

University of Oregon Research Findings: 2 Questions

Is the 4DSW associated with changes in student educational achievement?

- Kilburn 2021 examined administrative data from school districts across six states (Colorado, Idaho, Missouri, New Mexico, South Dakota, Oklahoma) for the years 2008 to 2019. They found that achievement levels of ELA and math in 4DSW school districts did not decrease after the adoption of the policy, and their “difference-in-differences” analyses (i.e., the research method used in other studies) did not detect a statistically significant association between 4DSW adoption and ELA/math scores. However, in other analyses comparing 4DSW districts with similar 5DSW districts, they found that student achievement may not have grown as fast as it would have if 4DSW districts retained a 5DSW—and that these differences in achievement scores may have compounded and grown over time.
 - Across various ways of analyzing their data, they found average ELA achievement scores to be between 0.028 and 0.087 standard deviations lower—and average math achievement scores to be between 0.044 and 0.099 standard deviations lower—than comparable 5DSW districts.
 - In other words, a school district that would be in the 50th percentile if they retained a 5DSW would instead be in the 47th-to-49th percentile on ELA and 46th-to-48th percentile on math after adopting the 4DSW.
 - Three years after 4DSW adoption, they found ELA scores to be between 0.040 and 0.096 standard deviations lower—and math scores to be between 0.069 and 0.140 standard deviations lower—than comparable 5DSW districts.
 - Three years after adopting the 4DSW, a school district that would be in the 50th percentile if they retained a 5DSW would instead be in the 46th-to-48th percentile on ELA and 44th-to-47th percentile on math.
 - Eight years after 4DSW adoption, they found ELA scores to be between 0.145 and 0.229 standard deviations lower—and math scores to be between 0.144 and 0.189 standard deviations lower—than comparable 5DSW districts.
 - Eight years after adopting the 4DSW, a school district that would be in the 50th percentile if they retained a 5DSW would instead be in the 43rd-to-44th percentile on ELA and 44th-to-47th percentile on math.
- Morton 2021 examined district-level achievement data from the Stanford Education Data Archive for all K–12 public school districts in Oklahoma for the years 2009 to 2016. They did not detect a statistically significant relationship on math and ELA scores for students in Grades 3 to 8.
- Morton 2022a examined district-level ACT data from the Oklahoma State Department of Education for Oklahoma districts that served high school students in a noncity location for the years 2008 to 2019. They did not detect a statistically significant relationship on ACT math and English scores.
- Thompson 2020 examined student-level data on the Oregon Assessment of Knowledge and Skills test scores for students in Grades 3 through 8 in Oregon for the years 2005 to 2019. They found math scores to be between 0.037 and 0.059 standard deviations lower—and reading scores to be between 0.033 and 0.042 standard deviations lower—for students at schools that have adopted the 4DSW than comparable students at schools that have retained the 5DSW.
 - In other words, a student that would be in the 50th percentile if their school retained a 5DSW would instead be in the 48th-to-49th percentile in both math and reading after adopting the 4DSW.
 - Using the probability that a student scores above the proficiency threshold (rather than actual test scores), they found that students at schools with 4DSW were 2-to-3.6 percentage-points less likely to score above the proficiency cutoff in math and 1.4-to-2.6 percentage points less likely to score above the proficiency cutoff in reading than if their school had retained a 5DSW.

