State Legislatures* 29: 21.

Ehrenberg, Ronald; Ehrenberg, Randy; Rees, Daniel and Eric Ehrenberg. 1991. "School District

Leave Policies, Teacher Absenteeism, and Student Achievement." *Journal of Human Resources* 26: 72-105.

Fager, Jennifer. 1997. "Scheduling Alternatives: Options for Student Success." Northwest Regional Education Laboratory.

Feaster, Rebecca. 2002. "The Effects of the Four-Day School Week in Custer, South Dakota." Doctoral dissertation, University of South Dakota.

Gaines, Gale. 2008. "Focus on the School Calendar: The Four-Day School Week." Southern Regional Education Board. Available at: http://publications.sreb.org/2008/08S06_Focus_sch_calendar.pdf.

Gilligan, Daniel and John Hoddinott. 2007. "Is There Persistence in the Impact of Emergency Food Aid? Evidence on Consumption, Food Security, and Assets in Rural Ethiopia." *American Journal of Agricultural Economics* 89: 225-242.

Grau, Elnabeth and Michael Shaughnessy. 1987. "The Four Day School Week: An Investigation and Analysis." Eastern New Mexico University. Available at: http://www.eric.ed.gov/ERICWebPortal/search/detailmini.jsp?_nfpb=true&_&ERICExtSearch_SearchValue_0=ED317337&ERICExtSearch_SearchType_0=no&accno=ED317337.

Graves, Jennifer. 2010. "The Academic Impact of Multi-Track Year-Round School Calendars: A Response to School Overcrowding." *Journal of Urban Economics* 67: 378-391.

Graves, Jennifer. 2011. "Effects of Year-Round Schooling on Disadvantaged Students and the Distribution of Standardized Test Performance." *Economics of Education Review* 30: 1281-1305.

Hanushek, Eric. 1986. "The Economics of Schooling." *Journal of Economic Literature* 24: 1141-1177.

Hazard, Louise. 1986. "What About the Four-Day School Week?" *Delta Kappa Gamma Bulletin* 52: 56-57.

Heckman, James; Ichimura, Hidehiko and Petra Todd. 1997. "Matching As An Econometric Evaluation Estimator: Evidence from Evaluating a Job Training Programme." *Review of Economic Studies* 64: 605-654.

Herring, Chris. 2010. "Schools' New Math: The Four-Day Week." *Wall Street Journal.* 8 March. Available at: http://online.wsj.com/article/SB10001424052748704869304575104124088312524.html.

Hewitt, Paul and George Denny. 2011. "The Four-Day School Week: Impact on Student Performance." *Rural Educator* 32: 23-31.

Hoffman, Florian and Philip Oreopoulos. 2009. "A Professor Like Me: The Influence of Instructor Gender on College Achievement." *Journal of Human Resources* 44: 479-494.

Hughes Jr., Woodrow. 2004. "Blocking Student Performance in High School?" *Economics of Education Review* 23: 663-667.

Kingsbury, Kathleen. 2008. "Four-Day School Weeks." *TIME*. 14 August. Available at: http://www.time.com/time/magazine/article/0,9171,1832864,00.html.

Koki, Stan. 1992. "Modified School Schedules: A Look at the Research and the Pacific." Pacific Region Educational Lab. Available at: http://www.eric.ed.gov/ERICWebPortal/search/detailmini.jsp?_nfpb=true&_&ERICExtSearch_SearchValue_0=ED354630&ERICExtSearch_SearchType_0=no&accno=ED354630.

Lefly, Dianne and Jhon Penn. 2009. "A Comparison of Colorado School Districts Operating on Four-Day and Five-Day Calendars." Colorado Department of Education. Available at: http://www.cde.state.co.us/cdeassess/documents/res_eval/2009_Colorado_districts_4day_school_week.pdf.

Link, Charles and James Mulligan. 1986. "The Merits of a Longer School Day." *Economics of Education Review* 5: 373-381.

Lippman, Laura; Burns, Shelley and Edith McArthur. 1996. "Urban Schools: The Challenge of Location and Poverty." U.S. Department of Education. National Center for Education Statistics, NCES 96-184.

Lopus, Jane. 1990. "Do Additional Expenditures Increase Achievement in the High School Economics Class?" *Journal of Economic Education* 21: 277-286.

Luallen, Jeremy. 2006. "School's Out...Forever: A Study on Juvenile Crime, At-Risk Youths and Teacher Strikes." *Journal of Urban Economics* 59: 75-103.

Marcotte, Dave. 2007. "Schooling and Test Scores: A Mother-Natural Experiment." *Economics of Education Review* 26: 629-640.

Marcotte, Dave and Steven Hemelt. 2008. "Unscheduled School Closings and Student Performance." *Education Finance and Policy* 3: 316-338.

Matsudaira, Jordan. 2008. "Mandatory Summer School and Student Achievement." *Journal of Econometrics* 142: 829-850.

McCoy, Jack. 1983. "A Summary Report on the Four-Day School Week in New Mexico." New Mexico State Department of Education, Evaluation, Testing, and Data Management.

Merino, Barbara. 1983. "The Impact of Year-Round Schooling: A Review." *Urban Education* 18: 298-316.

Papke, Leslie. 2005. "The Effects of Spending on Test Pass Rates: Evidence from Michigan." *Journal of Public Economics* 89: 821-839.

Pierce, Jon; Newstrom, John; Dunham, Randall and Alison Barber. 1989. *Alternative Work Schedules*. Needham Heights, MA: Allyn and Bacon.

Rice, Jennifer; Croninger, Robert and Christopher Roellke. 2002. "The Effect of Block Scheduling High School Mathematics Courses on Student Achievement and Teachers' Use of Time: Implications for Educational Productivity." *Economics of Education Review* 21: 599-607.

Richberg, Robert and Douglas Sjogren. 1983. "The Four-Day Week – What Are the Advantages for Schools?" *NASSP Bulletin* 67: 60-63.

Ricketts, Thomas; Johnson-Webb, Karen and Patricia Taylor. 1998. "Definitions of Rural: A Handbook for Health Policy Makers and Researchers." Federal Office of Rural Health Policy. Available at: http://www.shepscenter.unc.edu/rural/pubs/report/ruralit.pdf.

Ronfeldt, Matthew; Lankford, Hamilton; Loeb, Susanna and James Wyckoff. 2011. "How Teacher Turnover Harms Student Achievement." NBER Working Paper No. 17176.

Ryan, Molly. 2009. "Four-Day School Week." Education Commission of the States. Available at: http://www.ecs.org/clearinghouse/82/94/8294.pdf.

Sabia, Joseph. 2006. "Does Sex Education Affect Adolescent Sexual Behaviors and Health?" *Journal of Policy Analysis and Management* 25: 783-802.

Sagness, Richard and Stephanie Salzman. 1993. "Evaluation of the Four-Day School Week in Idaho Suburban Schools." Paper presented at the Annual Meeting of the Northern Rocky Mountain Education Research Association. Available at: http://www.eric.ed.gov/ERICWebPortal/search/detailmini.jsp?_nfpb=true&_&ERICExtSearch_SearchValue_0=ED362995&ERICExtSearch_SearchType_0=no&accno=ED362995.

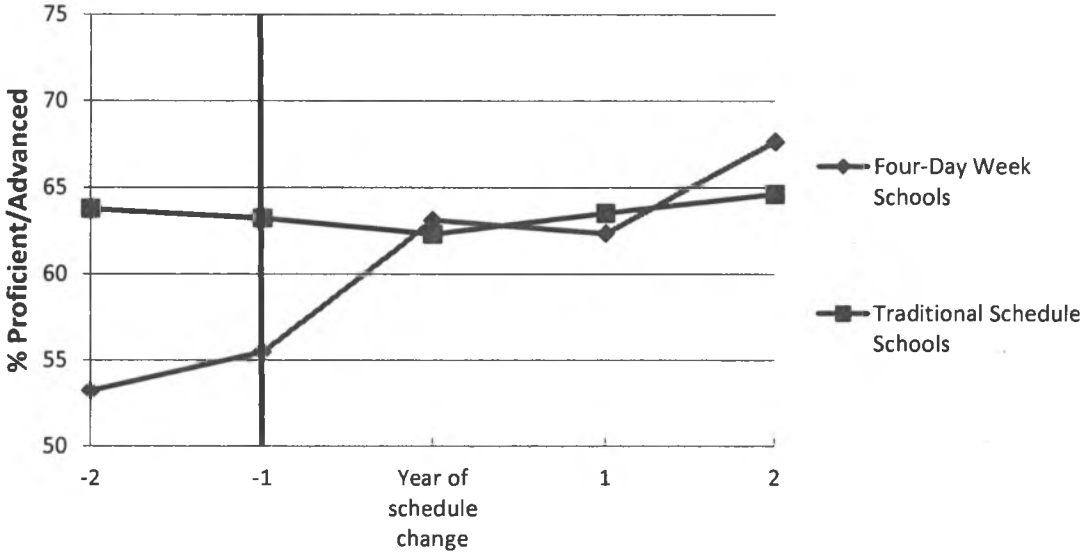
Shoemaker, Michael (ed.). 2002. "Effects of Four-Day School Schedule Undecided." *Journal of Physical Education, Recreation & Dance* 73: 8-9.

Toppo, Greg. 2002. "In Rural Areas, the Four-Day School Week is Growing in Popularity." *Christian Science Monitor*. 20 August. Available at: http://www.csmonitor.com/2002/0820/p14s02-lecs.html.

Turner, Dorie. 2010. "No Class: 4-Day School Weeks Gain Popularity Nationwide." *USA Today*. 4 June. Available at: http://www.usatoday.com/news/education/2010-06-04-shorter-school-week_N.htm.

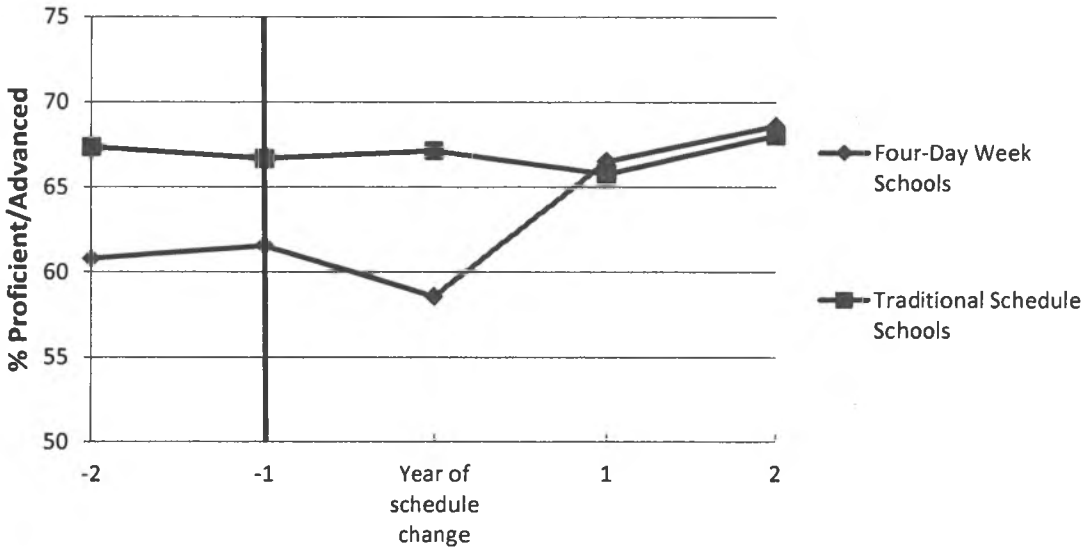
Yarborough, Rachel and David Gilman. 2006. "From Five Days to Four." *Educational Leadership* 64: 80-85.

Figure 1. Percent Scoring Proficient or Advanced in Math



On the horizontal axis, "year of schedule change" represents the year in which schools changed to a four-day week. It was randomly assigned to schools that remained on traditional schedules during the period under study.

Figure 2. Percent Scoring Proficient or Advanced in Reading



On the horizontal axis, "year of schedule change" represents the year in which schools changed to a four-day week. It was randomly assigned to schools that remained on traditional schedules during the period under study.

Table 1: Descriptive Statistics

	(1) Four-day week: 5th grade math sample		(2) Traditional schedule: 5th grade math sample		(3) Four-day week: 4th grade reading sample		(4) Traditional schedule: 4th grade reading sample	
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
Test scores								
Percent scoring proficient or advanced[a]	60.3	16.8	63.2	17.0	66.1	15.6	66.9	15.5
County-level variables								
Percent poverty[a, b]	18.7	9.81	14.4	6.17	18.5	9.71	14.4	6.11
Population density (per sq. mile)[a, b]	51.2	92.1	122	108	50.1	91.6	120	108
School district-level variables								
Instructional expenditures per student[a, b]	4566	630	4135	501	4575	661	4110	511
Percent of male teachers[a, b]	29.7	9.95	26.4	5.20	29.2	9.21	26.4	5.10
Percent of Hispanic teachers[a]	7.55	15.8	6.46	6.54	7.15	15.2	6.35	6.54
Percent of white teachers[b]	91.4	16.1	90.3	10.7	91.9	15.5	90.5	10.7
School-level variables								
Total students[a, b]	228	156	399	150	225	152	399	149
Pupil-teacher ratio[a, b]	14.2	2.91	16.2	10.2	14.1	2.86	16.3	10.7
Percent free lunch	39.9	21.9	37.3	23.9	39.8	21.0	37.2	23.8
Percent of Hispanic students[a, b]	21.2	22.3	24.8	21.1	20.3	21.3	24.8	21.2
Percent of white students[a, b]	75.4	222	67.7	22.0	76.4	21.2	67.9	22.0
N	282		3759		326		4304	

Notes: [a] Means are statistically different at 5% level for 5th grade math sample. [b] Means are statistically different at 5% level for 4th grade reading sample. Unweighted means for the 5th grade math sample are based on data from 2001-2010. Unweighted means for the 4th grade reading sample are based on data from 2000-2010.

Table 2: Descriptive Statistics for Schedule Changers: Mean Percentages of Students Scoring Proficient or Advanced

	(1) 2 years before change to a four-day week		(2) 1 year before change to a four-day week		(3) Year of change to a four-day week		(4) 1 year after change to a four-day week		(5) 2 years after change to a four-day week	
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
5th grade math	53.2	17.4	55.5	19.2	63.1	16.2	62.3	16.8	67.6	14.2
4th grade reading	60.8	15.7	61.5	14.5	58.9	17.4	66.5	16.3	68.6	15.0

Notes: Unweighted means for the 5th grade math sample are based on data from 2001-2010; fourteen schools changed their schedule to a four-day week during this period. Unweighted means for the 4th grade reading sample are based on data from 2000-2010; seventeen schools changed their schedule to a four-day week during this period.

Table 3: Four-Day School Week and Student Performance: Baseline 5th Grade Math Results

	(1) *% Proficient/ Advanced in Math*	(2) *%Proficient/ Advanced in Math*	(3) *% Proficient/ Advanced in Math*	(4) *% Proficient/ Advanced in Math*	(5) *% Proficient/ Advanced in Math*
Four-Day Week	13.15***	7.44***	7.43***	7.22***	7.43***
	(1.48)	(1.68)	(1.77)	(1.70)	(1.72)
N	4041	4041	4041	4041	4041
R^2	0.659	0.707	0.707	0.708	0.711
School FE	Yes	Yes	Yes	Yes	Yes
Year FE	No	Yes	Yes	Yes	Yes
County variables	No	No	Yes	Yes	Yes
District variables	No	No	No	Yes	Yes
School variables	No	No	No	No	Yes

* Statistically significant at 10% level; ** at 5% level; *** at 1% level.

Notes: Each column represents the results from a separate OLS regression. The dependent variable is equal to the percentage of students within a school scoring proficient or advanced; the covariates are listed in Table 2. Standard errors, corrected for clustering at the school district level, are in parentheses.

Table 4: Four-Day School Week and Student Performance: Baseline 4th Grade Reading Results

	(1) *% Proficient/ Advanced in Reading*	(2) *%Proficient/ Advanced in Reading*	(3) *% Proficient/ Advanced in Reading*	(4) *% Proficient/ Advanced in Reading*	(5) *% Proficient/ Advanced in Reading*
Four-Day Week	5.96**	3.32	3.64	3.68	3.76*
	(2.54)	(2.49)	(2.47)	(2.42)	(2.24)
N	4630	4630	4630	4630	4630
R^2	0.709	0.726	0.726	0.727	0.733
School FE	Yes	Yes	Yes	Yes	Yes
Year FE	No	Yes	Yes	Yes	Yes
County variables	No	No	Yes	Yes	Yes
District variables	No	No	No	Yes	Yes
School variables	No	No	No	No	Yes

* Statistically significant at 10% level; ** at 5% level; *** at 1% level.

Notes: Each column represents the results from a separate OLS regression. The dependent variable is equal to the percentage of students within a school scoring proficient or advanced; the covariates are listed in Table 2. Standard errors, corrected for clustering at the school district level, are in parentheses.

Table 5: Four-Day School Week and Student Performance: Policy Timing

	(1) *% Proficient/ Advanced in Math*	(2) *% Proficient/ Advanced in Reading*
2 years before four-day week	1.50	2.06
	(2.50)	(5.54)
1 year before four-day week	4.67	2.58
	(3.68)	(4.19)
Year of schedule change	10.37***	0.602
	(2.52)	(3.26)
1 year after four-day week	7.99***	5.24
	(2.54)	(3.62)
2 years after four-day week	11.62***	8.23**
	(3.87)	(4.16)
3+ years after four-day week	5.78*	5.97*
	(2.94)	(3.22)
N	4041	4630
R^2	0.711	0.733
School FE	Yes	Yes
Year FE	Yes	Yes
County variables	Yes	Yes
District variables	Yes	Yes
School variables	Yes	Yes

*Statistically significant at 10% level; ** at 5% level; *** at 1% level.

Notes: Each column represents the results from a separate OLS regression. The dependent variable is equal to the percentage of students within a school scoring proficient or advanced; the covariates are listed in Table 2. The omitted category is "3+ years before four-day week." Standard errors, corrected for clustering at the school district level, are in parentheses.

Table 6: Four-Day School Week and Student Performance: All Test Score Categories

	(1) *% Unsatisfactory in Math*	(2) *% Partially Proficient in Math*	(3) *% Proficient in Math*	(4) *% Advanced in Math*
Math				
Four-Day Week	-2.48*	-4.61***	3.80**	3.63
	(1.49)	(1.12)	(1.87)	(2.38)
N	4041	4041	4041	4041
R^2	0.593	0.549	0.332	0.693
	(1) *% Unsatisfactory In Reading*	(2) *% Partially Proficient in Reading*	(3) *% Proficient in Reading*	(4) *% Advanced in Reading*
Reading				
Four-Day Week	-2.43*	-0.666	1.63	2.14***
	(1.39)	(1.69)	(1.99)	(0.799)
N	4630	4630	4630	4630
R^2	0.638	0.580	0.651	0.554
School FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
County variables	Yes	Yes	Yes	Yes
District variables	Yes	Yes	Yes	Yes
School variables	Yes	Yes	Yes	Yes

* Statistically significant at 10% level; ** at 5% level; *** at 1% level.

