



Four-Day School Week

Executive Summary

Enacted in 2009, Missouri statute (RSMo [160.011](#)) states that a school term must consist of at least 1,044 hours of pupil attendance with no minimum requirement for the number of school days. Since 2009, the number of school districts in Missouri with four-day school weeks (4DSWs) has increased yearly. Rationale to adopt a 4DSW includes reducing school expenditures and improving hiring and retention of teachers. Primary considerations include how a 4DSW affects student academic achievement, working parents of young school-age children, juvenile crime, and wrap-around services of schools (e.g., free and reduced price lunch programs and student counseling).

Highlights

- Nationwide, over 1600 schools in 24 states have adopted a 4DSW which is a 600% increase since 1999.
- In the 2020-21 school year, there were 102 4DSW school districts, which is approximately 20% of total school districts in Missouri.
 - Most schools that have adopted 4DSW are in rural communities with higher rates of food insecurity and may be associated with increased rates of juvenile crime.
- Studies have found mixed effects of 4DSWs on certain aspects of student academic achievement such as reading and math scores.
- Teacher recruitment increased by 4% for Missouri rural schools adopting a 4DSW as compared to rural schools with a standard 5-day school week.
- Research indicates a decrease in general employment within districts adopting 4DSWs due to women leaving the workforce.

Limitations

- Analyzing the effects of 4DSWs is difficult because programs vary substantially in implementation.
- The effectiveness of 4DSWs to recruit rural educators is unknown in the long-term and might decrease as more schools adopt the system.

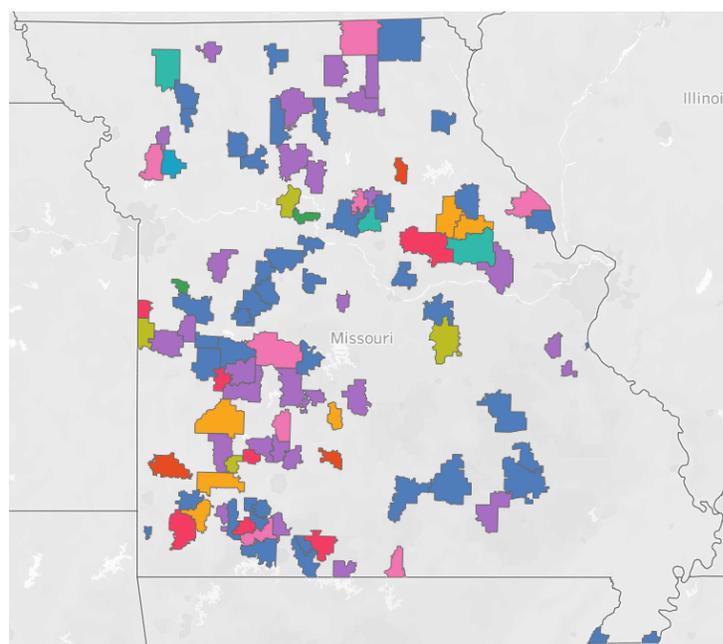
Research Background

Four-Day School Week (4DSW) Background & Patterns Nationwide

Legislation in Missouri was first passed in 2009 allowing school districts to establish Four-Day School Weeks (4DSW). Current statute (RSMo [160.011](#)) states that a school term must consist of

*MOST Policy Initiative, Inc. is a nonprofit organization that provides nonpartisan information to Missouri's decisionmakers. All legislative Science Notes are written only upon request by members of the General Assembly. **This Science Note was published on 2/25/22 by Dr. Alan Moss, Education & Workforce Development Policy Fellow – alan@mostpolicyinitiative.org.***

at least 1,044 hours of pupil attendance with no minimum requirement for the number of school days. Since then, more than 100 Missouri school districts have adopted Four-Day School Weeks (4DSWs) which is approximately 20% of total school districts in Missouri.¹ Nationwide, over 1,600 schools in 24 states have adopted a 4DSW which is a 600% increase since 1999.² The distribution of districts with 4DSWs both nationally and in Missouri tends to be largely concentrated in rural districts (Figure 1). The rationale for establishing a 4DSW includes cost



savings and increasing teacher recruitment and retention. The most predictive factor for a Missouri school district adopting a 4DSW was the neighboring school district having a 4DSW.³

Figure 1. Map of school districts in Missouri with Four-Day School Weeks (4DSW). Different colors of districts signify the year of adoption of a 4DSW. Reproduced from Tableau Public; original map was created by [Ximena Uribe-Zarain](#).