- They found that these negative associations with achievement are most evident immediately after 4DSW adoption and fade over time—primarily due to transitory 4DSW schools switching back to the 5DSW after a few years (rather than permanent 4DSW schools becoming more acclimated to the new schedule).
 - By four years after permanent 4DSW adoption, math achievement fell by 0.088 standard deviations and reading achievement fell by 0.104 standard deviations relative to the year before adoption (i.e., 46th percentile rather than 50th percentile for the average student). Conversely, math achievement grew by 0.093 standard deviations and reading achievement grew by 0.099 standard deviations four years after transitory 4DSW adoption (i.e., 54th percentile rather than 50th percentile for the average student).
- They also found a noticeable positive association between greater time in school and improvements in educational achievement—suggesting that maintaining exposure to the school environment may mitigate negative associations with achievement.
 - Specifically, they found that a one-hour increase in weekly time in school was associated with higher math achievement scores by 0.0185 standard deviations (i.e., 51st percentile rather than 50th percentile for the average student). However, they did not detect a statistically significant relationship reading.
- Thompson 2022 examined student-level data on the Oregon Assessment of Knowledge and Skills test for high school students in 11th grade in Oregon for the years 2005 to 2019. They found that math scores to be 0.09 standard deviations lower for students who started in a four-day school upon entry into high school compared to students at schools that have retained the 5DSW (i.e., 54th percentile rather than 50th percentile for the average student). They did not detect a statistically significant relationship for reading achievement.

Is the 4DSW associated with differences in achievement for specific student populations?

- Anderson 2015 found a positive relationship between the percentage of students at a school receiving free lunch and higher test scores for fifth-grade mathematics, but they did not detect a statistically significant relationship for fourth-grade reading.
- Thompson 2020 found that special education students had math scores 0.026 standard deviations higher on average than general education students (i.e., 51st percentile rather than 50th percentile for the average student), but they did not detect a statistically significant relationship for reading. Conversely, they found that students participating in an English as a second language (ESL) program had reading scores 0.041 standard deviations lower on average, in reading than non-ESL students (i.e., 48th percentile rather than 50th percentile for the average student), but they did not detect a statistically significant relationship for math. Lastly, they found that students in 8th grade had the most prominent associations between 4DSW adoption and lower math and reading achievement effects compared to other grades.
 - They did not detect statistically significant relationships for student race/ethnicity, gender, eligibility for free or reduced-price lunch, or participation in gifted education.

1. Neutral Achievement/Positive Behavior (4DSW No impact on ACT scores, Attendance, Creates less bullying/fighting)

#2 Negative Academic Impact, Negative impact with absent students, Reduction of on time Graduation rates compared to 5DSW

#3. Negative Achievement Impact in Math and ELA with 4DSW- Less time in school more negative impact; More time in school more positive impact

#4 Neutral- The more you have 4DSW districts around you the more other districts want to implement; 4DSW is good for teacher recruitment and retention, 4DSW typically offer lower teacher salaries

#5. Mixed: Negative & Positive: Negative Achievement compared to 5DSW, Qualitative: Saves \$\$, Improves attendance, Parents and students like it, helps to recruit and retain teachers in rural districts. Advice: communities should make choices based on their goals, local context matters

#6. Neutral/Information- Financially driven, rural, Less time in school

#7. Negative Academic achievement impact; Less contact time drives achievement decline, Math scores decrease over time significantly with 4DSW, Positive Recommendation: 1 hour more per week overall can increase reading and math achievement (Win-Win)

#8. Neutral/Informational: Districts implement 4DSW due to less funding; decrease spending, less support services, due to less funds.

#9. Negative-Switching to 4DSW increases adolescent health and risk behaviors, obesity, and food security. More sugar sweetened beverages, less water, less PE, more food insecure, more drugs/Marijuana and 5DSW- Switching may impact adolescent health behaviors, including diet, physical activity, and drug use.

#10. Mixed Findings: Positive: Increased student engagement, decreased substance use behaviors, decreased non-school screen time, and increased physical activity: Negative: Increased bullying, increased sexual activity, decreased sleep, and breakfast consumption

11# Positive for teacher retention due to teacher shortage.

12#. Negative 4DSWs impact to physical activity, increase to childhood obesity prevalence in 4- versus 5-day Oregon schools; the authors hypothesized lower PE exposure and higher obesity in FDSW schools, given reduced school environment exposure. The authors utilized existing data from Oregon to compare 4- versus 5- day models: t tests compared mean school-level factors (PE exposure, time in school, enrollment, and demographics) and complex samples weighted t tests compared mean child-level obesity data for a state representative sample of first to third graders (N = 4625). Enrollment, time in school, and student-teacher ratio were significantly lower in FDSW schools. FDSW schools provided significantly more PE, both in minutes (120 vs 101 min/wk in 4- vs 5-d schools, $P < .01$) and relative to total time in school (6.9% vs 5.0%, $P < .0001$).