Notes: Each cell represents the results from a separate OLS regression. The dependent variable is equal to the percentage of students within a school scoring in one of the following four indicated categories: unsatisfactory, partially proficient, proficient, advanced. The covariates are listed in Table 2. Standard errors, corrected for clustering at the school district level, are in parentheses.

Table 7: Random Four-Day Week Assignment

	(1) *% Proficient/ Advanced in Math*	(2) *% Proficient/ Advanced in Reading*
Average *Four-Day Week* coefficient estimate	-0.908	0.514
Number of trials	25	25
Number of *Four-Day Week* estimates that were positive and significant at 5% level	1	2
School FE	Yes	Yes
Year FE	Yes	Yes
County variables	Yes	Yes
District variables	Yes	Yes
School variables	Yes	Yes

*Statistically significant at 10% level; ** at 5% level; *** at 1% level.

Notes: Each column represents the results from a series of OLS regressions. The dependent variable is equal to the percentage of students within a school scoring proficient or advanced; the covariates are listed in Table 2.

Table 8: Four-Day School Week and Student Performance: Matched Samples

	(1) *% Proficient/ Advanced in Math*	(2) *% Proficient/ Advanced in Math*	(3) *% Proficient/ Advanced in Math*
Math			
Four-Day Week	5.32**	5.44**	4.32
	(2.35)	(2.48)	(2.57)
k-nearest neighbors	$k = 25$	$k = 10$	$k = 5$
N	1042	822	569
R^2	0.711	0.713	0.687
	(1) *% Proficient/ Advanced in Reading*	(2) *% Proficient/ Advanced in Reading*	(3) *% Proficient/ Advanced in Reading*
Reading			
Four-Day Week	4.02*	3.60*	2.75
	(2.22)	(2.01)	(1.84)
k-nearest neighbors	$k = 25$	$k = 10$	$k = 5$
N	1129	777	607
R^2	0.704	0.720	0.731
School FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
County variables	Yes	Yes	Yes
District variables	Yes	Yes	Yes
School variables	Yes	Yes	Yes

* Statistically significant at 10% level; ** at 5% level; *** at 1% level.

Notes: Each cell represents the results from a separate OLS regression. The dependent variable is equal to the percentage of students within a school scoring proficient or advanced; the covariates are listed in Table 2. Standard errors, corrected for clustering at the school district level, are in parentheses.

Table 9: Four-Day School Week and Student Performance: Sensitivity of Math Results

	(1) Baseline results for comparison	(2) Replace school fixed effects with district fixed effects	(3) Add district trends	(4) Weight regression by school size	(5) Restrict sample to schools on traditional schedule at baseline (2001)	(6) Restrict sample based on the Census definition of "rural"
Four-Day Week	7.43***	8.19***	5.10	5.58**	7.33***	7.91***
	(1.72)	(1.38)	(3.77)	(2.27)	(1.79)	(1.78)
N	4041	4041	4041	4041	3807	7335
R^2	0.711	0.586	0.742	0.746	0.720	0.787
School FE	Yes	No	Yes	Yes	Yes	Yes
District FE	No	Yes	No	No	No	No
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
County variables	Yes	Yes	Yes	Yes	Yes	Yes
District variables	Yes	Yes	Yes	Yes	Yes	Yes
School variables	Yes	Yes	Yes	Yes	Yes	Yes

* Statistically significant at 10% level; ** at 5% level; *** at 1% level.

Notes: Each column represents the results from a separate OLS regression. The dependent variable is equal to the percentage of students within a school scoring proficient or advanced; the covariates are listed in Table 2. Standard errors, corrected for clustering at the school district level, are in parentheses.

Table 10: Four-Day School Week and Student Performance: Sensitivity of Reading Results

	(1)	(2)	(3)	(4)	(5)	(6)
	Baseline results for comparison	Replace school fixed effects with district fixed effects	Add district trends	Weight regression by school size	Restrict sample to schools on traditional schedule at baseline (2000)	Restrict sample based on the Census definition of "rural"
Four-Day Week	3.76*	6.18**	1.45	5.84***	3.85*	3.72
	(2.24)	(2.74)	(2.90)	(2.14)	(2.22)	(2.27)
N	4630	4630	4630	4630	4377	8169
R^2	0.733	0.640	0.759	0.773	0.746	0.807
School FE	Yes	No	Yes	Yes	Yes	Yes
District FE	No	Yes	No	No	No	No
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
County variables	Yes	Yes	Yes	Yes	Yes	Yes
District variables	Yes	Yes	Yes	Yes	Yes	Yes
School variables	Yes	Yes	Yes	Yes	Yes	Yes

* Statistically significant at 10% level; ** at 5% level; *** at 1% level.

Notes: Each column represents the results from a separate OLS regression. The dependent variable is equal to the percentage of students within a school scoring proficient or advanced; the covariates are listed in Table 2. Standard errors, corrected for clustering at the school district level, are in parentheses.

Table A1: Reasons for Four-Day School Week Application/Renewal in Colorado

	(1) Financial savings of some form	(2) Community support, parent support, or tradition	(3) Improved attendance	(4) Increased academic performance
Number of school administrator reports	51	26	17	6

Notes: These data are based on 76 school administrator responses from a Colorado Department of Education survey that was conducted in 2010. Of the responses, 10 districts were applying to switch their schedule to a four-day school week and 66 districts were applying to renew their current four-day-week status. The total number of responses sum to greater than 76 because respondents were allowed to list multiple reasons. These data were supplied through correspondence with the Colorado Department of Education.

Table A2: Descriptive Statistics for Propensity Score Analysis

	(1) 5th Grade Math Sample		(2) 4th Grade Reading Sample	
	Mean	Std. Dev.	Mean	Std. Dev.
Dependent variable				
Eventual Four-Day Week	0.050	0.217	0.050	0.217
Independent variables				
Percent poverty (County-level)	13.1	5.39	13.1	5.43
Instructional expenditures per student (District-level)	3911	522	3898	481
Transportation expenditures per student (District-level)	190	86.8	191	97.7
Operational expenditures per student (District-level)	616	142	613	128
Total students (School-level)	337	112	339	109
Pupil-teacher ratio (School-level)	16.1	2.79	16.0	2.61
Percent free lunch (School-level)	36.5	22.2	36.9	22.3
N	303		303	

Notes: Means of the independent variables are based on data from 2001.

Table A3: Probit Models for Propensity Score Analysis

	(1) *Eventual Four-Day Week* (Math Sample)	(2) *Eventual Four-Day Week* (Reading Sample)
Total students (100s)	0.179	0.123
	(0.177)	(0.172)
Pupil-teacher ratio	0.033	0.057
	(0.068)	(0.076)
Percent free lunch	0.003	0.007
	(0.010)	(0.010)
Instructional expenditures per student (100s)	0.054*	0.064**
	(0.029)	(0.029)
Transportation expenditures per student (100s)	0.400**	0.343**
	(0.202)	(0.183)
Operational expenditures per student (100s)	0.000	0.040
	(0.099)	(0.102)
Percent poverty	0.100***	0.085**
	(0.036)	(0.034)
N	303	303

* Statistically significant at 10% level; ** at 5% level; *** at 1% level.

Notes: Each column represents the results from a separate probit regression. The variables are listed in Table A1. Standard errors are in parentheses.

SOUTHEAST ISLAND SCHOOL DISTRICT

P.O. Box 19569, 1010 Sandy Beach Road Thorne Bay, Alaska 99919
(907) 828-8254 Fax: (907) 828-8257 E-mail: sisd@sisd.org

Three-year Pilot Program Proposal
Four-day School Week

We seek your support for HB 21 or your assistance in bringing a companion bill forward in the Senate. We represent a grassroots desire for a four-day school week schedule. This schedule was requested by the vast majority of our parents, students, and staff, and is supported by our administration, school board, and teacher's union. Our request to implement this schedule in FY 2013 was denied by the Department of Education and Early Development.

In Alaska, our educational system is structured to empower families with choice. Options such as home school, correspondence programs, boarding schools, and busing students between districts give families the ability to make choices for their child's best interest. At the same time, the availability of these options can make it difficult to keep small schools open. A four-day week is simply one more of these choices that will help us be responsive to what our families desire. If our request for a four-day school week is approved, we intend to offer each of our schools this option and the individual school can decide to implement any of our four-day or five-day school week calendar choices. Small districts survive only by being responsive to the requests of their families.

The four-day school week we have proposed provides the educational equivalent of the traditional five-day school week. Research supports this schedule as a successful model for small, rural school districts. As such, we believe that the decision by our school board to implement this schedule should be supported. We are a successful district and our school board is fully capable of monitoring the successfulness of this proposal and our families' preferences in succeeding years.

Attached is a copy of the SISD proposal. We appreciate your support on this issue.

Sincerely,

LAUREN BURCH
Superintendent

HYDABURG CITY SCHOOL DISTRICT

PO BOX 109, HYDABURG, ALASKA 99922 PHONE: 907.285.3491 FAX: 907.285.3391

February 1, 2013

Commissioner Mike Hanley
AK Department of Education and Early Development
P.O. Box 110500
Juneau, AK 99811-0500

Dear Commissioner Hanley,

Hydaburg City School District (HCSD) and Southeast Island School District (SISD) are planning to continue the cooperative arrangement that we entered into for fiscal year (FY) 2013. Our initial request for funding through the Cooperative Arrangement Grant Program, as provided for in Alaska Statute 14.14.115, was submitted on June 10, 2012. As outlined in your response, we realize that available funds for FY 2013 were already committed and priorities had been established. We are respectfully requesting funding through this grant for FY 2014 in the amount of $100,000. We are hoping that, with this early notification, you will be able to prioritize our efforts and commit funds to the Cooperative Arrangement Grant Program.

HCSD has been struggling to improve student achievement in core areas including math, where our students' proficiency was only 22% for the 2011-2012 school year. We knew that, without a radical change, HCSD student achievement would almost certainly continue to drop and the district would face the problems associated with failing districts elsewhere in the state. HCSD would require increasing intervention from the Department of Education and Early Development with indirect costs far exceeding the funding associated with this request.

HCSD is a small, one-site district located on Prince of Wales Island. Challenges such as declining student numbers and an infrastructure that includes three large buildings to maintain leave little funding available to hire top administrators who can lead this district to success. Current statute (AS 14.12.010) does not allow our to two districts to combine. Our districts chose to work together to reduce costs and improve efficiency, instruction, educational opportunities, and the quality of new hires. SISD has been financially able and willing to assist this year. A number of adjustments to shared services can be made to reduce costs and increase the effectiveness of administration and education. HCSD cannot afford to bear the costs of this transition and SISD will be not be financially able to continue to subsidize the efforts. Once our program is successful and we have improved systems in place, costs can stabilize, especially as the loss of students from dissatisfaction can be arrested.

Below are some examples of costs and how the grant funds could be used to improve and implement a successful program.

Administrative Services: $30,000
Our problem has been trying to hire a skilled superintendent/principal in a challenging district with inadequate support staff, huge paperwork responsibilities and persistent classroom and staff issues. Turnover has been consistent and this model has failed. Employing a principal and sharing superintendent services raises costs.

Business Management: $30,000
Last year, costs at HCSD approached $150,000. We have reduced this to about $75,000, but need to spend $30,000 to transition to software used by SISD, which will allow us to drop the yearly costs to about $45,000.

Professional Development, Evaluation and Improved Academic Rigor: $45,000
We have contracted an administrator to work with our staff to improve these items, but could only afford modest efforts. SISD currently provides about $10,000 to subsidize this effort and HCSD spent an additional $25,000 on this effort this year. This focus is critical to improvement and we should commit $45,000.

School Improvement Grants: $30,000
HCSD is a prime candidate for grants that could provide the funding for many of our efforts to improve. Unfortunately, we have neither the personnel nor the resources to actively seek these additional sources of funding. This year, SISD has been providing personnel to support this effort. Time spent working with HCSD takes away from time spent on SISD duties, but is critical to success. SISD is currently contributing about $10,000. We should be committing $30,000 to the effort.

Counseling: $40,000
As is perhaps true with all struggling districts, mental health issues, career guidance, and day-to-day crisis management are huge components of improving academic success. Eight percent of HCSD students are currently receiving suicide intervention services. SISD grant funding for a counseling position will close at the end of FY 2013; SISD will be in no position to subsidize counseling needs without funding.

Curriculum: $100,000
Our curriculum currently lacks interesting electives and does not include culturally relevant courses or foreign language. SISD could provide teachers on Fridays to improve choice and interest in school. Courses currently being considered are woodshop, music and foreign language at a cost of $60,000. SISD has used video teleconferencing to make sure that students at each SISD site are able to receive instruction from highly qualified teachers. HCSD does not have the equipment or qualified aides to allow participation in these classes. The cost to provide both would be $40,000.

Please contact me with any questions or if you would like any additional information.

Sincerely,

LAUREN BURCH
Superintendent

Hydaburg City
School District

LAUREN BURCH
Superintendent

OFFICE
P.O. Box 109
Hydaburg, AK 99922

PHONE
907-285-3491

FAX
907-285-3391

CELL PHONE
907-401-0789

MESSAGE PHONE
907-723-6462

EMAIL
lburch@sisd.org

WEB
www.hydaburg.k12.ak.us

SOUTHEAST ISLAND
SCHOOL DISTRICT

Lauren Burch
Superintendent

T: 907.828.8254
F: 907.828.8257
C: 907.401.0789
M: 907.723.6462

lburch@sisd.org
www.sisd.org

P.O. Box 19569
1010 Sandy Beach Rd.
Thorne Bay, AK 99919

SOUTHEAST ISLAND SCHOOL DISTRICT

P.O. Box 19569, 1010 Sandy Beach Road, Thorne Bay, Alaska 99919
(907) 828-8254 Fax: (907) 828-8257 E-mail: sisd@sisd.org

Three-year Pilot Program Proposal
Four-day School Week

Goals:

- To continually increase student achievement.
- To improve teacher performance using methods such as professional learning communities and cross-curricular planning.
- To respond to stakeholder requests for four-day school weeks with longer blocks of instructional time each day.

Current Condition:

- Middle and high school classes in SISD are locked into 50-minute blocks of time and elementary classrooms are self-contained rooms that usually contain students who span multiple grade levels. Each teacher teaches the content areas for the classes that they are assigned.
- Students attend school for a shorter period of time on Fridays (8:30 a.m. to 2:00 p.m.) to allow time for teacher professional development.
- Thorne Bay School is piloting a program where four elementary teachers are being released from their classes for an hour each week to work together on cross-curricular planning, both at the same grade level and across grade levels. In order to make time for this to happen, the school principal teaches a combined PE course to the students from these classes.

Challenges:

- The Alaska Performance Scholarship has prompted SISD to increase the number of academic graduation credits from 21 to 24. We have increased the number of core classes offered, which has reduced our ability to offer elective classes.
- Students have been vocal about the importance of having more time during each class period, as well as additional time to study and prepare for their increased credit load.
- Teacher preparation time and professional learning community (PLC) time is difficult to schedule at SISD schools. This is primarily because teachers at single-teacher school sites are unable to schedule teacher preparation and peer collaboration time into their school day. When teachers prepare lessons outside of their workday, teacher collaboration does not occur with a high level of frequency and/or consistency. This can, and often does, impact the quality of lessons delivered.

  SISD's FY13 professional development schedule is included as Appendix 1. This schedule shows that while we can facilitate professional development, this training time takes away from the time that teachers need to create lesson plans and collaborate with each other to develop quality units, lessons, and activities.
- Teachers at small school sites (sites with one or two teachers) face additional challenges, as they may be responsible for all content areas for multiple, if not all, grade levels.
- Many of our core content high school classes are delivered to our multiple small school sites through video teleconferencing from highly qualified high school teachers at our largest school site, Thorne Bay School. With little time in the day to communicate with each other, the site teacher and distance delivery teacher have to trust that each sites' students are getting their needs met.
- While the majority of ASC's selected the four-day school week option for the 2012-2013 school year, one school (Edna Bay) preferred the five-day school week option (see Appendix 2).
- Students frequently miss in-class instruction due to participation in sports and travel related to extracurricular activities such as, but not limited to, The Rose Urban-Rural Exchange Program, Whale Fest, Alaska Association of Student Government (AASG), leadership development with neighboring school districts, college fairs, and tours (see Appendix 3).
- The remoteness of SISD school communities creates challenges for those traveling to appointments. Students and staff who live on the road system must drive from one to four hours to get to the nearest doctor, dentist, or Division of Motor Vehicles. Four school sites are located in communities not on the road system. Students and staff traveling from those four sites must also travel by air or boat, which can add days to the trip. Travel to these appointments results in missed school time for students and teachers.

- Many SISD families participate in migrant/subsistence activities. Students miss school when they are required to assist their families with activities such as hunting, fishing, diving, gathering, and trapping.
- Many SISD students spend time on the weekend and after school hours fundraising to support their participation in extracurricular events (students must fundraise to pay for travel, uniforms, and other supplies). This participation takes away from family time and can negatively impact study time. SISD stakeholders place a premium on family time and would like to have an alternative to fundraising on the weekends and evenings.

Plan:
Move from a traditional five-day school week to a four-day school week with longer instructional days and built-in teacher professional development/PLC days.

The preferred FY 2013 school calendar alternatives and proposed FY 2014 calendar options are listed in Appendix 4. While the total number of days students attend school would lower with the four-day school week calendar, the length of the school year would increase under the four-day week schedule, with students attending class two weeks longer than under the five-day school week calendar. The four-day calendar also increases the length of the school day by one hour. This combination results in more student contact hours under the four-day school week calendar than found in the traditional five-day calendar approved by the Department of Education and Early Development.

	4-day week	5-day week
school days per year	146	173
weeks in school per year	36 + 2 days	34 + 3 days
hours in school per day	7	6 M-Th; 5 Fri
contact hours per year	1022	1006

Example five-day and four-day school week schedules are found in Appendix 5. With the four-day school week schedule, the school day will be lengthened by 1 hour, which will add 10 minutes to each secondary class period. The school day will begin at 8:00 a.m. and end at 3:30 p.m. Students who are struggling or deficient in subject matter will be offered the opportunity to receive additional tutorial or instructional support on Fridays, which will be funded by Title IA, IC, VIB, Indian Education programs, and the general fund.

One of the cornerstones of our district is the ability to be flexible. If/when we implement a four-day school week, we believe that we can accommodate any sites that wish to remain on a five-day school week.

Rationale:
Students will be able to use Fridays to complete homework, participate in tutoring activities, and attend leadership and wilderness camps. They will also be able to attend

appointments, participate in family activities, participate in fundraising activities needed to support student extra curricular travel, and travel to extra curricular activities.