Effects on School Expenditures

A 2020 Oklahoma study found that school districts with 4DSWs saved ~2% on expenditures with the majority of reductions coming from transportation, administration, and food costs.⁴ Others studies have found similar results with average expenditure cost reductions in the 1-2% range.⁵ In a survey of 552 school districts nationwide that have 4DSWs, about half (48%) are fully closed on the off-day, which is typically Friday.² However, 30% of schools reported having remedial or enrichment activities for students on off-days and 23% had professional development on these days for teachers.

Effects on Students & Parents

Academic Achievement

One of the limitations in analyzing the effects of 4DSWs is that the programs vary substantially in implementation. Some variations include the length of the school day and whether enrichment activities are offered on off-days. Academic achievement effects have been found to vary across 4DSWs and it seems likely that the specific implementation methods utilized largely determine what effects it has on student academic achievement. For example, a Colorado study⁶ of schools adopting 4DSWs found that proficiency rates increased in math and reading for 4th

and 5th graders. In contrast, an Oregon study⁷ found the opposite results with a decrease in math and reading proficiency rates for 3rd through 8th graders after the adoption of 4DSWs. Finally, an Oklahoma study,⁸ found no significant difference in math and reading proficiency rates for 4DSW schools. These results might be in part driven by differences in the average total time in school. School districts with 4DSWs in Colorado have an average of 1,169 hours followed by Oklahoma's with 1,139 hours and Oregon's with 1,116 hours.²

Student Food Security, Health, and Juvenile Crime Rates

Schools in the U.S. provide more than just academic instruction. Education institutions offer wrap-around services for children such as food, counseling, and socialization. Food insecurity for children is a major issue in Missouri with 1 in 7 children facing hunger.^{9,10} The same rural districts that adopted 4DSWs tend to already have the highest rates of child hunger (Figure 2) leading to concerns that students may have further decreased access to food through school food programs.

The adoption of 4DSWs has been found to have various effects on study behavior. In a study of juvenile crime in Colorado, rates were found to go up nearly 20% in school districts after adopting a 4DSW, with the largest increase being in property crimes.¹¹ Another Colorado study found various positive and negative health effects of 4DSWs.¹² Positive effects associated with 4DSWs included increased school connectedness (e.g., attendance and participation in extracurricular sports); decreased non-school screen time; and increased physical activity. Negative health outcomes included increased bullying; increased sexual activity; decreased sleep; and decreased breakfast consumption. These last two health outcomes are likely driven by the increased length of the school days in Colorado 4DSWs.

Effects on Childcare & Parent Workforce Participation

Since most schools with 4DSWs are completely closed on off-days, finding daycare for younger students can be a concern for working parents. A study of 4DSW programs in four states (CO, ID, OK, OR) found that employment and the number of hours worked decreased in districts adopting 4DSWs due to women leaving the workforce or working fewer hours.¹³ More than half the counties in Missouri are classified as childcare deserts.¹⁴

Effects on Teacher Recruitment & Retention

One proposed reason for switching to a 4DSW is to increase school districts' ability to recruit and retain teachers, which is an ongoing issue in Missouri's schools (for more information, see our Science Note on [Teacher Recruitment & Retention](#)). A small survey of teachers in three rural Missouri 4DSW school districts found that 91% of the teachers indicated the change improved staff morale.¹⁵ A 4DSW might allow teachers to use the off-day to spend more time planning, grading, and attending professional development.

Schools with 4DSWs tend to have lower teacher pay than neighboring districts, indicating that 4DSWs are likely used as a competitive recruitment tool. A Saint Louis University study found

that teacher recruitment increased by 4% for 4DSW rural schools compared to rural schools with a standard five-day school week.¹⁶ However, teacher recruitment increases were only found in rural school districts and not in town school districts. Additionally, it is unknown how teacher recruitment would be impacted in urban districts. Finally, the study covered a relatively short time frame for teacher recruitment meaning that these trends might not continue long-term. Lastly, as more schools adopt a 4DSW for teacher recruitment, its effectiveness as a competitive recruitment tool may diminish.

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