#13. Mixed: Overall Parent support is strong. Parents with elementary age children and parents with students receiving Sped services less supportive,

14. Negative: school-crime relationship 20% increase in juvenile criminal offenses, where the strongest effect is observed for property crime.

15. Positive/Qualitative: Classified and Certified Staff that transition to 4DSW support the change, improved morale, increased instructional quality, business and government support compressed workweek

16. Negative school-crime relationship and negative impact to school attendance has on youth crime in rural areas. 20% increase in juvenile criminal offenses, where the strongest effect is observed for property crime.

17. Negative: 4DSW focus: Even split of Community/business leaders concerned with the economic impact. Even split of concern with education quality impact, Negative perception related to the economic impact on the profitability of their personal businesses. Overall; Business Prefer 5DSW

18. Negative: Low income, Hispanic immigrants, increased financial strain to pay childcare during the week to avoid losing a day of work. 4DSW negatively impacts ELL student performance on standardized exams

19. Negative Assessment achievement: Study provided conclusive evidence that students in the four-day week did not performed as well, over time, when compared to students in the traditional five-day week settings.

20. Positive

We use school-level data from Colorado to investigate the relationship between the four-day week and academic performance among elementary school students. Our results generally indicate a positive relationship between the four-day week and performance in reading and mathematics. evidence that moving to a four-day week compromises student academic achievement. This research has policy relevance to the current U.S. education system, where many school districts must cut costs.

20. Positive relationship between 4DSW and performance in reading and mathematics.

21. Negative Achievement Impact with 4DSW in ELA, Writing, Math in grades 3-10: 5DSW scores exceed 4DSW in 11 of 12 test comparisons; Decision to change to 4DSW should be for other reasons other than student achievement.

22. Positive Impact: 4DSW saves fuel costs, decreased absenteeism, improved efficiency in activity-oriented classes, increased staff development time, and a flexible "fifth day" for extracurricular activities.

23. Mixed: 12 Colorado school districts changed to a 4DSW during the 80-81 school year. Article shares advantages of the move and offers some cautions

24. Neutral: Achievement impact is less with less time; more time with enrichment and skill learning activities is important

25. Negative Achievement Finding: 4DSW negative average effects (-0.02 to -0.09 SD) on annual, standardized state test scores in math and reading; 4DSW vs 5DSW significant negative effects of

the schedule on spring reading achievement (-0.07 SD) and fall-to-spring achievement gains in math and reading (-0.06 SD in both). The negative effects of the schedule are disproportionately larger in non-rural schools than rural schools and for female students, and they may grow over time.

Suggestion: Policymakers and practitioners will need to weigh the policy's demonstrated negative average effects on achievement in their decisions regarding how and if to implement a four-day week.

26. Negative housing transaction data from the first school district in a major metropolitan area to convert to a four-day school week, We found that house prices decreased 2 to 5 percent relative to surrounding school districts soon after the policy was announced.

27. Negative- Creates 11% decrease in employment for mothers with children ages 5 and 13; 7.6 percentage points decreases in hours and weeks worked, also found that the policy led to an 18% increase in the incidence of working year-round relative to working fewer weeks per year. The labor supply of married fathers was not affected by 4DSW; By adoption of the four-day school week in a statistically significant manner. Small increases in moving in response to the policy in subsequent years and show that there is significant heterogeneity in labor supply responses among married mothers according to educational level, with most of the negative effects accruing to mothers with a four-year college degree or greater.

28. Positive Using data from Oklahoma employment records, 4DSW reduced the attrition rate for teachers by 1 to 3 percentage points.