With Friday work days (annotated on the preferred calendar) free from student contact, teachers will participate in professional development, work in PLC groups to reflect on and prepare lessons and collaborate regarding effective strategies and interventions designed to increase student performance. Staff at single teacher sites will commute to nearby sites or connect with peers through video teleconferencing. The four-day calendar will result in teachers being better prepared for instruction and more energetic due to the reduction in personal time being utilized for preparation.

Moving to a four-day school week will allow VTC and site teachers to better communicate and plan to meet each site student's needs. In addition these distance-delivered classes will be longer in length in a four-day school week schedule. This is an essential component due to the nature of response time with two-way interaction in a distance class with multiple sites. SISD is also looking into ways in which to digitally archive these distance classes so that students that miss a class due to illness or travel may still watch the class when the time is more convenient. Fridays can also be a day for these students to contact the site or distance delivery teacher to seek extra help for the classes that they may have missed.

The feedback from Thorne Bay School's pilot for common planning time is very encouraging. Teachers are creating more dynamic ways to deliver instruction and to assess the learning. State and local content standards are being discussed and dissected. Blooms Taxonomy is being used to create higher level questioning in lessons to challenge students to think critically and analyze and synthesize plans of action when problem solving. We are hoping to see a significant growth in the standardized test scores for these teachers' students this May. Moving to a four-day school week will allow teachers the time they need to collaborate in this manner.

SISD involves students in a multitude of educational opportunities that can impact the regular school day. This year, students are learning vocational skills by building two Forest Service three-sided shelters, a housing unit in Whale Pass, and painting and landscaping schools. SISD also provides opportunities for students to learn outdoor skills and leadership skills through educational kayak camps and leadership trainings. Our ability to offer these opportunities will increase as we reduce the pressure on school day absences.

An added benefit of "no school Fridays" is that students will be able to work at their homes, spend time with their families, and participate in family hunting, fishing, gathering and trapping activities. This schedule will also allow staff and parents to schedule doctor, dentist, and DMV appointments on Fridays, which will reduce student/staff absence. Staff will be expected to schedule on Fridays, parents will be reminded through newsletters, emails, and other interactions to make the change. We anticipate a 90 percent reduction in absences for scheduled appointments.

SISD also promotes the opportunity for our students to travel outside of the rural areas in which they live. Exposing students to many "off island" experiences gives them a better understanding of what it takes to succeed in other environments. Most SISD middle and high school students travel for extracurricular activities. Many of these trips wrap around weekends due to ferry and air travel schedules. An added benefit of moving to a four-day school week is that this will reduce the number of days that students are out of class due to travel. Based on information gathered during the 2012-2012 school year, moving to a four-day school week would reduce the number of "out of class" days by 26 percent (see Appendix 3).

Conclusion:

How will moving from our current five-day school week to a four-day school week allow greater student achievement? The answer we feel is "time" – time that teachers get to work with students in class and with each other in professional learning communities. Teachers will be able to work together on selected Fridays to develop lessons and to plan units across curriculum divides to unify and solidify student learning. Longer school days will allow us to move away from the traditional 50-minute block schedules and allow high school and middle school teachers to plan and teach thematic units together. Small school sites with one or two teachers will be able to communicate with other teachers through video teleconferencing or even drive to other sites on Fridays to actively participate in planning and work collaboratively to prepare outstanding lessons.

The proposed four-day calendar will provide staff time needed to plan, prepare, collaborate and reflect. We anticipate that this additional time will result in creating learning environments that support and enhance student learning. SISD's parents, students, teachers, paraprofessionals, and administration overwhelmingly supported changing from a five-day to a four-day school week in FY13 (see Appendix 2). SISD stakeholders are currently in the process of selecting their preferred calendar for the 2013-2014 school year.

SISD is requesting the Department of Education and Early Development grant our proposal for a three-year pilot program of the four-day school week. SISD is prepared to collect, analyze and submit student achievement, attendance, and student/staff/community data needed to assess the effectiveness of the implementation of this proposal on an annual basis. We look forward to the opportunity to work with the Department on this pilot program.

APPENDIX 1
SISD Certified Teacher Professional Development

Course Meeting Information

Location: Thorne Bay School or through Video Teleconferencing
Start and End Date: August 22, 2012 – April 15, 2013
Instructor: Nick Higson & Sheila Nyquest

Class Day(s) & Time(s): Fridays, 2:15pm to 3:30pm (Weekly)

Description: This training explores the essential components of quality Professional Learning Communities (PLC) focusing on the philosophy and strategies related to differentiating materials for regular education students in K-12 multi age/graded classrooms. Participants will be given an overview of PLCs and differentiated instruction as well as provided with an opportunity to create classroom materials and lesson plans that focus on providing a differentiated curriculum to students.

Intended Audience: SISD K-12 classroom teachers, specialists, and resource teachers

Alignment with College of Education Vision, Mission, and Conceptual Framework

We believe that the preparation and support of professional educators is the shared responsibility of the University of Alaska Anchorage and our partners, and that our programs must evolve dynamically in response to unique community needs, research, and continuous program assessment. This PACE course is designed to meet a professional development need in response to our partner school districts and professional organizations. The course fits within the mission of the UAA College of Education as we encourage lifelong learning to meet the challenges of a rapidly changing world.

Link to Standards for Alaska Teachers

This professional development effort is rooted in the fundamentals of the standards for Alaska Teachers. It is offered to encourage and support practicing educators in attaining, maintaining, or surpassing the standards that, as stated in Standards for Alaska's Teachers, "define the skills and abilities our teachers and administrators need to possess to effectively prepare today's students for successful lives and productive careers." (Roger Sampson, http://www.eed.state.ak.us/standards/pdf/teacher.pdf)

Course Design

a. Requires 35 contact hours and an average of approximately 90 hours of engaged learning outside of class.
b. Does not apply to any UAA certificate or degree program.
c. No UAA lab and/or materials fees beyond standard charges.
d. This course is based upon the collegial sharing, collaboration, and support of the participants and facilitator as a community of learners. Course activities will include common readings and group discussions, collective learning processes, peer coaching/mentoring, and reflective practices.

Instructional Goals and Defined Outcomes:

RESEARCH BASED THEORY/PRINCIPLES/PRACTICES/TRENDS **(CONTENT)**

1.0 Instructional Goal:
Introduce the research-based principles and the basic structure of Professional Learning Communities and differentiated instruction within a framework that encompasses best practices for K-12 teachers related to meeting individual student learning needs.

Defined Outcome:
1.1 Participants will examine key elements of Professional Learning Communities.
1.2 Participants will examine key elements of differentiated instruction.
1.3 Participants will describe the relevancy of the key elements to their experiences, classroom practices, and students' needs.

THEORY INTO PRACTICE **(APPLICATION)**

2.0 Instructional Goal:
Provide a collaborative structure for participants to translate the essential principles and components of differentiated instruction into their classroom practices.

Defined Outcome:
Participants will select and adapt strategies for implementation in their classrooms, as well as, share instructional philosophy and practical strategies with their PLC colleagues.

REFLECTION ON THEORY INTO PRACTICE **(REFLECTION)**

3.0 Instructional Goal:
Engage participants in "in-action" and "on-action" reflective examinations of the theories, their implemented practices, and the outcomes.

Defined Outcome:
Participants will analyze and reflect upon the principles and strategies of differentiated instruction, their application in the K-12 multi-age/graded classroom, the outcomes of the implementation, and the implication for future direction in the classroom and work focus of the PLC.

RELATIONSHIP TO STANDARDS

4.0 Instructional Goal:
Familiarize participants with the district, state, and national standards addressed by the strategies and concepts presented.

Defined Outcome:
Participants will identify the standards met by implementing the strategies for differentiated instruction and PLCs.

Writing Style Requirements

Participants' writing will reflect the clarity, conciseness, and creativity expected of post-baccalaureate certificated educators.

Attendance and Make-up Policy

Participants are expected to actively and collegially participate in all classes as a contributing member of a learning community. Attendance at every session is, therefore, very important and make-up for missed classes will be approved by the instructor on an exception basis only.

Course Assignments, Assessment of Learning, and Grading System

Course grading will be P-F based upon the following. Models and rubrics will be provided for each assignment.

a. Participation and Collegial Support: 25%
Participants will be expected to actively and collegially participate in discussions, activities, and other process experiences during the seminars and group sessions

b. Reflective Paper: 25%
Participants will complete a thoughtful, reflection of course experience(s), discussions, applications, and readings.

c. Discussion Facilitation and Presentation: 25%
Participants will lead one PLC study group discussion based on the assigned reading topic and create and present a minimum of two strategies incorporated into their classroom that models differentiated instruction.

d. Application and Assessment: 25%
Participants will apply the strategies in their classroom and will submit an assessment of the process and outcomes in their reflective paper.

Quality of Work

Assignments, projects, papers, presentations, etc. will be graded for quality as follows:

"P" work is complete, comprehensive, and well prepared; clearly indicates that considerable time and intellectual effort was expended in preparing the assignment.

"F" work is below average; incomplete or chronically late; in inappropriate format; does not meet course standards, shows limited effort and understanding.

Course Calendar/Schedule

September 21st (Session 1, 2)
Text: ***Professional Learning Communities at Work***
- PLC Intro Chapter 2: A New Model: The Professional Learning Community
- Rationale for PLCs
- Where are we at, where are we going?
- **Self Reflection Journal Entry**
- Reading Assignment for next session: Chapter 4 and 5: "Building the Foundation of a Professional Learning Community – Mission and Vision and Values and Goals"

September 28th (Sessions 3, 4)
Text: ***Professional Learning Communities at Work***
- Independent and Guided Reading
- Facilitated discussions in your PLC Groups on Ch 4 & 5
- **Self Reflection Journal Entry**
- Readings for next session: Chapters 10: "Teaching in a Professional Learning Community"

October 5th (Session 5)
Text: ***Differentiating Instruction in the Regular Classroom***
- Introduction and Overview Chapter 1 What is Differentiation?
- Facilitated discussions and strategy presentations
- Complete Classroom Practices Inventory
- Assign Leaders to present overviews of assessment instruments for the in-service on Oct 12th
- **Self Reflection Journal Entry**
- Reading for next session: Chapter 2: "Who Are Your Students?"

Oct 12th Inservice (Session 6, 7, 8)
Text: ***Differentiating Instruction in the Regular Classroom***
- Report out – Classroom Practices Inventory
- Facilitated discussions led by participants on data collection instruments at the end of the chapter
- **Self Reflection Journal Entry**
- Reading for Session 9 Chapter 3: "What Do You Teach?"

October 19th (Session 9)
Text: ***Differentiating Instruction in the Regular Classroom***
- Facilitated discussion on Chapter 3
- Review SISD Curriculum Web Site
- PLCs begin to create a Curriculum Map
- **Self Reflection Journal Entry**

November 2nd (Session 10)
Text: ***Differentiating Instruction in the Regular Classroom***
- PLCs continue working on Curriculum Maps
- **Self Reflection Journal Entry**

Nov 9th & 16th (Session 11, 12)
Text: ***Differentiating Instruction in the Regular Classroom***
- PLC teams present Curricular Maps
- **Self Reflection Journal** Entry
- Reading for Session 13 & 14: Chapter 4: "How do you Teach?"

Nov 30th & Dec 7th (Session 13, 14)
Text: ***Differentiating Instruction in the Regular Classroom***
- Facilitated discussion on Chapter 4
- PLCs build Lesson Plans incorporating Bloom's Taxonomy and the Matrix Plan
- **Self Reflection Journal Entry**
- Reading for Session 15: Chapter 5: "What do students need? Flexible Instructional Groups"

January 11th (Session 15)
Text: ***Differentiating Instruction in the Regular Classroom***
- PLC groups report out re: Lesson Plans
- Facilitated discussions on Chapter 5
- **Self Reflection Journal Entry**
- Reading for Session 16: Chapter 6: "What do students need? Tiered Assignments"

Jan 18th & Feb 15th (Session 16, 17)
Text: ***Differentiating Instruction in the Regular Classroom***
- Facilitated discussion on Chapter 6
- PLC groups develop Tiered Assignments
- **Self Reflection Journal Entry**
- Reading for Session 18 - 23: Chapter 7: "What do students need? Choices" and Chapter 8: "What about grading?" and Chapter 9 "How do you Manage Differentiation?"

Feb 18th Inservice (Sessions 18 – 23)
Text: ***Differentiating Instruction in the Regular Classroom***
- PLC groups report out re: Tiered Assignments
- Facilitate discussion on Chapter 7, 8 & 9
- PLCs develop Design Project Matrix
- PLCs complete "Area and Volume" Check-up Activity
- PLCs report out on "Area and Volume" Check-up
- Individual participants create a plan for managing differentiation in his/her classroom.
- Individuals share plan with PLC group, revise as needed with input from PLC group
- **Self Reflection Journal Entry**
- Reading for Session 24 Chapter 10: "How do you differentiate for Special Populations?"

March 1st (Session 24)
Text: ***Differentiating Instruction in the Regular Classroom***
- Facilitated Discussion on Chapter 10
- Share developed differentiation plan with whole group
- **Self Reflection Journal Entry**
- Read: "Final Thoughts and Appendices A, B, and C"

March 8th (Session 25)
Text: ***Differentiating Instruction in the Regular Classroom***
- Share developed differentiation plan with whole group
- Facilitated Discussion on Final Paper and Project
- Reflective Paper addressing growth in working in a PLC and application of Differentiated Instruction.
- Each participant will develop a 7-10 minute differentiated instruction video clip with Lesson Plan for their final project
- **Self Reflection Journal Entry**

Mar 15th – Apr 14th (Sessions 26 – 30)
- Work on completing Final Paper and Final Project

Apr 15th Inservice
- Final projects and lesson plans will be presented today
- Turn in Final Paper to Mr. Higson
- Complete course evaluation document

Related Professional Organizations

Association for Supervision and Curriculum Development (ASCD)
National Principal's Association

Course Texts, Readings, Handouts, and Library Reserve:

Required Text/Materials:

Heacox, Ciane. (2002) *Differentiating Instruction in the Regular Classroom.* Minneapolis: Free Spirit Publishing

DuFour, Richard & Eaker, Robert. (1998) *Professional Learning Communities at Work.* Alexandria, VA: Association for Supervision and Curriculum Development

Content References:

Tomlinson, Carol Ann (1999*). The differentiated classroom; Responding to the needs of all learners.* Alexandria, VA: Association for Supervision and Curriculum Development.

Tomlinson, C.A., & Imbeau, M.B. (2010) *Leading and managing a differentiated classroom.* Alexandria, VA: Association for Supervision and Curriculum Development.

Drapeau, P. (2004). *Differentiated insruction: Making it work: A practical guide to planning, managing, and implementing a differentiated instruction to meet the needs of all learners.* New York: Scholastic..

Fox, J. & Hoffman, W (2011). *The differentiated instruction book of lists.* San Francisco: Jossey Bass

Kanold, Timothy D (2011). The five disciplines of PLC Leaders. Bloomington: Solution Tree Press

Standards References:

Contact Jennifer Harty, if you need the standards list from your content area's umbrella "selected topics" CCG.

Alaska Native Knowledge Network. (1998). *Alaska standards for culturally responsive schools.* Fairbanks, AK: University of Alaska Press.

IRA/NCTE Joint Task Force on Assessment. (1994). *Standards for the assessment of reading and writing.* Newark, DE: NCTE/IRA.

National Council of Teachers of English/International Reading Association. (1996). *Standards for the English language arts*. Newark, DE: NCTE/IRA.

NCTE Committee on Teacher Preparation and Certification. (1996). *Guidelines for the preparation of teachers of English language arts*. Chicago, IL: NCTE.

State of Alaska Department of Education and Early Development. (1997). *Standards for Alaska teachers*. Juneau, AK: Author.

State of Alaska Department of Education and Early Development. (2006). *Content standards for Alaska students.* Juneau, AK: Author.

State of Alaska Department of Education and Early Development. (1999). *Performance standards for Alaska students.* Juneau, AK: Author.

APPENDIX 2
Calendar Choices For 2012-13 School Year
As Voted by ASC Members at Each Site ASC Meeting

Following is the breakdown of votes from each Advisory School Council (ASC) for the 2012-2013 School Calendar. The ASC's voted on two calendar-related items this year.

1. Select between 5-day school week and 4-day school week
2. Select preferred 5-day school week calendar and preferred 4-day school week calendar.

ITEM 1: 5-day School Week or 4-day School Week

The raw vote totals (actual votes recorded at the ASC meetings) are shown in Table 1, below. The 4-day school week received over 4 times as many raw votes as the 5-day school week.

Table 1: School Week Length Raw Votes

School	5-Day School Week Raw Votes	4-Day School Week Raw Votes
BCS Kasaan	2	6
Edna Bay	4	0
Hollis	2	11
HV Coffman Cove	2	6
Nakauti	0	9
Port Alexander	4	4
Port Protection	0	4
Thorne Bay	5	48
Whale Pass	3	5
Total	**22**	**93**

The raw vote from each ASC is converted to a weighted vote, which is based on school size. One vote per school is tallied for the preferred calendar of the following schools: BCS Kasaan, Edna Bay, Hollis, HV Coffman Cove, Naukati, Port Alexander, Port Protection, and Whale Pass; two votes are tallied for the preferred calendar from Thorne Bay School.

Table 2 shows the preferred school week length selected by each ASC, based on raw votes, and the weighted vote score.

Table 2: School Week Length Weighted ASC Vote

School	Preferred Calendar	Weighted Vote
BCS Kasaan	4-day	1
Edna Bay	5-day	1
Hollis	4-day	1
HV Coffman Cove	4-day	1
Nakauti	4-day	1
Port Alexander	Tie	1
Port Protection	4-day	1
Thorne Bay	4-day	2
Whale Pass	4-day	1

The results show that most ASC's (80% of the weighted vote) preferred the 4-day school week:

5-day School Week: 1 vote
4-day School Week: 8 votes
Tie: 1 vote

ITEM 2: Preferred 5-day Week Calendar and Preferred 4-day Week Calendar

In the second vote, each ASC member selected their preferred 5-day school week calendar (either Calendar A or B) **and** their preferred 4-day week calendar (either Calendar C or D). Stakeholders were asked to vote on their preferred calendar for each school week length to ensure that their preference was represented, regardless of the school week length selected. The raw vote totals are shown in Table 3, below.

Table: 5-day Week and 4-day Week Preferred Calendars – Raw Votes

School	Calendar A (5-day week)	Calendar B (5 day week)	Calendar C (4-day week)	Calendar D (4-day week)
Coffman Cove	5	1	1	5
Edna Bay	4	0	0	4
Hollis	13	0	13	0
Kasaan	7	1	1	7
Nakauti	9	0	9	0
Port Alexander	7	1	0	8
Port Protection	2	2	4	0
Thorne Bay	29	18	31	20
Whale Pass	6	2	3	5
Total	**83**	**23**	**62**	**49**

Calendar A (5-day week) and Calendar C (4-day week) were the preferred calendars based on raw votes.

Table 4 shows the preferred 5-day school week calendar and preferred 4-day school week calendar for each ASC, based on raw vote totals, and the weighted vote for each.

