RESEARCH BRIEF:

A Review of the Evidence on the

Four-Day School Week

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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).
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 Shaughnessy (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:


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.


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.
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 half day 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.