29. Positive/Neutral: Travel cost 4DSW caused sizable increases in "day trips"—trips that are at least 50 miles away from home but require no overnight stay. The number and nature of "weekend trips" remained unaffected by the four-day week. 4DSW and 5DSW took the same number of trips had similar lengths of stay and spent similar amounts of money on weekend trips. 4DSW families were nine percentage points less likely to take an in-state trip;

30. Mixed: Case Study: Positive student achievement in some grade levels; other grade levels comparable to previous years in 5DSW; high levels of student on-task behaviors, less disruption of instructional time, sustained student engagement, a decrease in employee and student absenteeism, and an approximate 1.6 percent savings in the district budget. Negative: However, the district abandoned the 4-day week after 1 year of implementation. Abandonment of the 4-day week is attributed to the district's lack of the following key elements of systematic change--vision, public and political support, cooperative networks, attention to teachers and learning, clearly defined administrative roles and responsibilities, and policy alignment.

31. Positive/Mixed 2 State Study: (NM) Positive Teacher, student, and parent attitudes toward the 4DSW: 4DSW reported cost savings of 10-25% on fuel, electricity, and transportation; standardized achievement test scores comparable to state norms; and a collective dropout rate of 3.3% vs 8.1% statewide). In the 12 Colorado districts 4DSW students showed some gains and some losses in academic achievement, with no clear evidence that student achievement was suffering.

32. Mixed Study: Positive 4DSW produced: (1) a 15% to 23% reduction in transportation costs plus additional savings in energy costs and nonteacher salaries; (2) more actual learning time due to less set-up time and fewer interruptions; (3) more time for staff development, extracurricular activities, and family business; (4) less student and teacher absenteeism; (5) higher teacher morale and student enthusiasm; (6) more parental involvement; and (7) no adverse effects on student achievement. The following disadvantages have been noted: (1) difficulties in restoration of the 5-day activities if desired; (2) increased costs for some parents; (3) increased teacher stress; (4) tiredness in younger children; (5) the impact of holidays on the schedule; and (6) concerns about the national movement toward a longer school year.

34. Neutral Academic Impact: Analysis of the ITBS scales revealed 4DSW had no effect on student academic achievement, although there was a suggestion that there might be some leveling of performance during the first year the schools were on the four-day schedule. Analysis of the same grade level across the four-year period also provided no clear evidence that the change had any effect on student achievement.

35. Mixed: Achievement Neutral: positive nor negative outcomes in student achievement could be shown. Mixed: The community impact was split: most parents saw Fridays as positive opportunities for family activities, but families where both parents were working and the children were of elementary age viewed the four-day week negatively.

Dissertations

36. Qualitative: Positive Perceptions: seven significant emergent themes. The significant themes for interviews were (a) increased teacher and student attendance, (b) increased student morale and decreased discipline issues, (c) increased teacher morale and retention, and (d) more time for family and personal business. The significant themes for the focus group discussion consisted of (a) increased teacher and student attendance, (b) increased student morale and decreased discipline issues, and (c) school finance benefits. Recommendations were included.

37. Neutral - teacher retention rates 4 day vs 5 day: results indicate that school districts on a five-day school week consistently had a higher rate of teacher retention when compared to districts on a four-day school week, there was no statistically significant impact ($p > .05$)

38. Qualitative: Negative Special education services and achievement impact and regression 4DSW; More Data and discussion to the findings would be beneficial to district leaders seeking to implement the four-day model in the future.

39. Neutral Achievement 4DSW vs. 5DSW- New Mexico's 89 public school districts Results of the independent-samples t-test showed the independent variable (length of the school week) had no statistical impact on the dependent variable (academic achievement) and the samples were statistically similar.

39. Negative achievement 4DSW vs. 5DSW – Middle School negative impact on 7th-grade ELA, according to MAP data analysis, whereas 7th-grade math, 8th-grade ELA, and 8th-grade math indicated an insignificant impact. Positive perceptions of principals and teachers indicated the four-day school week was an overall benefit to the school climate.