Table 4: 5-day Week and 4-day Week Preferred Calendars – Weighted ASC Votes

School	Choice	Weighted Vote	Choice	Weighted Vote
Coffman Cove	A	1	D	1
Edna Bay	A	1	D	1
Hollis	A	1	C	1
Kasaan	A	1	D	1
Nakauti	A	1	C	1
Port Alexander	A	1	D	1
Port Protection	TIE	1	C	1
Thorne Bay	A	2	C	2
Whale Pass	A	1	D	1

The results show that Calendar A was the preferred 5-day school week calendar and Calendars C and D were tied for preferred 4-day school week calendar:

5-day Week Calendars		**4-day Week Calendars**	
Calendar A	9 votes	Calendar C	5 votes
Calendar B	0 votes	Calendar D	5 votes
Tie	1 vote		

APPENDIX 3
Number of FY12 Student "Out-of-Class" (OOC) Days Due to Travel for Extracurricular Activities and Sports Events

Event	Destination	Number of Participants	Days OOC During Event	Fridays OOC During Event	Total Student Days OOC	Total Student Fridays OOC	% Student OOC Days on Friday
National Archery Tournament	Kentucky	21	7	1	147	21	14%
Post Secondary Trip	Various locations in AK	13	5	1	65	13	20%
HS Basketball	Metlakatla	13	1	1	13	13	100%
	North Trip	19	8	2	152	38	25%
	Regionals – Sitka	20	7	1	140	20	14%
HS Volleyball	Hoonah	8	6	1	48	8	17%
	Juneau	7	6	1	42	7	17%
HS Wrestling	ACS – Anchorage	3	3	1	9	3	33%
	Ketchikan	6	1	1	6	6	100%
	Regionals – Sitka	6	3	1	18	6	33%
	State – Anchorage	2	3	1	6	2	33%
	Wrangell	6	1	1	6	6	100%
HS Cross Country	Regionals - Ketchikan	9	1	1	9	9	100%
MS Basketball	Petersburg	9	2	1	18	9	50%
MS Wrestling	Juneau	8	2	1	16	8	50%
	Ketchikan	8	1	1	8	8	100%
	State – Fairbanks	4	2	1	8	4	50%
	Wrangell	8	1	1	8	8	100%
HOBY Leadership	Anchorage	3	5	1	15	3	20%
Rose Urban Rural Exchange	Anchorage/ POW	5	10	2	50	10	20%
Out-of-Class Day Totals			**75**	**22**	**784**	**202**	**26%**

Friday out-of-class days account for 26% of total student days missed for these extra-curricular events. Additionally, Friday was the only day missed for 30% of the events.

APPENDIX 4
2012-2013 Preferred and Approved School Calendars

Southeast Island School District
2012-2013 4-day School Week School Calendar C
(Calendar Preferred by Stakeholders)

C	School Closes
E	End of Quarter
H	Legal Holiday
IS	Inservice Day
M	Parent-Teacher Conf Meeting reqts
N	Parent-Teacher Conf Not meeting reqts
O	School Opens
S	Saturday School
T	Testing
V	Vacation Day
W	Teacher Workday
X	Emergency Closure Day
	Students in Session

Aug-12

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	
	O					

# of Inservice Days: 4
# of Student Days: 4
# of Teacher Days: 9

Sep-12

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						
	H				W	

# of Inservice Days: 0
# of Student Days: 15
# of Teacher Days: 18

Oct-12

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			
					IS	
					W	

# of Inservice Days: 1
# of Student Days: 19
# of Teacher Days: 21

Nov-12

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	
				H	H	
					W	

# of Inservice Days: 0
# of Student Days: 16
# of Teacher Days: 20

Dec-12

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					
	V	H	V	V		
	V					

# of Inservice Days: 0
# of Student Days: 10
# of Teacher Days: 11

Jan-13

S	M	T	W	Th	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		
	H	V	V			
					W	

# of Inservice Days: 0
# of Student Days: 16
# of Teacher Days: 18

Feb-13

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28		
					IS	

# of Inservice Days: 1
# of Student Days: 16
# of Teacher Days: 17

Mar-13

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						
	V	V	V	V		
					W	

# of Inservice Days: 0
# of Student Days: 12
# of Teacher Days: 13

Apr-13

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				
	T	T	T	W		
					IS	

# of Inservice Days: 1
# of Student Days: 18
# of Teacher Days: 20

May-13

S	M	T	W	Th	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	
	H					
					W	

# of Inservice Days: 0
# of Student Days: 17
# of Teacher Days: 20

Jun-13

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						
				C	W	

# of Inservice Days: 0
# of Student Days: 4
# of Teacher Days: 5

Instructional Day:	
Kindergarten	
M-Th	5 hrs
Grade 1-12	
M-Th	7 hrs

Aug - Oct SubTotal	Student	Teacher
Days	38	48
Gr 1-12 Hrs	266	
Gr K Hrs	190	

Inservice Days:	5
Work Days:	4
Holidays:	1

Nov - Feb SubTotal	Student	Teacher
Days	58	66
Gr 1-12 Hrs	406	
Gr K Hrs	290	

Inservice Days:	1
Work Days:	3
Holidays:	4

Mar - Jun SubTotal	Student	Teacher
Days	51	58
Gr 1-12 Hrs	357	
Gr K Hrs	255	

Inservice Days:	1
Work Days:	5
Holidays:	1

2012-2013 TOTAL	Student	Teacher
Days	147	172
Gr 1-12 Hrs	1029	
Gr K Hrs	747	

Inservice Days:	7
Work Days:	12
Holidays:	6

Southeast Island School District

2012-2013 5-day School Week School Calendar A

(Calendar Approved by Department of Education and Early Development)

		Aug-12							Sep-12							Oct-12						
C	School Closes	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
E	End of Quarter				1	2	3	4							1		1	2	3	4	5	6
H	Legal Holiday																					
IS	Inservice Day	5	6	7	8	9	10	11	2	3	4	5	6	7	8	7	8	9	10	11	12	13
M	Parent-Teacher Conf									H											IS	
	Meeting reqts	12	13	14	15	16	17	18	9	10	11	12	13	14	15	14	15	16	17	18	19	20
N	Parent-Teacher Conf																					
	Not meeting reqts	19	20	21	22	23	24	25	16	17	18	19	20	21	22	21	22	23	24	25	26	27
O	School Opens				IS	IS	IS	W													E	
S	Saturday School	26	27	28	29	30	31		23	24	25	26	27	28	29	28	29	30	31			
T	Testing		IS	O																		
V	Vacation Day								30													
W	Teacher Workday																					
X	Emergency Closure Day	# of Inservice Days: 4							# of Inservice Days: 0							# of Inservice Days: 1						
	Students in Session	# of Student Days: 4							# of Student Days: 19							# of Student Days: 22						
		# of Teacher Days: 9							# of Teacher Days: 20							# of Teacher Days: 23						

	Nov-12							Dec-12							Jan-13							Feb-13						
	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	Th	F	S	S	M	T	W	T	F	S
					1	2	3							1			1	2	3	4	5						1	2
																	H	V	V	V								
	4	5	6	7	8	9	10	2	3	4	5	6	7	8	6	7	8	9	10	11	12	3	4	5	6	7	8	9
	11	12	13	14	15	16	17	9	10	11	12	13	14	15	13	14	15	16	17	18	19	10	11	12	13	14	15	16
																				E							V	
	18	19	20	21	22	23	24	16	17	18	19	20	21	22	20	21	22	23	24	25	26	17	18	19	20	21	22	23
					H	H			V	V	V	V	V										IS					
	25	26	27	28	29	30		23	24	25	26	27	28	29	27	28	29	30	31			24	25	26	27	28		
									V	H	V	V	V															
								30	31																			
									V																			
# of Inservice Days: 0								# of Inservice Days: 0							# of Inservice Days: 0							# of Inservice Days: 1						
# of Student Days: 20								# of Student Days: 10							# of Student Days: 19							# of Student Days: 18						
# of Teacher Days: 22								# of Teacher Days: 11							# of Teacher Days: 20							# of Teacher Days: 19						

	Mar-13							Apr-13							May-13							Jun-13						
	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	Th	F	S	S	M	T	W	T	F	S
						1	2		1	2	3	4	5	6				1	2	3	4							1
										T	T	T																
	3	4	5	6	7	8	9	7	8	9	10	11	12	13	5	6	7	8	9	10	11	2	3	4	5	6	7	8
																								C	W			
	10	11	12	13	14	15	16	14	15	16	17	18	19	20	12	13	14	15	16	17	18	9	10	11	12	13	14	15
													IS															
	17	18	19	20	21	22	23	21	22	23	24	25	26	27	19	20	21	22	23	24	25	16	17	18	19	20	21	22
		V	V	V	V	V																						
	24	25	26	27	28	29	30	28	29	30					26	27	28	29	30	31		23	24	25	26	27	28	29
						E										H												
	31																					30						
# of Inservice Days: 0								# of Inservice Days: 1							# of Inservice Days: 0							# of Inservice Days: 0						
# of Student Days: 16								# of Student Days: 21							# of Student Days: 22							# of Student Days: 2						
# of Teacher Days: 16								# of Teacher Days: 22							# of Teacher Days: 23							# of Teacher Days: 3						

Instructional Day:	
Kindergarten	
M-F	4 hrs
Grade 1-12	
M-Th	6 hrs
F	5 hrs

Aug - Oct SubTotal	Student	Teacher
Days	45	52
Gr 1-12 Hrs	262	
Gr K Hrs	180	

Inservice Days:	5
Work Days:	1
Holidays:	1

Nov - Feb SubTotal	Student	Teacher
Days	67	72
Gr 1-12 Hrs	390	
Gr K Hrs	268	

Inservice Days:	1
Work Days:	0
Holidays:	4

Mar - Jun SubTotal	Student	Teacher
Days	61	64
Gr 1-12 Hrs	354	
Gr K Hrs	244	

Inservice Days:	1
Work Days:	1
Holidays:	1

2012-2013 TOTAL	Student	Teacher
Days	173	188
Gr 1-12 Hrs	1006	
Gr K Hrs	692	

Inservice Days:	7
Work Days:	2
Holidays:	6

APPENDIX 4 (continued)
2013-2014 Calendar Options

Southeast Island School District
2013-2014 5-day School Week Calendar - Option A

C	School Closes
E	End of Quarter
H	Legal Holiday
IS	Inservice Day
M	Parent-Teacher Conf Meeting reqts
N	Parent-Teacher Conf Not meeting reqts
O	School Opens
S	Saturday School
T	Testing
V	Vacation Day
W	Teacher Workday
X	Emergency Closure Day
	Students in Session

Aug-13

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31
	IS	IS	IS	W		

# of Inservice Days: 3
# of Student Days: 0
# of Teacher Days: 4

Sep-13

S	M	T	W	T	F	S
1	2	3	4	5	6	7
	H	IS	O			
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

# of Inservice Days: 1
# of Student Days: 19
# of Teacher Days: 21

Oct-13

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
					IS	
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

# of Inservice Days: 1
# of Student Days: 22
# of Teacher Days: 23

Nov-13

S	M	T	W	T	F	S
					1	2
					E	
3	4	5	6	7	8	9
10	11	12	13	14	15	16
	M	M	M	M		
17	18	19	20	21	22	23
				H	H	
24	25	26	27	28	29	30

# of Inservice Days: 0
# of Student Days: 19
# of Teacher Days: 21

Dec-13

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
			V	V	V	
22	23	24	25	26	27	28
	V	V	H	V	V	
29	30	31				
	V	V				

# of Inservice Days: 0
# of Student Days: 12
# of Teacher Days: 13

Jan-14

S	M	T	W	Th	F	S
			1	2	3	4
			H	V	V	
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
					E	
26	27	28	29	30	31	

# of Inservice Days: 0
# of Student Days: 20
# of Teacher Days: 21

Feb-14

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
					V	
16	17	18	19	20	21	22
	IS					
23	24	25	26	27	28	

# of Inservice Days: 1
# of Student Days: 18
# of Teacher Days: 19

Mar-14

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
	V	V	V	V	V	
23	24	25	26	27	28	29
30	31					

# of Inservice Days: 0
# of Student Days: 16
# of Teacher Days: 16

Apr-14

S	M	T	W	T	F	S
		1	2	3	4	5
		T	T		E	
6	7	8	9	10	11	12
13	14	15	16	17	18	19
	IS	M	M	M		
20	21	22	23	24	25	26
27	28	29	30			

# of Inservice Days: 1
# of Student Days: 21
# of Teacher Days: 22

May-14

S	M	T	W	Th	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31
	H					

# of Inservice Days: 0
# of Student Days: 21
# of Teacher Days: 22

Jun-14

S	M	T	W	T	F	S
1	2	3	4	5	6	7
					C	W
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

# of Inservice Days: 0
# of Student Days: 5
# of Teacher Days: 6

Instructional Day:

Kindergarten	
M-F	4 hrs
Grade 1-12	
M-Th	6 hrs
F	5 hrs

Aug - Oct SubTotal

	Student	Teacher
Days	41	48
Gr 1-12 Hrs	239	
Gr K Hrs	164	

Inservice Days:	5
Work Days:	1
Holidays:	1

Nov - Feb SubTotal

	Student	Teacher
Days	69	74
Gr 1-12 Hrs	402	
Gr K Hrs	276	

Inservice Days:	1
Work Days:	0
Holidays:	4

Mar - Jun SubTotal

	Student	Teacher
Days	63	66
Gr 1-12 Hrs	365	
Gr K Hrs	252	

Inservice Days:	1
Work Days:	1
Holidays:	1

2012-2013 TOTAL

	Student	Teacher
Days	173	188
Gr 1-12 Hrs	1006	
Gr K Hrs	692	

Inservice Days:	7
Work Days:	2
Holidays:	6

Southeast Island School District

2013-2014 5-day School Week Calendar - Option B

C	School Closes
E	End of Quarter
H	Legal Holiday
IS	Inservice Day
M	Parent-Teacher Conf
	Meeting reqts
N	Parent-Teacher Conf
	Not meeting reqts
O	School Opens
S	Saturday School
T	Testing
V	Vacation Day
W	Teacher Workday
X	Emergency Closure Day
	Students in Session

Aug-13

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

# of Inservice Days:	4
# of Student Days:	4
# of Teacher Days:	9

Sep-13

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

# of Inservice Days:	0
# of Student Days:	20
# of Teacher Days:	21

Oct-13

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

# of Inservice Days:	1
# of Student Days:	22
# of Teacher Days:	23

Nov-13

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

# of Inservice Days:	0
# of Student Days:	19
# of Teacher Days:	21

Dec-13

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

# of Inservice Days:	0
# of Student Days:	12
# of Teacher Days:	13

Jan-14

S	M	T	W	Th	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

# of Inservice Days:	0
# of Student Days:	19
# of Teacher Days:	20

Feb-14

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	

# of Inservice Days:	1
# of Student Days:	19
# of Teacher Days:	20

Mar-14

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

# of Inservice Days:	0
# of Student Days:	16
# of Teacher Days:	16

Apr-14

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

# of Inservice Days:	1
# of Student Days:	21
# of Teacher Days:	22

May-14

S	M	T	W	Th	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

# of Inservice Days:	0
# of Student Days:	21
# of Teacher Days:	23

Jun-14

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

# of Inservice Days:	
# of Student Days:	
# of Teacher Days:	

Instructional Day:	
Kindergarten	
M-F	4 hrs
Grade 1-12	
M-Th	6 hrs
F	5 hrs

Aug - Oct SubTotal	Student	Teacher
Days	46	53
Gr 1-12 Hrs	268	
Gr K Hrs	184	

Inservice Days:	5
Work Days:	1
Holidays:	1

Nov - Feb SubTotal	Student	Teacher
Days	69	74
Gr 1-12 Hrs	402	
Gr K Hrs	276	

Inservice Days:	1
Work Days:	0
Holidays:	4

Mar - Jun SubTotal	Student	Teacher
Days	58	61
Gr 1-12 Hrs	336	
Gr K Hrs	232	

Inservice Days:	1
Work Days:	1
Holidays:	1

2012-2013 TOTAL	Student	Teacher
Days	173	188
Gr 1-12 Hrs	1006	
Gr K Hrs	692	

Inservice Days:	7
Work Days:	2
Holidays:	6

Southeast Island School District
2013-2014 4-day School Week Calendar - Option C

C	School Closes
E	End of Quarter
H	Legal Holiday
IS	Inservice Day
M	Parent-Teacher Conf Meeting reqts
N	Parent-Teacher Conf Not meeting reqts
O	School Opens
S	Saturday School
T	Testing
V	Vacation Day
W	Teacher Workday
X	Emergency Closure Day
	Students in Session

Aug-13

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

# of Inservice Days: 4
# of Student Days: 4
# of Teacher Days: 9

Sep-13

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

H W

# of Inservice Days: 0
# of Student Days: 16
# of Teacher Days: 19

Oct-13

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

IS W E

# of Inservice Days: 1
# of Student Days: 19
# of Teacher Days: 21

Nov-13

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

W M M M M H H W

# of Inservice Days: 0
# of Student Days: 15
# of Teacher Days: 19

Dec-13

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

V V H V V V

# of Inservice Days: 0
# of Student Days: 10
# of Teacher Days: 11

Jan-14

S	M	T	W	Th	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

H V V W E

# of Inservice Days: 0
# of Student Days: 15
# of Teacher Days: 17

Feb-14

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	

W IS

# of Inservice Days: 1
# of Student Days: 16
# of Teacher Days: 17

Mar-14

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

W V V V V

# of Inservice Days: 0
# of Student Days: 13
# of Teacher Days: 14

Apr-14

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

T T/E W M M M IS

# of Inservice Days: 1
# of Student Days: 18
# of Teacher Days: 20

May-14

S	M	T	W	Th	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

W W H

# of Inservice Days: 0
# of Student Days: 16
# of Teacher Days: 19

Jun-14

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

C W

# of Inservice Days: 0
# of Student Days: 4
# of Teacher Days: 5

Instructional Day:	
Kindergarten	
M-F	5 hrs
Grade 1-12	
M-Th	7 hrs

Aug - Oct SubTotal	Student	Teacher
Days	39	49
Gr 1-12 Hrs	273	
Gr K Hrs	195	

Inservice Days:	5
Work Days:	4
Holidays:	1

Nov - Feb SubTotal	Student	Teacher
Days	56	65
Gr 1-12 Hrs	392	
Gr K Hrs	280	

Inservice Days:	1
Work Days:	4
Holidays:	4

Mar - Jun SubTotal	Student	Teacher
Days	51	58
Gr 1-12 Hrs	357	
Gr K Hrs	255	

Inservice Days:	1
Work Days:	5
Holidays:	1

2012-2013 TOTAL	Student	Teacher
Days	146	172
Gr 1-12 Hrs	1022	
Gr K Hrs	742	

Inservice Days:	7
Work Days:	13
Holidays:	6

Teacher Days/Hours

In a 5-day school calendar, teachers work 188 days x 7.0 hrs/day = 1316 hrs/school year

In this 4 day proposed calendar, teachers work 159 days @ 8.0 hrs/day + 13 Friday workdays @ 3.2 hrs/day = 1316.2 hrs/school year

Actual teacher hours are: 44.2 hrs of teacher Friday workdays + 1272 hrs instructional = **1316.2 hrs/school year**

Student Days/Hours

Traditional 5-day School Week

Students in grades K-12 traditionally attend a minimum of 172 days/year.