40. Policy Study: Teen traffic safety within the school district before and after adoption of the four-day schedule. The second policy examined is the usage of academic probation by universities. The final policy examined is the introduction of charter schools throughout the United States.

41. Neutral - attendance and student discipline: 4DSW does not significantly impact student attendance or student discipline incident rates. Suggestions: research a variety of ways to implement a compressed school and workweek and creating an action plan to track school district data, including student attendance and student discipline incidents, because the success of the four-day school week depends on the school community.

42. Neutral achievement - The results of the t tests indicated there were no significant differences in reading proficiency mean scores between any of the matched four-day and five-day school districts. Qualitative: main reason for 4DSW schedule was to recruit and retain quality teachers and Teachers indicate overall positive impact on the amount of reading instruction time, teacher collaboration, and altogether student reading achievement.

43. Neutral/Suggestions - What is focus of 5th day. Need to address the comprehensive needs of the families and students they serve. The project focuses on childcare, food insecurities and academic deficiencies and/or supplemental and extracurricular activities.

44. Negative achievement 4DSW vs 5DSW in Idaho results indicate that school districts on a 5DSW week consistently had a higher percentage of proficient/advanced students on standardized tests when compared to 4DSW; there was no statistically significant impact ($p \geq .05$) on the academic performance; poverty students and Hispanic students also key demographic studied;

45. Neutral 4DSW vs. 5DSW Annual Progress Report (APR) scores of academic achievement levels (5 schools each reviewed) The results of the t-Test in each case did not provide proof that a significant difference existed between the four-day school week and the five-day school week.

46. Positive professional development

The purpose of this qualitative case study was to examine math teachers' experiences attending professional development during a four-day instructional week in East Texas. This alternative schedule provided for a full day of professional development for math teachers during the work week. Qualitative data was collected through semi-structured interviews with six math teachers and triangulated with interviews from three other staff members working in this setting at a middle school. Data analysis occurred through open coding and axial coding resulting in four themes. This study found that teachers felt a need to be supported by their administration, and that teachers felt that a day of professional development was overall more beneficial to them and their students in lieu of an additional day of instruction. Implications for the findings and recommendations include teachers and administrators working together to help teachers feel supported, teachers finding time to make sure professional development is a priority, and teachers attending professional development they feel will help them be more effective.

47. Negative communication/climate perception

A multi-case study was conducted to understand elementary, middle, and high school teachers' shared perceptions of their experiences while transitioning from a 5-day school system to a 4-day school system. Teachers experienced changes in personal time use, reduction in student engagement, and improvement in attendance. With the experiences, teachers developed feelings of being overwhelmed, disconnected from administration, and unable to adapt to the change. Policymakers and administration are encouraged to foster an environment that generates a feeling of inclusion among all stakeholders. Data from the current study could be utilized for future comparative studies on public school districts currently functioning under or considering the adoption of the 4-day school week system.

48. Mixed findings in music performance - significant changes to programs

The results of the survey found that the frequency of instruction and decrease in instructional time creates limitations on curriculum, ensembles and concert literature. However, many teachers found the schedule to have personal benefits. Music programs must in turn adapt to the circumstances in creative ways to engage students on a consistent basis. The findings also showed that to be successful on the shortened schedule, results indicated that educators must maintain high levels of student's engagement, adjusting repertoire to fit the realities of less instructional time, extra review time and by having a strong student assessment system in place. The implications of the four-day school week on school music programs are discussed fully in the final chapter.

49. Mixed findings-negative Financial consequences for students and admin and teacher retention implications are good

Data were collected over a five-year time period, 2013-2017. This study found statistically significant relationships between higher teacher salaries, instructional and support resources, and proximity of the district to teacher retention. In addition, the study indicated a four-day workweek, administrative expenditures, and percent of economically disadvantaged students were significantly and inversely related to teacher retention.