Students in grades 1-12 attend school 6 hrs/day Monday through Thursday, so 140 days x 6 hrs/day = 840 hrs

Students in grades 1-12 normally attend school 5 hrs/day on Fridays, so 32 days x 5 hrs/day = 160 hrs

Therefore students in grades 1-12 would spend 840 hrs + 160 hrs = **1000 hrs** in school each year.

Kindergarten is traditionally 4 hrs/day x 172 days = 688 hrs in each school year

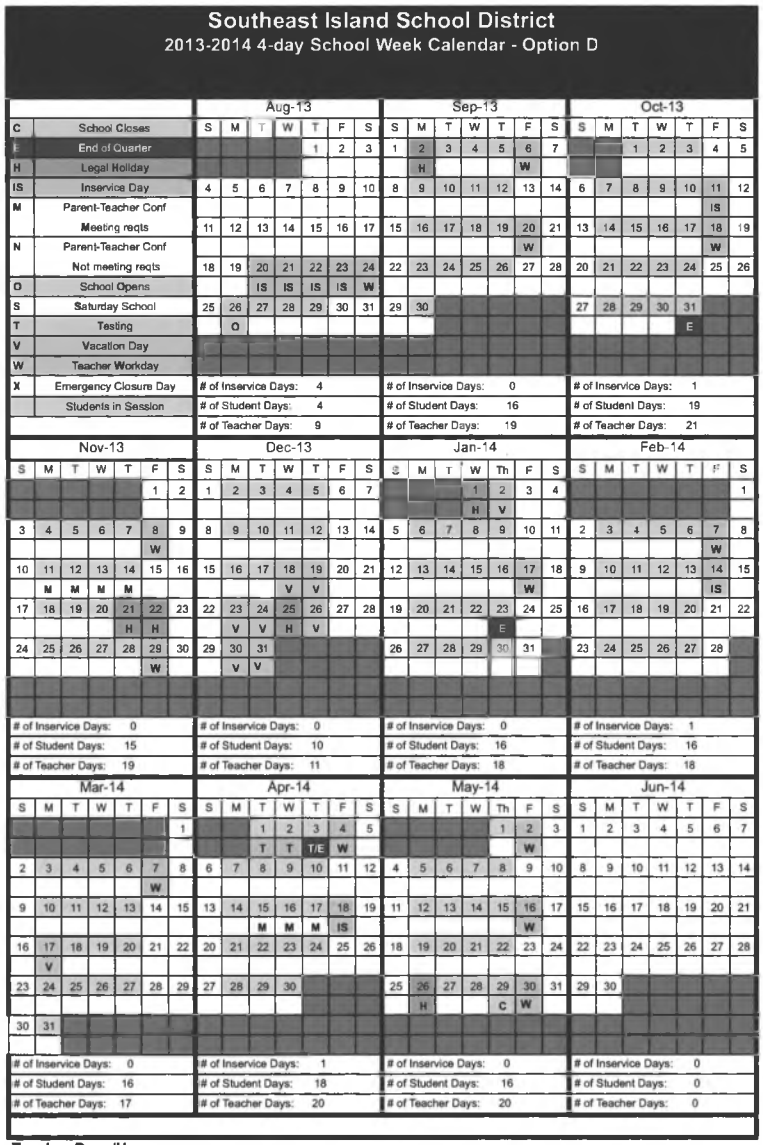
Alternative 4-day School Week

In this 4-day proposed calendar, students in grades 1-12 attend 146 days/year @ 7 hrs/day = **1022 hrs**/school year

This is an increase of 22 hrs or almost 4 days added to the instructional school year.

Kindergarten will attend 5 hr/day x 146 days/year = 730 hrs/school year

This is an increase of 42 hrs or over 8 days added to the instructional school year for Kindergarteners



Instructional Day:	
Kindergarten	
M-F	5 hrs
Grade 1-12	
M-Th	7 hrs

Aug - Oct SubTotal	Student	Teacher
Days	39	49
Gr 1-12 Hrs	273	
Gr K Hrs	195	

Inservice Days:	5
Work Days:	4
Holidays:	1

Nov - Feb SubTotal	Student	Teacher
Days	57	66
Gr 1-12 Hrs	399	
Gr K Hrs	285	

Inservice Days:	1
Work Days:	4
Holidays:	4

Mar - Jun SubTotal	Student	Teacher
Days	50	57
Gr 1-12 Hrs	350	
Gr K Hrs	250	

Inservice Days:	1
Work Days:	5
Holidays:	1

2013-2014 TOTAL	Student	Teacher
Days	146	172
Gr 1-12 Hrs	1022	
Gr K Hrs	742	

Inservice Days:	7
Work Days:	13
Holidays:	6

Teacher Days/Hours

In a 5-day school calendar, teachers work 188 days x 7.0 hrs/day = 1316 hrs/school year

In this 4 day proposed calendar, teachers work 159 days @ 8.0 hrs/day + 13 Friday workdays @ 3.2 hrs/day = 1316.2 hrs/school year

Actual teacher hours are: 44.2 hrs of teacher Friday workdays + 1272 hrs instructional = **1316.2 hrs/school year**

Student Days/Hours

Traditional 5-day School Week

Students in grades K-12 traditionally attend a minimum of 172 days/year.

Students in grades 1-12 attend school 6 hrs/day Monday through Thursday, so 140 days x 6 hrs/day = 840 hrs

Students in grades 1-12 normally attend school 5 hrs/day on Fridays, so 32 days x 5 hrs/day = 160 hrs

Therefore students in grades 1-12 would spend 840 hrs + 160 hrs = **1000 hrs** in school each year.

Kindergarten is traditionally 4 hrs/day x 172 days = 688 hrs in each school year

Alternative 4-day School Week

In this 4-day proposed calendar, students in grades 1-12 attend 146 days/year @ 7 hrs/day = **1022 hrs**/school year

This is an increase of 22 hrs or almost 4 days added to the instructional school year.

Kindergarten will attend 5 hr/day x 146 days/year = 730 hrs/school year

This is an increase of 42 hrs or over 8 days added to the instructional school year for Kindergarteners

APPENDIX 5
Example Class Schedules

Example Four-Day Week Middle/High School & VTC Schedule

		Mrs. Fitz	Mr. Martin	Mr. Young	Mrs. Hughes	Ms. Moody	Mr. Adams
Breakfast	7:30 – 7:55						
Homeroom	8:30 – 8:40						
1st Period	8:10 -9:15	Biology VTC	9th/10th English	MS English	Calculus	World History	Horticulture
Passing	9:15 – 9:20						
2nd Period	9:20-10:25	Biology (TNB)	11th/12th English VTC	US History	Algebra I	Productivity/ Multimedia	MS Social St.
Passing	10:25-10:30						
3rd Period	10:30-11:35	MS Science	11th/12th English	US History VTC	Geometry VTC	High School PE (S1) Health (S2)	Entrepreneur-ship
Lunch	11:35-12:05						
4th Period	12:05-1:10	Earth Science	World History VTC	Correspond-ence School	Algebra II/ Pre-calculus VTC	Middle School PE/Health	
Passing	1:10 – 1:15						
5th Period	1:15-2:20	Spanish 1 VTC	Drama	Fine Woodwork	Algebra II/ Pre-calculus	MS Study Skills/Tech	
Passing	2:20-2:25						
6th Period	2:25 – 3:30	Spanish I	Yearbook & Newspaper	Fine Woodwork	Algebra 1 VTC	Academic Decathlon	

Each class is 65 minutes long with a 10 min homeroom at the start of the day and a half hour lunch break.
Classes that are highlighted in yellow are distance delivery classes. This schedule is set in such a way for teachers to collaboratively plan thematic units across content areas (Math-Science and Social Studies-English).

Example Four-Day School Week Elementary School Schedule

		Kindergarten	1st/2nd Grade	3rd/4th Grade	5th/6th Grade
Breakfast	7:30 – 7:55				
	8:00 -9:30	Calendar/Reading and Language Arts/Music	Leveled Reading and Language Arts Groups	Leveled Reading and Language Arts Groups	Leveled Reading and Language Arts Groups
Snack Break & Recess	9:30 – 9:50				
	9:50-11:20	Math/Social Studies/Art	Leveled Math Groups	Leveled Math Groups	Leveled Math Groups
Lunch	11:20 – 11:50				
	11:50-12:40	Science/Health/PE	Science	Science	Science
	12:40-1:30		Health and PE	Health and PE	Health and PE
Optional Recess	1:30 – 1:50				
	1:50-2:40		Music/Art	Music/Art	Music/Art
	2:40 – 3:30		Social Studies	Social Studies	Social Studies

This schedule allows for leveled grouping of students for Math and Reading/Language Arts groups. This also allows for teacher collaboration in Math and Reading to place, teach and move students from level to level regardless of the grade and/or time in the school year. The schedule also allows for teachers to plan and implement thematic units for all subjects across grade levels.

Example Five-Day Week Middle/High School & VTC Schedule

		Mrs. Fitz	Mr. Martin	Mr. Young	Mrs. Hughes	Ms. Moody	Mr. Adams
Breakfast	8:00 – 8:30						
Homeroom	8:30 – 8:40						
1st Period	8:40 -9:35	Biology VTC	9th/10th English	MS English	Calculus	World History	Horticulture
Passing	9:35 – 9:40						
2nd Period	9:40-10:35	Biology (TNB)	11th/12th English VTC	US History	Algebra I	Productivity/ Multimedia	MS Social St.
Passing	10:35-10:40						
3rd Period	10:40-11:35	MS Science	11th/12th English	US History VTC	Geometry VTC	High School PE (S1) Health (S2)	Entrepreneur-ship
Lunch	11:35-12:05						
4th Period	12:05-1:00	Earth Science	World History VTC	Correspond-ence School	Algebra II/ Pre-calculus VTC	Middle School PE/Health	
Passing	1:00 – 1:05						
5th Period	1:05-2:00	Spanish 1 VTC	Drama	Fine Woodwork	Algebra II/ Pre-calculus	MS Study Skills/Tech	
Passing	2:00-2:05						
6th Period	2:05 – 3:00	Spanish I	Yearbook & Newspaper	Fine Woodwork	Algebra 1 VTC	Academic Decathlon	

Each class is 55 minutes long with a 10 minute homeroom at the start of the day and a half hour lunch break.
Classes that are highlighted in yellow are distance delivery classes.

Example Five-Day School Week Elementary School Schedule

		Kindergarten	1st/2nd Grade	3rd/4th Grade	5th/6th Grade
Breakfast	8:00 – 8:25				
	8:30 – 9:50	Calendar/Reading and Language Arts/Music	Leveled Reading and Language Arts Groups	Leveled Reading and Language Arts Groups	Leveled Reading and Language Arts Groups
Snack Break & Recess	9:50 – 10:05				
	10:05 – 11:25	Math/Social Studies/Art	Leveled Math Groups	Leveled Math Groups	Leveled Math Groups
Lunch	11:25 – 11:55				
	11:55 – 12:30	Science/Health/PE	Science	Science	Science
	12:30 – 1:30		Health and PE	Health and PE	Health and PE
Optional Recess	1:30 – 1:40				
	1:40 – 2:20		Music/Art	Music/Art	Music/Art
	2:20 – 3:00		Social Studies	Social Studies	Social Studies

RESEARCH BRIEF:

A Review of the Evidence on the

Four-Day School Week

Prepared by

Christine Donis-Keller

Research Associate

David L. Silvernail

Director

Center for Education Policy, Applied Research and Evaluation

University of Southern Maine

February 2009

RESEARCH BRIEF
A Review of the Evidence on the Four-Day School Week

Christine Donis-Keller **David Silvernail**

January 2009

Introduction

Faced with volatile fuel and energy prices and rising education costs, school districts across the country are considering ways in which to reduce their expenditures and increase efficient use of limited resources. The four-day school week has been proposed as one solution to address budget shortfalls. News reports indicate that districts in several states including New York, Iowa, Minnesota, Ohio, Pennsylvania, Kansas, and Louisiana are considering such a shift in instructional time. Proponents argue that reducing the number of days students attend classes may yield savings in transportation, facilities, and personnel costs.

At present, the four-day school week is being used in more than 120 school districts across the country, in states including New Hampshire, Colorado and New Mexico. Use of the four-day school week also extends beyond our borders to several provinces in Canada, France, and Britain.

This research brief provides a history of the reform and presents a synthesis of the research base, albeit limited, focused on the implementation and impact of moving to a four-day school week schedule. Also included is a discussion of the most commonly voiced concerns.

Methodology

Research for this brief relied on many resources, including a literature search of the Educational Resources Information Center (ERIC), Pro-Quest-UMI, and the World Wide Web, for the terms "four-day school week" and "4-day school week." In addition, researchers examined state and district websites known to use a four-day school week, and other sources, including a major news media, using similar search terms. Researchers also contacted education administrators and offices across the country concerning local regulations governing the four-day week. It is important to note that while there is

considerable anecdotal information about the potential benefits of four-day school weeks, there is limited systematic research on the impacts of this reform.

Background

The four-day school week has a nearly 40-year history in the US. Approximately 17 states currently have some school districts that operate on a four-day week for some part of the school year. Most are west of the Mississippi and include Arizona, California, Colorado, Idaho, Kansas, Kentucky, Louisiana, Michigan, Minnesota, Montana, New Mexico, Oregon, South Dakota, Texas, Utah, Wisconsin and Wyoming (Chmelynski, 2003; Darden, 2008; Durr, 2003). Other states, such as Arkansas, Delaware, and Virginia, have authorized a four-day week, but currently have no districts using the condensed schedule (Darden, 2008). The practice has been used in other states such as Hawaii (Koki, 2002) and yet other states are considering legislation to permit an alternative school schedule. A July 2008 national survey of school administrators concerning fuel and energy issues indicates that while 3% of the responding superintendents were in districts implementing a four-day school week, 15% were in districts considering such a move. Daily news reports from across the country reflect this increased interest.

The four-day week is currently most widely used in the states of Colorado, Wyoming and New Mexico (Dam, 2006; Darden, 2008). Cimarron School District in New Mexico has the longest established use of the schedule in the country: they have consistently utilized the four-day schedule since switching to it in 1973-74 (Feaster, 2002). The majority of districts utilizing a four-day week are small and rural and serve on average less than 1,000 students (Chamberlain & Plucker, 2003).

Although the earliest use of the four-day week seems to have been in the 1930s in South Dakota, the most recent wave of implementation may have originated in Maine. In 1971-72, Maine School Administrative District 3 (MSAD 3) began a three-year experiment with a four-day week schedule (Feaster, 2002; Roeth, 1985). Two factors led to the decision to implement the four-day week: citizens had voted to cut district operating expenses by ten percent and the school district was awarded a federal Title III grant for professional development. The superintendent of MSAD 3 addressed the United

States House of Representatives in a special report to Congress about the four-day school week, bringing the practice to the national stage (Roeth, 1985). Although the experiment yielded cost savings and improved professional practice, MSAD 3 returned to the five-day school week after three years. At the conclusion of their federal grant, an easing of energy concerns coupled with an increase in the number of required in-service days for teachers led the commissioner of education to deny the school board's request for the continuation of the four-day school week (Roeth, 1985).

Districts in Massachusetts and New Jersey also conducted early trials of the four-day week in the early 1970s, but returned to a five-day week when budget pressures eased (Feaster, 2002). Although their number of school districts using the four-day school week in the US has increased over 100 percent since its introduction, the 120 school districts utilizing a four-day week constitute less than one percent of all school districts in the US.

Four-day Models

Districts and schools implement the four-day model differently. A review of the literature reveals three primary four-day week 'models':

- *4-day week in winter months only:* Closing school on the fifth days allows for additional energy savings during the most energy-intensive (coldest) months. This model has been used in some districts in New Mexico, Michigan's Arenac Eastern School District, and Southern Columbia Area School District in Pennsylvania.

- *4-day week every other week:* Lengthened instructional days are held for nine consecutive school days with the tenth day off. This model was used in MSAD 3 in Maine in the early 1970s.

- *4-day week during the entire school year:* Each week consists of four lengthened instructional days with a fifth day off. This is the model most recently implemented in MACCRAY School District, MN in 2008-09.

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. Fridays are often chosen because of competing commitments on this day such as athletic events and other activities. Other districts elect to close on Monday because gymnasiums

often have to be lit and heated to accommodate Friday athletic events and other activities, whereas fewer such activities occur on Mondays (Blankenship, 1984).

In all models, the use of the fifth day varies. In some districts the off day is used for extracurricular activities, sports, professional development for teachers, parent teacher conferences, enrichment activities, or extra student supports (Wilmoth, 1995). In other districts, school is simply closed on the fifth day and students and teachers use the time at their discretion. The fifth day is often used to schedule personal business such as medical and dental appointments, for students to work at part-time jobs, as preparation time for teachers, and for time with family (Dam, 2006). In rural areas where medical offices may be a great distance, a trip to the doctor often means missing a day from school for teachers and students; encouraging people to schedule appointments on the day off may in some cases reduce absenteeism (Dam, 2006).

During the 1970s, the most compelling reason for districts to consider alternative scheduling was the energy crisis. To date, potential savings on facilities and transportation continues to be one of the primary reason districts consider the switch. However, federal grants for professional development and other instructional and educational issues have also prompted districts to consider consolidation of instructional time. Federal grants for professional development led districts such as Franklin Pierce School District in Washington and MSAD 3 in Maine to seek alternative schedules to promote more time for professional development activities and common planning time for teachers (Roeth, 1985). A lengthened school day also provided increased learning blocks for instruction.

With a waiver from the state, in 1972 MSAD 3 embarked upon their "experiment" with the four-day school week. In addition to cost savings, the goal of the change was to bring about a shift in teaching practice toward a more individualized learning program in order to increase teachers' effectiveness with students. The fifth day of the week was frequently used for intensive professional development activities to support teachers' change in practice.

A similar intervention was funded by the federal government in Colorado in the early 1980s. Guided by the Effective Schools research literature, emphasizing greater collaboration, common planning, professional development, and measuring time-on-task

performance, the Cotopaxi/Westcliffe School District used the reduction in the number of student school days and transportation savings to provide extra time for teachers to participate in professional development and common planning. Additional savings accrued because the district did not have to pay substitute teachers to cover those workshop hours (Blackadar & Nachtigal, 1986).

Impacts

Despite over 35 years of implementation, few studies have documented the impact of the four-day school week. The impact of the four-day week is generally considered in four areas: (1) financial savings, (2) student achievement, (3) other student and teacher outcomes, and (4) stakeholder satisfaction. The most common means of identifying its success or failure are reports or evaluations conducted by districts themselves. As noted by many observers, the literature that exists on the four-day school week is mainly positive, but not often peer-reviewed or scientifically-based, and few summaries of this literature provide any critical analysis of the results.

1. Financial

As one of the primary motivations for considering, switching to, and maintaining a four-day school week, it is important to consider actual savings accrued in districts that use the four-day schedule. Anticipated savings are typically in transportation, food and food service staff, hourly staff, as well as facilities energy costs and substitute teacher pay. Calculating those savings in real terms is more difficult, and limited data are available, but savings range from two to nine percent of a school districts operating budget.

In the earliest applications of the four-day week, districts did see savings, though often not as much as originally hoped. For example, in Maine, a report issued by the district after one year of implementation in 1972 lists total one-year savings of $18,794 ($92,190 adjusted for inflation) for 18 no-school Fridays (the "experiment" operated a four-day week bi-weekly). The amount, nearly 1.5% of the total operating budget, reflected savings in transportation including salaries, bus depreciation, and fuel as well as in the operation of the physical plant, school lunch and teacher aides (Feaster, 2002). The

district's report estimates that utilizing a four-day week schedule every week (in contrast to bi-weekly) would yield savings closer to $35,496 (the equivalent of $174,117 in 2007; MSAD #3, 1972).

Researchers report that districts implementing a four-day week schedule have found savings on utilities, school buses, and long-term building wear and tear (Blankenship, 1984; Culbertson, 1982; Fager, 1997; Grau & Shaughnessy, 1987; Koki, 1992; Sagness & Salzman, 1993). While transportation and utilities provide obvious areas for savings, districts have found that pay for substitute teachers has also decreased because of reduced teacher absences (Nelson, 1983; Yarbrough and Gilman, 2006). Nelson's evaluation of the four-day week in Sheridan County, WY found that the biggest difference in cost was in substitute teachers. In their evaluation of the implementation of a four-day week in Webster County, KY, which serves 1,800 students, Yarbrough and Gilman report savings amounting to two percent of the school system's budget: approximately $200,000 per year in transportation, reduced overtime for support staff, reduced worker's compensation, and reduced need for substitute teachers. Reeves (1999) reports four percent in similar cost savings in the $5.5 million budget in East Grand School District in East Granby, CO during the mid-1980s.

In an evaluation of Colorado's 62 school districts using a four-day school week, Dam (2006) notes the following "reliable" trends in financial outcomes in four areas: transportation, food service, utilities, and staff. He states that transportation costs may be reduced by about 20% but notes that in order to realize that level of savings districts must severely restrict or eliminate transportation for activities or programs not conducted on regular school days. While some costs remain relatively constant, such as capital, insurance, maintenance, and administrative costs, reductions may be made in fuel, oil, salaries, and supervisory costs. Net pay for transportation employees would be reduced. In food service, Dam finds that if districts are subsidizing their food service program from the general fund, 20% of that subsidy may be saved since the program runs only four days. However, certain fixed costs within this category are not reduced. Utilities savings, he observes, may be comparable to those on a typical three-day weekend if buildings are actually closed. However, he notes that common practice is for school buildings to be open for extra activities and for the use of staff and in most cases, heat is

provided. Finally, in terms of staff, the majority are either on contract or on regular work weeks. In the four-day week districts, he reports that secretaries usually work 10-hour days with offices closed on the off day, and teachers and administrators usually receive the same annual salary. Hourly employees who are tied directly to the school day, such as aides and paraprofessionals, may or may not work the same number of hours per week.

The savings, however, are not always as great as expected, particularly if personnel costs are not reduced (Chamberlain & Plucker, 2003; Richard, 2002). As a result of limited savings some districts have abandoned the practice early on (Reeves, 1999). An analysis by Michael (2003) of potential savings in Indiana demonstrates the difficulties of finding widespread savings without reducing teacher, administrator, and support staff salaries. A 20% reduction in transportation, facilities, and food services costs, he argues, amounts to a small fraction of the overall budget, the bulk of which is made up of salaries. In addition, these savings would be offset by childcare costs generated by a fifth non-school day.

2. Student Achievement

One of the primary concerns about the implementation of the four-day week pertains to the impact on student learning and achievement. Critics worry that the reduction in instructional days will negatively affect student learning. Few studies have sought to document the impact of the four-day week on student achievement, and researchers argue that because the four-day week is implemented in small, rural districts, data have been limited. Much of the literature on the practice concludes that a condensed schedule may have a positive effect, and in most cases has no negative impact. Some of the key studies in the field are described below.

In a study conducted using achievement data from five rural Colorado school districts before and after implementation of a four-day week calendar, researchers examined scores across the same group of students for four years, and across the same grade level for the same period. They found that the change in schedule had no discernable impact on test performance (Daly & Richburg, 1984).

In a study of New Mexico's four-day schools McCoy (1983) demonstrates that not only did students' achievement not suffer as a result of the change in calendar, in

some districts it actually improved. In addition, performance on standardized tests remained above state and national averages (Koki, 2002). Cimarron, New Mexico's results show more gains on the four-day schedule than those made on the five-day schedule according to a summary of test score results provided by Grau and Shaugnessy (1987). Yarborough and Gilman (2006) report similar findings in Webster, KY, which switched to a four-day week in 2003. Reinke's (1987) summary of annual reports delivered to the Oregon State Department of Education by districts using the four-day week similarly documents maintenance or slight improvement in student achievement during the period after implementation of the condensed calendar. However, although widely cited, the report provides no actual achievement data or analysis.

Using a pre-post cohort design, Sagness and Salzman (1993) examined the changes in achievement test scores during a one-year experiment with a four-day week in a district in suburban Idaho. Their findings were uneven for each cohort with no clear pattern of gains or losses, which they find is consistent with trends in previous years before the implementation of the four-day week.

Finally, Feaster (2002) examined achievement data in Custer, SD over a ten-year period and found that district fourth- and eighth-grade students continued to exceed the state average after the implementation of a four-day week calendar (as they had done using a five-day week), and that achievement levels among all district students did not significantly change with the advent of the revised schedule.

3. Other Student and Teacher Outcomes

One of the most positive and ubiquitous findings in several studies and reports examining the four-day week has been in increased attendance for both teachers and students (Blankenship, 1984; Koki, 1992; Grau & Shaughnessy, 1987; Sagness & Salzman, 1993). A decline in the high school drop out rate has also been observed (Grau & Shaughnessy, 1987), as well as a decline in student disciplinary referrals (Koki, 1992).

Studies using surveys of teachers and students have found that other observed benefits include fewer class interruptions and distractions because of the lengthened day (and thus class periods) which leads to increasing the efficiency of instruction (Blankenship, 1984; Koki, 1992; Grau & Shaughnessy, 1987; Culbertson, 1982). A

common worry among districts considering the calendar shift stems from research literature that calls for increasing students' contact hours in order to improve achievement. However, proponents of the schedule argue that the lengthened day used in a four-day week schedule allows for longer class periods and thus better use of class time, with more in-depth focus on particular subjects during a given class (Reinke, 1987).

The separation of academic and extra-curricular activities is also facilitated by a four-day schedule as these activities may be pursued on the fifth day of the week (Feaster, 2002). Greater participation in extracurricular activities has been observed in some cases and is attributed to the increased time available for such activities (Fager, 1997). For teachers, the fifth day provides more time for staff development if the day off is used for this purpose (Blankenship, 1984). Administrators also note that a four-day schedule allows for flexibility in the event of weather-related school cancellations, as schools can make up missed days without lengthening the school year (Blankenship, 1984).

4. Stakeholder Satisfaction

Many studies have focused on teacher, student, and community satisfaction with the switch to a four-day school week (Feaster, 2002; Hale, 2007; Maine State Department of Education, 1972; Nelson, 1983; Wilmoth, 1995). Although there is often public pushback on the initial approval of a four-day schedule, once implemented districts have often been surprised by the level of public support they find for the practice (Chmelynski, 2002; Reeves, 1999). For example, Dam (2006) reports that among Colorado school districts using a four-day school week, 80-90% of teachers, students, and parents favor the continuation of the schedule, noting that opposition often comes from those not directly associated with the schools.

Surveys have revealed that the switch to the four-day week yields a marked improvement in school morale (Blankenship, 1984; Grau & Shaughnessy, 1987). For example, a school survey conducted in Custer School District in rural South Dakota which adopted the four-day week in 1995, found that the switch boosted morale, reduced absenteeism, decreased the need for substitute teachers, and led to a boom in participation in extracurricular activities. Survey results also indicated that teachers felt they were

covering more academic content in their classes than they had under the traditional five-day calendar (Durr, 2003).

Researchers have noted additional benefits of the four-day week. Koki (1992) reports rural Hawaiian districts use of the practice as a teacher retention strategy (Koki, 1992), and Nelson (1983) found that after the implementation of a four-day schedule, employee departures from the district declined. As noted above, survey respondents have also noted the added benefits of creating time for students to work part-time jobs (Nelson, 1983; Reinke, 1987) and more time with family (Nelson, 1983; Reinke, 1987).

Summary of Impact Findings

A review of the literature on the impact of the four-day school week in the four areas of financial, achievement, other student and teacher outcomes, and stakeholder satisfaction reveals generally positive trends. Districts may not save as much as they hoped, but there are reported savings in transportation, food costs, and substitute teachers. The degree of additional cost reductions are dependent on the use of facilities during the off day and salaries for staff tied to the school calendar. The broadest conclusion that may be drawn from the limited research on the impact of the four-day week on student achievement is that it has no negative impact. There is some evidence that student and teacher absenteeism is lessened under a four-day week calendar, and there is greater opportunity for concentrated professional development. While it is sometimes difficult to persuade stakeholders to move to a four-day school week, surveys have found that students, teachers and parents are generally enthusiastic about the practice. It should be noted, however, that few of the studies cited above have been held to professional scrutiny, and the results are often reported by states and districts implementing the practice.

Challenges to Implementation

The switch to a four day week is rarely a swift transition and requires districts to research the practice, examine existing models, and weigh advantages and disadvantages. While the research literature and news reports tell the story of many districts that are

satisfied with their decision to implement the four-day week, they also caution that districts must consider a range of issues in order to make an informed decision. Some of these concerns are:

- **Childcare:** Often an initial concern with the four-day week, many districts have found that parents prefer having to find good childcare only one day a week, in contrast to some care every day. Some schools have alleviated this concern by using high school students as baby-sitters for those in need, and providing training courses to increase the quality of care provided (Blankenship, 1984; Fager, 1997).
- **Student Fatigue:** There is often concern as to how students, particularly young students, will respond to a lengthened school day. Blankenship (1984) reports that many schools address this concern by creating school schedules that put the bulk of academic work into the earlier parts of the day.
- **At-risk students**: Concerns arise that a three-day break creates additional difficulties for at-risk and special-needs students, though there is limited research to support the claim (Blankenship, 1984; Culbertson, 1982; Fager, 1997).
- **Contact hours:** Despite increasing the length of the school day to accommodate a condensed school schedule, the four-day week appears to run counter to the increased emphasis on more, not less, time in school (Blankenship, 1984; Fager, 1997; Prendergast, Spradlin & Palozzi, 2007).
- **Shift in Costs:** Savings by the school systems are offset by new costs incurred by parents for childcare and food. In addition, savings may be found by reducing hours for some of the school districts' lowest paid, hourly workers (Chmelynski, 2002; Durr, 2003).
- **Legal/Legislative:** State laws typically delimit required instructional time in days per year. Teacher and other labor contracts, as well as retirement and pension plans in many states and districts, are framed in terms of days instead of hours (Darden, 2008; Gains, 2008). While some states allow districts to use the four-day week by applying for a waiver of these requirements, others have

sought to change their laws to reflect instructional hours instead of days. For example, in Nebraska, state law does not stipulate a timeframe, but requires a minimum number of hours (1032 hours of instruction in elementary grades and a minimum of 1080 hours of instruction in high school grades). The state department of education reports that "it is up to the school districts to construct their school days and weekly schedule to meet the aforementioned hours of instruction. A few school districts in Nebraska have met the aforementioned hours of instruction using a 4 day school week" (Correspondence with Maine Department of Education). Sample legislation from other states is included in an appendix.

Conclusion

The four-day week is the preferred calendar of many small rural districts scattered across the country. These districts mostly boast widespread public support, no or positive impact on academic performance, and some financial savings. Savings, however, must be weighed against an increased length of the school day, childcare needs on the off day, and professional development needs to help teachers adapt to an alternative schedule. Thus, it is important for any school district considering changing to a four-day school week to weigh the costs and benefits of such a decision.

References:

Blackadar, A. R. & Nachtigal, P. (1986). Cotopaxi/Westcliffe Follow Through Project. Final Evaluation Report. Aurora, CO: Mid-Continent Regional Educational Lab.

Blankenship, T. (1984). Update: These school systems swear by the four-day school week because students work harder and face fewer distractions. The American School Board Journal, 171 (8), 32-33.

Chamberlain, M. & Plucker, J. (2003). The Four-Day School Week. Education Policy Briefs, Vol. 1, No. 2, Winter 2003.

Chmelynski, C. (2003). Four-day school weeks? Only if they fit. School Board News. Vol. 22 (8).

Culbertson, J. (1982). Four-Day School Week for Small Rural Schools. ERIC Clearinghouse on Rural Education and Small Schools, EDRS 232799.

Daly, J. L & Richburg, R. W. (1984). Student Achievement in the Four-day School Week. Office for Rural Education, Colorado State University.

Dam, A. (2006). The 4-Day School Week. Denver, CO: Office of Educational Services, Colorado State Department of Education.

Darden, E.C. (2008). The four-day school week: A fuel's paradise? Forecast, 6 (3), November 2008.

Durr, G. (2003). Four Day School Week. National Conference of State Legislatures.

Fager, J. (1997). Scheduling Alternatives: Options for Student Success. By Request…, Northwest Regional Educational Laboratory. Retrieved October 2008 from: http://www.nwrel.org/request/feb97/schedalts.html.

Feaster, R. A. (2002). The Effects of the Four-Day School Week in Custer, South Dakota. (Doctoral dissertation, University of South Dakota; UMI No. 3055138).

Gaines, G. F. (2008). Focus on the School Calendar: the Four-Day School Week. Atlanta, GA: Southern Regional Education Board.

Grau, E. & Shaugnessy, M..F. (1987). The Four-Day School Week: An Investigation and Analysis. ERIC Document Reproduction Service, EDRS 327 337.

Hale, R. M. (2007). A Case Study of the Four-Day School Week in Five South Dakota Prekindergarten-12 Public Schools. (Doctoral dissertation, University of South Dakota, UMI No. 3269556).

Koki, S. (1992). *Modified school schedules: A look at the research and the pacific.* ERIC Document Reproduction Service, ED 024707.

Maine School Administrative District (MSAD) #3. (1972). Four-Day Week Savings. Quarterly Newsletter. Vol. 1 (2): 1.

Maine State Department of Education, Office of Planning, Evaluation and Research. (1972). Community Survey of School Administrative District Three; Follow –Up Study. Augusta, Maine.

McCoy, J. (1983). A Summary Report on the 4-day School Week in New Mexico. Santa Fe, New Mexico: Evaluation, Testing and Data Management, New Mexico State Department of Education.

Michael, R. (2003). Moving to a 4-day week: how much is saved? Education Policy Briefs, Vol. 1, No. 2, Attachment.

Nelson, S.R. (1983). An Evaluation of Sheridan County School District Alternative Schedule, 1982-83. Portland, OR: Northwest Regional Education Lab.

Prendergast, K. A., Spradlin T. E. & Palozzi, V. J. (2007). Is it Time to Change Indiana's School-Year Calendar? Education Policy Briefs, Vol. 5 (1).

Reinke, J. M. (1987). More with Four: A Look at the Four Day Week in Oregon's Small Schools. Paper presented at the Rural Education Symposium (Washington, DC, March 30-31, 1987).

Reeves, K. (1999). The Four-Day School Week. School Administrator. Vol. 56(3): 30-34.

Richard, A. (2002). Rural Schools See Dividends In Four-Day Week. Education Week. Vol. 22 (4): 6.

Roeth, J. E. (1985). Implementing the Four-Day School Week into the Elementary and Secondary Public Schools. (Doctoral dissertation, Ball State University; UMI No. 8608635).

Sagness, R.L & Salzman, S. A. (1993). Evaluation of the Four-Day School Week in Idaho Suburban Schools. Paper presented at the Annual Meeting of the Northern Rocky Mountain Educational Research Association (Jackson, WY, October 1-2, 1993).

Wilmoth, S. (1995). The Four-Day School Week and how it Affects Student Achievement. (Doctoral dissertation, University of Arkansas; UMI No. 9536045).

Yarbrough, R. & Gilman, D. A. (2006). From Five Days to Four. Educational Leadership. Vol. 64 (2): 80-85, Oct 2006.

APPENDIX:

Legislation in other states may serve as a guide for allowing schools to elect a four-day school week. Below are examples provided by state departments of education in response to a request by the Maine Department of Education and from a National Conference of State Legislatures Brief on the four-day week (Durr, 2003).

Arizona:

15-801. School year; school month; holidays

A. Except as may be otherwise authorized by the superintendent of public instruction to accommodate a year-round school operation, an educational program offered on the basis of a four day school week or an alternative kindergarten program offered on the basis of a three day school week, the school year shall begin July 1 and end June 30 and a school month is twenty school days, or four weeks of five days each.

http://www.azleg.gov/FormatDocument.asp?inDoc=/ars/15/00801.htm&Title=15&DocType=ARS

Arkansas:

6- 10- 117. Four- day school week.

(a) It is found and determined by the General Assembly that granting local school districts greater flexibility in scheduling instructional time can reap educational benefits for the students and financial rewards for the school district. It is the intent of this section to authorize local school districts to initiate and maintain public school educational programs on a four- day school- week basis, so long as planned instructional time is in accord with requirements established by the State Board of Education.

(b) As used in this section, "four- day school week" means an educational program in which all students attend school for four (4) days a week but no fewer than the total number of hours required by the Arkansas Standards for Accreditation in a five- day school week.

(c) The board of directors of any school district is authorized to initiate and maintain a four- day school week in any or all of the public schools in the school district.

(d) (1) The State Board of Education shall establish appropriate standards, guidelines, rules, and regulations for the determination of average daily membership of school districts and for the distribution of state aid to each local school district that elects to operate any or all of the public schools of its school district on a four- day school- week basis, to provide the school district with an equitable share of aid funds designated to equate a four- day school- week operation by the school district to the educational opportunities provided by a school district offering a five- day school week.

(2) Provided, however, that a school district shall not receive any more state financial aid for offering a four- day school week of instruction than it would have received for offering a five- day school week of instruction.

History. Acts 1997, No. 1147, § 1.

http://arkansased.org/rules/pdf/current/066.pdf

Colorado:

As reported by the state department of education, Colorado law requires school districts to schedule 1080 hours per year of instructional time for secondary schools and 990 instructional hours for elementary schools. The 1080 hours equate to six hours per day for 180 days. The 990 hours equate to five and one-half hours per day. Up to 24 hours may be counted for parent-teacher conferences, staff in-service programs, and closing for reasons of health, safety, or welfare of students.

The law also requires any district offering less than 160 days of school to obtain permission from the Commissioner of Education. One of the duties of local school boards is:

> C.R.S 22-32-109 (n) (I) To determine, prior to the end of a school year, the length of time which the schools of the district shall be in session during the next following school year, but in no event shall said schools be scheduled to have less than one thousand eighty hours of planned teacher-pupil instruction and teacher-pupil contact during the school year for secondary school pupils in high school, middle school, or junior high school or less than nine hundred ninety hours of such instruction and contact for elementary school pupils or less than four-hundred-fifty hours of such instruction for a halfday kindergarten program. In no case shall a school be in session for fewer than one hundred sixty days without the specific prior approval of the commissioner of education. Districts scheduling a school year of 160 days or more need no state approval. Local boards of education annually establish district calendars, but there is no requirement to report or submit calendars to the Colorado Department of Education (CDE). Scheduling a school year of more than 160 days is at the discretion of local districts.

Virginia

> **HB2806,** *Signed by Governor 3-19-03*
>
> Provides that schools may request and local school boards may approve, pursuant to guidelines developed by the Board of Education, school-proposed alternative school schedule plans, including those providing for the operation of schools on a 4-day weekly calendar, so long as a minimum of 990 hours of instructional time is provided for grades 1 through 12 and 540 hours for kindergarten. Specifies that no alternative plan that reduces the instructional time in the core academics will be approved.

CHALLENGE TO LEAD

Focus *on the School Calendar:*
The Four-Day School Week

SREB

Gale F. Gaines

When the economy weakens, heightened consideration is given to ways in which schools and districts can more efficiently use financial resources or make up for lost funding. Discussions about implementing four-day school weeks — with students attending school more hours each day — are surfacing again because of general economic pressures in the states and the increased cost of diesel fuel for school buses. While the need to balance the budget is real — and many districts across the region are facing static or even reduced funding in the coming year — the current focus on improving student achievement should continue to be central to state-level decisions impacting schools.

SREB's *Challenge to Lead* Goals for Education call for the achievement of all groups of students to exceed national averages and for performance gaps to close. The federal *No Child Left Behind Act* also requires improvements in student performance. SREB states have made tremendous progress in many areas in recent years; despite the softening of the economy, policy-makers should be vigilant so that educational progress does not stagnate.

The four-day school week is not a new issue. However, the vast majority of the nation's schools and districts remain on the traditional school calendar. The first schools to implement a four-day week were in New Mexico in the early 1970s, primarily as a response to an energy crisis that sharply increased the cost of transportation and utilities. A 2003 survey by the National School Boards Association (NSBA) indicated that districts in nine states (Arizona, Colorado, Kansas, Michigan, New Mexico, Oregon, South Dakota, Wisconsin and Wyoming) were using a four-day per week schedule. It also showed that in Louisiana, some schools within one district used the alternative schedule, but not the entire district. Arkansas, too, had at least one small district using a four-day schedule for a few years.

NSBA currently estimates that about 100 districts in as many as 17 states — those mentioned above, plus California, Kentucky, Idaho, Minnesota, Nebraska and Utah — may be using the alternative schedule. Colorado's 67 districts and New Mexico's 17 account for most of the districts using a four-day week. Most participating districts are small and rural. Because these districts tend to be sparsely populated, students face long commutes to and from school.

The decision to implement a four-day school week has been based primarily on efforts to save or more efficiently use available funds. Presumably, if a school were to operate for four days each week and close on the fifth (shutting down utilities as though for a holiday weekend), reductions

August 2008

Southern Regional Education Board

592 10th St. N.W.
Atlanta, GA 30318
(404) 875-9211
www.sreb.org

The Southern Regional Education Board Focus *series reports on timely education issues.*

of up to 20 percent would be gained in some non-fixed expenditures such as motor fuel, cafeteria food, utilities and, perhaps, hourly workers. In reality, however, many schools reportedly don't close on the fifth day; they use that day instead for extracurricular activities, tutoring, special programs and professional development, resulting in reduced savings. In addition, these non-fixed expenditures are only a small part of overall budgets. The salaries and benefits of teachers, school leaders and administrators make up the largest part of school operating funds.

The actual magnitude of the potential savings of the four-day week is unclear. However, data in the 2007 *Digest of Education Statistics* suggest that student transportation — which includes more than just fuel costs — and food service each accounted for about 4 percent of operating expenditures nationally for elementary and secondary schools in 2004-2005. (Utilities are more difficult to estimate because they are combined with other operations and maintenance items.) A full 20 percent reduction in transportation and food service spending, which is not possible due to bus maintenance and other fixed costs within those expenditures, would result in savings of roughly 2 percent of the overall budget, based on national spending patterns. Diesel fuel prices, however, have nearly doubled since January 2006. Even with this rise in costs, the proportion of the budget affected by a four-day week would remain small. The savings would vary by district. Webster County School District in Kentucky estimated its savings in the first year of using a four-day week (2003-2004) to be about 3 percent of its operating budget.

State laws and the school calendar

Generally, laws in most SREB states prohibit schools or districts from implementing a four-day school week because of language that requires a minimum number of instructional days per year — most commonly, 180 days. Variations do exist, as states may permit districts to petition for exceptions such as a national or civic disaster, severe weather or contagious disease outbreaks that prevent them from following the law.

Statutes in five SREB states (Arkansas, Delaware, Kentucky, Louisiana and Virginia) permit schools or districts to implement a four-day school week. Currently, however, only Kentucky and Louisiana have some children attending school on this type of alternative schedule.

Delaware requires districts to provide most students with 1,060 hours of instruction during the school year instead of specifying a certain number of instructional days. In addition, districts must provide kindergartners with at least 440 hours and high school seniors with at least 1,032 hours.

Kentucky also specifies the minimum instructional time required, but in a slightly different way. The statute requires "no less than the equivalent of 175 six-hour days." Teacher contracts, however, are specified in days per year (185). In addition, the Legislature has funded two additional days of instruction in the budget without changing the statute, so that districts have had to add two days (not the equivalent number of hours) to whatever type of calendar they were following. In the past, only two or three districts had implemented four-day per week calendars. Currently, two of the state's 174 districts are using the alter-

native calendar. Nine schools (0.5 percent of the state's 1,900 public schools), serving about 2,700 students (0.4 percent of Kentucky students), participate.

Statutes in Arkansas, Louisiana and Virginia specifically permit districts to use a calendar with a reduced number of days each week. In Arkansas, legislation passed in 1997 that authorizes districts to "initiate and maintain public school educational programs on a four-day school week basis, so long as planned instructional time is in accord with requirements established by the State Board of Education." At least one small district did implement the adjusted calendar following authorization. This district later merged with another district after 2003 legislation passed that required the consolidation of districts with fewer than 350 students. As of the 2007-2008 school year, no districts were using the alternative calendar, but currently several are discussing the possibility for the future.

Louisiana passed legislation in 1982 that allows local school boards to implement the four-day schedule with approval of the state Board of Elementary and Secondary Education, as long as the required yearly instructional hours are not reduced (equal to 177 days of 360 minutes of instruction). The law requires guidelines set by the state Department of Education to ensure that local boards consider the health, safety and attention span of the schoolchildren; provide for the maximum use of time for academic work; minimize disruptions of the educational process; and monitor the progress of children. The law also prohibits a reduction in the salary or benefits for any school employee. During the 2007-2008 school year, almost 13,600 students (2 percent of public school students) in 43 schools (3 percent of the schools statewide) in seven districts (10 percent of the state's districts) attended school four days per week.

Virginia's general statute requires at least 180 teaching days or 990 hours in the school year. Legislation passed in 2003 allows individual schools to petition the local school board to approve a four-day weekly calendar, pursuant to state Board of Education guidelines, as long as the minimum required instructional time is provided (the 990 hours, or 540 hours for kindergarten).

Potential benefits and disadvantages for schools and students

There have been a number of articles published about the pros and cons of the four-day school week, but there is little research available on the practice. Much of the information available is based on surveys of stakeholders, such as teachers, students and parents, or on newspaper interviews with district superintendents. There is a decided lack of evidence that the four-day week helps or hurts student achievement — anecdotal information seems to point merely to a "lack of harm" where student achievement is concerned.

The list of pros and cons is long. The most common benefit listed is financial savings, although the reductions vary depending upon how the unscheduled day is used. Some districts reportedly found that as savings were realized, they were able to redirect the money to support efforts such as tutoring, reading programs, preschool programs, and summer programs for students needing additional help. Other common benefits include increases in the attendance rates of students and teachers, which in turn, reduce the need

for substitute teachers; declines in discipline problems; fewer hours per week spent commuting; and longer blocks of instructional time to complete lessons such as science labs.

Though surveys seem to indicate that schools and families participating in a four-day week have overcome the commonly expressed challenges, they do remain a consideration when schools adopt the alternative schedule. Common challenges include the length of the day for young students, particularly when long commutes are involved; maintaining the focus of students during the extended day; the impact on extracurricular activities; and the perception of "giving a day off" (even though instructional time is the same or greater) when national and state goals call for raising student achievement.

Colorado's experience

In Colorado, districts were authorized to pilot alternative calendars in 1980. In 1985, the Legislature amended statutes to require 1,080 hours of instruction per year. (Previously, it was 180 days.) In 2007-2008, 34 percent of school districts, serving less than 3 percent of the state's students, used the four-day school week. The largest district using the schedule had 1,265 students; the smallest had eight students.

According to a 2006 state Department of Education report, characteristics of the schedules varied. For example, some schools scheduled 7.5-hour days for 144 days per year, compared with the regular school schedule of six hours per day for 180 days. Not all districts chose to utilize the four-day week for the full school year — some used it only during the winter months. Most often, the Colorado districts on the four-day week were rural, sparsely populated and had some students with long bus rides to and from school.

State Department of Education staff indicate that the four-day week has been very popular with students, parents and teachers. Reasons for the popularity include more time for family and family activities, use of the fifth day for teacher preparation, and the longer weekend break. Aside from the potential for financial savings, other issues addressed in the report include child care, instruction and student performance.

The issue of arranging child care was deemed a "wash." Students in school for the longer day often arrive home about the same time as their working parents. This has served to diminish the "latchkey" issue for older students and the need for after-school care for younger ones. Because schools are closed on the unscheduled day, more babysitters (such as high school students) are available, and communities have responded with services. Also, families in many of the communities involved, which are primarily rural, are more likely to have at least one parent working in the home. Child care issues may be more of a concern for urban districts where parents are more likely to work outside of the home.

The report notes that instructional time — and making the best use of it — was a hurdle initially as teachers had to rearrange lessons to accommodate the longer day. Diligence in reducing interruptions and making full use of time was an important factor, just as it is when schools move from a traditional to a block schedule. (The fifth day can be used for personal appointments that often remove students and teachers from school; however, if an instructional day is missed, the student or teacher loses 20 percent more time than in a traditional six-hour day.) Concern was expressed about the length of the day, particularly for younger students, but the report indicates that students and parents were able to adapt.

Student performance was not a significant issue in the decision of Colorado districts to use a four-day week, according to the report, and there are no conclusive studies on the impact. However, state Department of Education staff say that students do no worse than students on a traditional calendar.

Potential Benefits

- Savings on fuel, food, utilities and the salaries of some workers
- Longer blocks of time available to complete lessons such as science labs
- Use of the unscheduled day for professional development, planning, tutoring, special programs, or to make up lost days due to inclement weather or other disruptions to the regular schedule
- District's use of the unscheduled day to plan athletic events, limiting disruptions to normal instructional time
- Students (particularly in sparsely populated areas) having fewer long commutes
- Lower absenteeism of students and teachers
- Fewer substitutes needed because teachers can schedule appointments on unscheduled days
- Students generally arriving home at the same time as their parents, diminishing the need for after-school child care and supervision

Potential Challenges

- Collective bargaining
- Unpopularity of reduced salaries for cafeteria workers and bus drivers
- Child care and supervision of students on the unscheduled day
- Length of day for young students, particularly when long commutes are involved
- The extended focus required of students during the longer day
- Student safety during winter months when daylight hours are fewer
- Twenty percent more instructional time lost when a student or teacher misses a day
- Impact on extracurricular activities and their schedules
- Teacher preparation for the change in schedule to assure the maximum use of instructional time
- Difficulties with students (especially at-risk and special-needs students) retaining subject matter during the extra day off
- The need to run utilities during the unscheduled day to prevent mold due to heat and humidity, thereby offsetting savings
- The perception of "giving a day off," although instructional time is the same or greater

Summary and further considerations

SREB states have made significant educational progress by focusing on student achievement and what it takes to raise performance levels. Generally, the decision to move to a four-day week has been made for financial reasons and not as a means to improve student achievement. The potential savings, however, appear to be a small percentage of the overall budget. Actual savings may be even lower because districts may use the unscheduled day for additional assistance (particularly to at-risk students), enrichment activities, professional development or extracurricular activities.

The school calendar and instructional time have changed little during the lifetimes of current policy-makers, yet expectations for students and teachers have increased significantly. Policy-makers should ask how a change to the school calendar can support today's focus on raising student achievement. Further, any significant change in current practice should include well-designed research to determine the impact on student achievement over time and whether the benefits of such a change outweigh the disadvantages.

The following questions should be considered as state leaders and educators debate the pros and cons of implementing a four-day school week:

- Is a four-day week educationally sound for all students and for all groups of students, including young children, those with special needs and at-risk students?
- Do the benefits of implementing a new calendar offset the disadvantages? How will education leaders know?
- How can a calendar change be used to continue progress in raising student achievement and closing gaps? Can the reallocation of savings support new or reorganized activities to better address student educational needs?
- Would changes to the school finance formula be required so that districts would not lose funding for lowering the number of instructional days per year?
- What would be the impact on federal funds received by schools due to the reduction of state spending for programs such as the school lunch program?
- What changes to school calendar and teacher-contract statutes would be needed to facilitate implementation of the alternative schedule?

Resources

Beesley, Andrea D. and Carmon Anderson. "The Four-Day School Week: Information and Recommendations." *The Rural Educator*, Fall 2007.

Chamberlin, Molly and Jonathan Plucker. "The Four-Day School Week." *Education Policy Briefs*, Vol. 1, No. 2, 2003.

Chmelynski, Carol. "Small Schools Save Money by Switching to a Four-Day Week." *School Board News*, October 22, 2002.

Dam, Ai. "The 4 Day School Week." Colorado Department of Education, July 2006.

Durr, Greta. "Four-day School Week?" *State Legislatures*, May 2003.

"Four-Day School Week." Northwest Regional Educational Laboratory, February 1997 — www.nwrel.org/requests/feb97/article4.html.

"Four-Day School Week Survey Summary." National School Boards Association, January 2003 — http://www.nsba.org/SecondaryMenu/StateAssociations/Members/Surveys/FourDaySchoolWeekSurveySummary.aspx.

"4 Day Week Report." Webster County (Kentucky) School District — http://www.webster.k12.ky.us/4DayWeekReport/tabid/848/Default.aspx.

Reeves, Kimberly. "The Four-Day School Week." *The School Administrator*, March 1999.

For more information, contact Gale Gaines, SREB vice president, State Services, at (404) 875-9211 or gale.gaines@sreb.org.

(08S06)

Four-Day School Week Report

in Montana Public Schools

October 2011

Denise Juneau
State Superintendent
Montana Office of Public Instruction
Helena, Montana 59620-2051

opi.mt.gov

Table of Contents

This report was prepared by the Office of Public Instruction, Accreditation Division
Contact information can be obtained by calling the Accreditation Office, (406) 444-3114

Introduction

The 2005 Montana Legislature passed a bill that changed the pupil instruction time during a school fiscal year from a required minimum of 180 school days to a required minimum number of aggregate hours.

SB170 was introduced by Sen. Jeff Mangan: AN ACT PROVIDING FLEXIBILITY TO SCHOOL DISTRICTS IN SETTING THEIR SCHOOL CALENDARS BY ELIMINATING THE REQUIREMENT THAT A SCHOOL DISTRICT CONDUCT AT LEAST 180 SCHOOL DAYS DURING EACH SCHOOL FISCAL YEAR; DEFINING "MINIMUM AGGREGATE HOURS"; REQUIRING A SCHOOL DISTRICT TO CONDUCT SCHOOL FOR A MINIMUM NUMBER OF AGGREGATE HOURS EACH SCHOOL YEAR; REQUIRING SCHOOL DISTRICT TRUSTEES TO SET THE LENGTH OF THE SCHOOL TERM, SCHOOL DAY, AND SCHOOL WEEK; MAKING THE REVISIONS NECESSARY TO REFLECT THE ELIMINATION OF THE REQUIREMENT FOR 180 SCHOOL DAYS;

Since the passage of this legislation, 31 public school districts and one nonpublic district (Two Eagle River) are operating a four-day school week. This report provides information, through surveys conducted during the springs of 2009 and 2011, of why districts changed to a four-day week, the benefits of the change, and the pitfalls they have encountered. The report also contains trends from states in our region concerning the four-day school week issue. It is the hope of the Office of Public Instruction staff that this report will give districts guidance to make an informed decision when considering changing to a four-day school week.

Montana Code Annotated

The following are the primary codes affected by SB170:

MCA 20-1-301. School fiscal year. (1) The school fiscal year begins on July 1 and ends on June 30. At least the minimum aggregate hours defined in subsection (2) must be conducted during each school fiscal year, except that 1,050 aggregate hours of pupil instruction for graduating seniors may be sufficient.

(2) The minimum aggregate hours required by grade are:

(a) 360 hours for a half-time kindergarten program or 720 hours for a full-time kindergarten program, as provided in 20-7-117;

(b) 720 hours for grades 1 through 3; and

(c) 1,080 hours for grades 4 through 12.

(3) For any elementary or high school district that fails to provide for at least the minimum aggregate hours, as listed in subsections (1) and (2), the superintendent of public instruction shall reduce the direct state aid for the district for that school year by two times an hourly rate, as calculated by the office of public instruction, for the aggregate hours missed.

MCA 20-1-302. School term, day, and week. (1) Subject to 20-1-301, 20-1-308, and any applicable collective bargaining agreement covering the employment of affected employees, the trustees of a school district shall set the number of days in a school term, the length of the school day, and the

number of school days in a school week and report them to the superintendent of public instruction.
(2) When proposing to adopt changes to a previously adopted school term, school week, or school day, the trustees shall:

(a) negotiate the changes with the recognized collective bargaining unit representing the employees affected by the changes;

(b) solicit input from the employees affected by the changes but not represented by a collective bargaining agreement; and

(c) solicit input from the people who live within the boundaries of the school district.

Districts Operating Four Days per Week

The following are the 31 public school districts and one nonpublic school (53 schools in all) that are currently operating on a four-day school week schedule:

Beaverhead County
- Reichle Elementary

Blaine County
- Bear Paw Elementary

Carter County
- Alzada Elementary

Choteau County
- Warrick Elementary

Custer County
- Cottonwood Elementary
- S.H. Elementary
- S.Y. Elementary
- Spring Creek Elementary

Flathead County
- West Glacier Elementary

Garfield County
- Sand Springs Elementary

Jefferson County
- Jefferson High School

Lake County
- Arlee K-12 Schools
- Swan Lake-Salmon Elementary
- Two Eagle River High School (Accredited Private School)

Lewis and Clark County
- Lincoln K-12 Schools

Madison County
Alder Elementary
Sheridan Public Schools

Meagher County
Lennep Elementary

Mineral County
Alberton K-12 Schools

Missoula County
Sunset Elementary

Musselshell County
Melstone Public Schools

Phillips County
Saco Public Schools

Powder River County
South Stacey Elementary

Powell County
Gold Creek Elementary
Ovando Elementary

Ravalli County
Victor K-12 Schools

Rosebud County
Ashland Elementary
Birney Elementary

Sanders County
Hot Springs Public Schools
Noxon Public Schools

Sweet Grass County
Greycliff Elementary

Yellowstone County
Custer K-12 Schools

Survey

During the 2010-11 annual data collection cycle, 31 public school districts and one accredited nonpublic district (Two Eagle River) indicated operating on a four-day week. Since the publication of the *Four-Day School Week Report in Montana Schools: October 2009*, Lima K-12 Schools and Trail Creek Elementary returned to the five-day week, while 15 new districts joined the ranks of four-day schools, increasing the number of individual schools operating on four-day weeks from 29 to 53. Nineteen

districts are small rural schools administered by county superintendents. The smallest of these has 2 students. Districts over 100 students include Alberton, Arlee, Hot Springs, Jefferson High School, Lincoln, Sheridan, Two Eagle River, and Victor. Arlee is the largest with 402 students. Surveys were sent to all 32 districts and all responded, although 2 districts did not respond to every question.

2011 Survey Results (a copy of the survey questions can be found in Appendix A)

1. How long has your school operated on a 4-day school week?
    - 4 districts completing 6 years
    - 6 districts completing 5 years
    - 2 districts completing 4 years
    - 5 districts completing 3 years
    - 10 districts completing 2 years
    - 4 districts completing 1 year

2. What were the reasons for the district to adopt a 4-day school week?
    - 19 districts wanted a decrease in absenteeism to maximize instruction effectiveness and improve test scores
    - 16 rural districts' families wanted to cut travel time and fuel costs due to long distances and bad roads
    - 9 districts desired cost savings
    - 10 rural districts' families desired a Friday "go-to-town day" for medical appointments and for ranch and farm-related business and competitions
    - 3 districts hoped to improve teacher applicant pools and curb decreasing student enrollment
    - 2 districts reported they needed more collaborative teacher time

3. Since the change to a 4-day school week what benefits has the district seen?
    - 20 districts noted dramatic improvement in attendance and discipline
    - 15 districts felt cost savings were worth mentioning in one or more of the following areas: transportation, utilities, substitute pay, lunch budgets
    - 10 districts reported that Fridays, besides providing a scheduling cushion for snow days and holidays, provide more productive time for curriculum work, collaboration, school visitations, PIR and in-service
    - 8 rural districts reported significant cost savings to families and staff for travel
    - 16 districts noted improved morale and that students and teachers are better rested and more enthusiastic
    - 4 districts said their teachers are better prepared
    - 8 districts reported teachers feel instructional time is more productive
    - 5 districts are experiencing improved grades and higher test scores
    - 2 districts have larger applicant pools, and 1 high school reported increased enrollment due to an influx of students needing Fridays for gainful employment

4. How has the extra day during the week been used?
    - 17 districts provide no instruction
    - 15 districts have a modified 4-day week for students, using some or all Fridays for field trips and other extra-curricular outings, P.E. ski days, rural education fairs, job-shadowing, guided help sessions, lab/library make-up, special projects, disciplinary days, and a regular school day due to a lost day for weather, etc.
    - 21 districts schedule a number of Friday staff days for term grade reporting, professional development, in-service and workshops, parent-teacher conferences

5. Before the change what concerns did the community have?
    - 10 districts felt school days would be too long for elementary students and too long with activities and increased homework for secondary students
    - 5 districts had worries about covering the curriculum requirements
    - 15 districts were concerned about academic performance and retention rates
    - 12 districts were worried about day care
    - 7 districts thought too much free time could result in youth delinquency
    - 2 districts worried about the loss of a day's lunch program each week
    - 9 districts reported parents and staff were on board from the start with no concerns

6. After the change did the concerns in item 5 come to be realized?
    - Every district responded "No" to this question with few caveats: one district said they are still having problems soliciting a good pool of teacher applicants; 3 districts said one or two parents are still struggling with child care issues; one district said some parents think teachers are lazy; and one district said some parents occasionally complain about too much homework

7. Does the district offer full-time kindergarten?
    - 28 districts offer full-time kindergarten. Of these, 4 said they ease their kindergartners into full time in increments; 1 district offers preschool two days a week.
    - 4 districts do not have full-time kindergarten, although 1 gives parents the option (one district is a high school)

8. Are the elementary and the secondary schools on basically the same beginning and ending daily schedule?
    - 13 districts responded "yes"
    - 18 districts responded "not applicable"
    - 1 district responded "no"

9. How was input solicited from the community?
    - 26 districts utilized school board/open forum public meetings
    - 5 districts used newsletters and newspaper announcements
    - 15 districts conducted surveys to one or more of their constituents
    - 3 districts utilized teacher-parent conferences
    - 1 district utilized TV and radio announcements

10. Were there any difficulties in meeting the 225 minutes requirement for a unit of credit for 7-12 grade students?
    - Of the 30 districts responding to this question, 28 said "no" due to lengthened day and longer class periods
    - 2 districts responded "not applicable"

11. How long did the decision making process take?
    - 21 districts required 1 to 6 months
    - 7 districts required nearly a year
    - 2 districts utilized more than 1 year

12. Do the following constituents like the change to a 4-day week?
    - All districts responded "yes"—a few districts said teachers and students liked the change once they adjusted to the longer days; 4 districts reported a small number of parents and students continue to oppose the plan for various reasons stated in survey question 5

13. Does the board of trustees plan to re-visit or re-consider the 4-day week in the near future?
    - 16 districts said "no" unless concerns should arise from the various constituents
    - 7 districts revisit it annually as a board agenda item
    - 3 districts periodically survey constituents to keep a pulse on its success
    - 4 districts reported they adopted the plan on a one, two, or three-year basis pending data collection and survey results

14. Please show any general comments that may help other school districts who are considering a change to a 4-day school week.
    - Advantageous to make on-site visits with constituent representatives and to invite guest speakers who can field questions from your constituents
    - Advantageous to begin with open-forum meetings soliciting and gathering input from all constituents, making the process as transparent as possible so that everyone gets on board
    - Requires substantial time to consider collective bargaining agreement and to negotiate with classified staff
    - Requires tailoring to meet your community and students' needs with lots of follow-up to measure the benefits and to keep it going in a positive direction
    - Requires patience during transition period while everyone adjusts to longer days
    - Allows uninterrupted and more productive instructional time with more flexibility for block scheduling
    - Offers flexibility to schedule make up days for bad weather and other lost days
    - Provides efficient and effective use of Fridays for in-service and professional development, collaboration, planning, and grading

- Allows for thorough cleaning and building maintenance during the school year
- Benefits other schools struggling to meet counseling/art/library accreditation standards by sharing FTE
- Suits today's needs of the farming and ranching communities extremely well
- Allows school and families to schedule virtually all extra-curricular activities on three-day weekends, which substantially improves morale and attendance in most schools
- Provides spectrum of savings in transportation, utilities, sub pay
- Increases teacher applicant pools in most districts
- Attracts students from five-day schools
- Creates long days for elementary students (advantageous to structure the more academically demanding subjects in the morning)
- May create additional day care issues
- Allows for addition of Friday programs such as private lessons, field trips, art and game days, and other experiences that students might not have had the opportunity to be part of in a five-day school week
- Creates environment for students and teachers to start and end the week more rested and energized
- Has improved test scores and GPAs in several districts

Survey Summary

Although schools changing to a four-day school week have experienced cost savings, they realize that student achievement and other benefits can outweigh the benefits of saving money. Schools have experienced a significant decline in absenteeism and disciplinary issues, an improvement in student and staff morale, and rising achievement scores. Almost every school feels the four-day school week fits its community like a glove and benefits everyone. Most would hate to return to the five-day week.

All the districts hold school Monday through Thursday. Schools that modify the four-day week use occasional Fridays for field trips and other activities that would otherwise interrupt the school week. A small number of schools are open on Fridays to supervise lab and library make up, project completion, and help sessions. Extra-curricular activities are scheduled on Fridays whenever possible. Most districts take advantage of Fridays for staff development and in-service programs. Some of the schools, particularly the very rural, do not schedule work activities for teachers on Friday. Most of the initial concerns from the community in regards to switching to the four-day plan relate to child care, lengthy days for early elementary children, teachers not being able to cover as much of the curriculum, academic performance and retention rates, and youth delinquency. After the change to the four-day plan, most of these concerns either don't coalesce or are outweighed by the benefits. No districts reported the curriculum not being covered; none of the districts had difficulties meeting standards and most exceed the 225-minute unit of credit requirement for grades 7-12.

All schools solicited feedback from constituents using a combination of board meetings, open forums, surveys, parent-teacher discussions, and newsletters; and most schools made the decision to make the change within a six-month time period. All districts keep an open-door policy regarding concerns or complaints and are prepared to re-visit or re-consider the four-day week. The survey

indicated that all schools and the vast majority of their constituents like the change to a four-day school week.

Information from States in the Region

Implementation of a four-day school began during the Great Depression, experienced a resurgence in the '70s, and gained further popularity in the new millennium, despite any solid studies to evidence that four-day schools impact learning. In the *ECS State Note: Four-Day School Week* (2009), Molly Ryan notes: "As school districts nationwide struggle with funding cuts, the four-day school week has gained momentum as one way to save money[.] ... While the positives and negatives of the four-day week have been widely debated, research on the impacts of the schedule is extremely limited. Moreover, there is a decided lack of evidence how the schedule impacts student achievement."

Nevertheless, to date 20 states have altered their state requirements to allow for four-day schools. Many schools, most of which are small and rural, continue to implement the four-day week, not because they save money, but because they have resolved some of the ubiquitous problems inherent in five-day school weeks and because they believe it's good for kids (NCSL. *Four-Day School Weeks* <www.ncsl.org>).

Among the states in and around our region, Colorado, Idaho, Nevada, Oregon, South Dakota, Utah, Washington, and Wyoming have passed laws allowing for four-day schools; all have implemented the program except Washington. Information from area state education departments seems to indicate the same results as the 32 Montana districts that responded to the four-day school week survey in 2011. Most districts reported some financial savings and have witnessed other important benefits to the changeover. There has been an improvement in the attendance rates of both students and teachers. Schools have seen a decrease in dropout rates and disciplinary referrals. There are fewer classroom interruptions, fewer distractions from extracurricular activities, and improved student and faculty morale. Student achievement shows no significant improvement or decline. Child care issues have not been a significant problem.

On-line Resources

The following on-line resources, although not exhaustive in their scope, may be helpful when considering moving toward a four-day week:

Beesley, A.D., and C. Anderson. The Four Day School Week: Information and Recommendations. *The Rural Educator*, 29(10), 48-55. Fall 2007. Web. March 2011 <http://findarticles.com/p/articles/mi_qa4126/is_200710/ai_n21137822/>

This overview discusses issues regarding the four-day school week, based on a limited number of studies and anecdotal reports from teachers and students. It provides a useful table of pros and cons and recommendations for districts who are considering implementing the four-day

school week. This Web page also provides links to other valuable articles discussing the four-day school week.

Chamberlin, Molly, and Jonathan Plucker. "The Four Day School Week." *Education Policy Briefs.* Indiana Education Policy Center. Winter 2003. Web. March 2011 <http://www.indiana.edu/~ceep/projects/PDF/PB_V1N2_Four_Day_School_Week.pdf>

This succinct pamphlet summarizes research on four-day school week in which anecdotal evidence suggests that small, rural districts may benefit from shortened school weeks, though the anticipated 20 percent may be larger than what may be actually realized. It includes some usable tables of advantages and disadvantages.

Dam, Ai. "The 4 Day School Week." Colorado Department of Education. July 2006. Web. March 2011 <http://www.eric.ed.gov/PDFS/ED497760.pdf>

Thirty-four percent of the 178 school districts in Colorado use the four-day school week. This 88-page ERIC document discusses the history of the four-day school week in Colorado. It also discusses the performance, financial, political, and day-care impact of the implementation.

Donis-Keller, Christine. "Research Brief: A Review of the Evidence on the Four-Day School Week." *University of Southern Maine*. Center for Education Policy and Applied Research, February 2009. Web. 20 March 2011 <http://usm.maine.edu/cepare/pdf/CEPARE%20Brief%20on%20the%204-day%20school%20week%202.10.pdf >

At present, the four-day school week is being used in more than 120 school districts across the country. Use of the four-day school week also extends beyond our borders to several provinces in Canada, France, and Britain. This research brief provides a history and presents a synthesis of the limited research base, focused on the implementation and impact of moving to a four-day school week schedule.

Idaho Department of Education. Current. Web. 20 March 2011 <http://www.sde.idaho.gov/site/ruraleducation/>

This Web page offers links to the current research and reports regarding the four day school week. A valuable go-to site for links to implementation ideas, schedule variables, financial implications, pros and cons, and more. It includes a list of Idaho schools using the schedule and data on average daily attendance and graduation rates.

McREL. "What High-quality Education Research Says about Four-day School Weeks." McREL Newsroom, *Education Hot Topics.* 2011. Web. March 2011 <http://www.mcrel.org/Newsroom/hottopicFourDayWeek.asp>

This article summarizes current research on potential benefits, drawbacks, financial savings and impact on student achievement related to implementation of a four-day school week.

National Council of State Legislatures. "Four-Day School Weeks." NCSL 2011. Web. March 2011 <http://www.ncsl.org/IssuesResearch/Education/SchoolCalendarExtendedDayYearFourDaySchoo/tabid/12934/Default.aspx>

This article from the National Council of State Legislatures provides a summary of the history, research, pending and enacted state legislation, and perceived pros and cons of a four-day school week. This site includes several additional links for those wishing to read further and an insightful podcast discussing the subject.

University of Minnesota. "Does a Four-Day School Week Make Financial Sense for My District? One of a Series of Fact Sheets on Economic Issues for Communities." University of Minnesota/Extension. 2010. Web. March 2011 <http://www.apec.umn.edu/prod/groups/cfans/@pub/@cfans/@apec/documents/asset/cfans_asset_213433.pdf>

This is current research, (largely anecdotal) written from the perspective of stakeholders in Minnesota, but it does provide a thorough examination of all sides of the issue.

Accreditation Reminders

Due to reports that additional school districts were considering a change to a four-day school week for the 2009-10 school year, the Accreditation Division of the Office of Public Instruction sent an Official E-mail to all districts on March 17, 2009.

Districts considering a change to a four-day week will need to consider the following:

- For high schools and 7 – 8 programs that are funded at the high school rate, the equivalent of at least 225 minutes per week for one school year must be allocated for each unit (credit) of study.
- Districts should pay particular attention to the time allotted for the 4th, 5th, and 6th grades. These grades fall under the 1,080 hours requirement but because of later start times, morning and afternoon recesses, and longer lunch periods, these grades may not meet 1,080 hours.
- Lunchtime may not be counted toward meeting the standard school day nor minimum aggregate hours required.
- Unstructured recess periods may not be counted as part of the mandated hours of pupil instruction. However, recess periods, for which there has been an identifiable effort to provide guidance and structure, and which are directly or indirectly under supervision of the certified

teacher, may be counted as pupil instruction under MCA 20-1-101(11), 20-1-302 and ARM 10.15.101(41). The OPI defines structure as having daily planning for activities at recess and all students are expected to participate.

- Although passing time between classes may be counted toward meeting the standard school day and the minimum aggregate hours required, passing time may not be counted as instructional time needed to meet the requirements of a "unit" of time. (ARM 10.55.902, 904-906)
    - This information can be found in Appendix D-1 of the ***Montana School Accreditation Standards and Procedures Manual.***

Initial Conclusions/Recommendations

Data does not confirm that the change to a four-day school week is best for all students. Almost all schools have reported an increase in attendance rates. Most schools have enforced fundamental rules to protect "instructional time" during the four days of school and hence have seen an overall increase in instructional time. Less instructional time is used for extracurricular activities as well. Morale has improved and discipline referrals have declined in the schools that have made the change to a four-day week. Academic achievement has remained about the same level for schools that have changed. The parents of the schools that have changed to a four-day school week overwhelmingly like the change because it allows more time with their children.

There appears to be concern for high-risk students, students with disabilities, and young students because the longer days may not be beneficial to them. The OPI must consider the "turnaround schools," schools that have been designated by ESEA/NCLB as in need of restructuring because of their continued failing status. Research shows that more instructional time is necessary, not less, for the at-risk student. If four-day schools become more predominant in the state, the Office of Public Instruction may consider "rules" for the "turnaround schools."

To date, most of the Montana districts that have changed to a four-day week have been the small, rural schools. The change appears to be beneficial to the rural schools due to the remote characteristics of these districts.

For districts considering a change to a four-day school week, the Office of Public Instruction recommends the following:

1. Take enough time to make an informed decision.
2. Research the issue thoroughly.
3. Make a point to visit and talk to districts that have made the change. Seek comments from a variety of people (students to community members).
4. Communicate, communicate, and communicate. Use various forms of communication to dialogue with all the different constituents in your community.

5. Make the process as transparent as possible. Do not surprise anyone.

For further information please contact the Accreditation Office, (406) 444-1852.

Appendix A

Four-Day School Week Survey

The 2011 Survey Questions are:

1. How long has your school operated on a four-day school week?
2. What were the reasons for the district to adopt a four-day school week?
3. Since the change to a four-day school week, what benefits has the district seen?
4. How has the extra day during the week been used?
5. Before the change, what concerns did the community have?
6. After the change, did the concerns in item 5 come to be realized?
7. Does the district offer full-time kindergarten?
8. Are the elementary and the secondary schools on basically the same beginning and ending daily schedule?
9. How was input solicited from the community?
10. Were there any difficulties in meeting the 225 minutes requirement for a unit of credit for 7-12 grade students?
11. How long did the decision making process take?
12. Do the following constituents like the change to a four-day week?
13. Does the board of trustees plan to re-visit or reconsider the four-day week in the near future?
14. Please show any general comments that may help other school districts who are considering a change to a four-day week.

The Office of Public Instruction is committed to equal employment opportunity and non-discriminatory acccess to all our programs and services. For information or to file a complaint, please contact the OPI Personnel Division, (406) 444-2673.

0,000 copies of this public document were published at an estimated cost of $000.00 per copy, for a total cost of $000.00, which includes $000.00 for printing and $.00 for distribution.

Denise Juneau
State Superintendent
Montana Office of Public Instruction
Helena, Montana 59620-2051

opi.mt.gov