50. Negative achievement

The results of the study also indicated that schools operating on the 4-day school week score significantly lower in subgroup achievement scores on ELA and mathematics EOC assessments than schools operating on the 5-day school week. Finally, the results of the study indicated that there are no significant differences in college and career readiness, attendance rates, and graduation rates between schools utilizing the 4-day school week and schools operating on the traditional 5-day school week. The study has implications for the educational community and policymakers making decisions regarding education funding and the use of the 4-day school week. School districts that are currently utilizing the 4-day schedule and school districts considering a future implementation of the schedule should review the results of this study to determine the future of the 4-day school week within their communities.

51. Positives to retain teachers and hire staff

The researcher suggests rural, Missouri schools struggling with retaining and attracting teaching staff to implement the four-day school week in order to increase teacher retention and teacher candidates for open positions.

52. 4 day has an overall Negative impact to students vs. 5 day.

This study found statistically significant relationships between schools districts' per-pupil valuations, a 4-day school week, reductions in instructional time, and increased class sizes, indicating that inequitable capital funding in Oklahoma was associated with a decrease in equity for state aid revenue. Specifically, class sizes were inversely associated with district wealth across all years of the study. The results indicate the more than 600,000 Oklahoma students in districts with low property values are disadvantaged by larger classes, a 4-day school week, and a decreased amount of instructional time compared to their peers in wealthier districts.

53. Negative perception need help with time management, curriculum training, collaboration time. data was analyzed by the researcher to determine if an impact existed on their teachers following a four-day school week implementation. Research data in this qualitative study showed that in the represented schools teacher preparation was affected in four areas, time management, curriculum awareness, collaboration and teacher morale. The intent of this study is to assist public school districts in decision-making regarding implementation of a four-day school week calendar.

54. Negative achievement some saved costs.

The results showed that switching to a four-day school week negatively impacted ACT composite scores, an indicator of college readiness. Using school district budget expenditures from two years before the district switched to a four-day school week and two years after the district made the switch, savings in the areas of utilities (heating and electricity), transportation, classified staff personnel costs, and food service personnel costs were examined. School districts that switched to a four-day school week showed significant savings in the areas of heating, transportation, and food service personnel costs. Savings in the areas of electricity and classified personnel costs were not realized.

55. Positives for professional development

The teachers responded via online survey distributed by email. Statistical analysis included independent sample two-tailed t-tests adjusted for unequal sample sizes at the $p < 0.05$ level.

Missouri four-day teachers rated the Learning Communities, Leadership, and Data standards significantly higher than their five-day counterparts did. The findings of this study add to the sparse body of literature related to the four-day school week and professional learning practices. The study concluded that the four-day school week may help schools improve professional learning practices due to the unique availability of professional development time on the off-day.

56. Positives impact for teachers PD and collaboration to be built in

Participants overwhelmingly identified the four-day school week as a benefit to them personally, citing the ability to balance work and family as positive. Employees of two of the three school districts reported improved ability to recruit potential candidates for teaching positions. Educators from all three districts reported an improvement in teacher retention, as the four-day schedule is very popular with teachers. Also noted as valuable and important to the teaching staff is the additional time for professional development and collaboration built into the school calendar.

57. Mixed- overall positives perception attendance, cost savings, time with loved ones, morale, retention.

Perception data revealed stakeholders felt a positive impact on student attendance; saving money on utilities; teacher PD time; part-time employment; family time; and morale and staff retention. Stakeholders felt negatively towards teacher collaboration time; student achievement; the longer school day; lack of structure, supervision, and nutritious meals on the off day; and the Monday federal holidays causing school to be in session only three days per week. Overall, data revealed that while perceptions varied, stakeholders preferred the four-day regardless of any negative impacts to the district.

58. Positives with PD and culture

The data from the SCS showed statistical significance in the areas of collaborative leadership, teacher collaboration, and learning partnership.

59. Mixed. Less achievement yet folks happier.

The findings of this study revealed the four-day school week produced a statistically positive significant impact on attendance, whereas ACT scores and dropout rates were not influenced. Furthermore, the perceptions of administrators and teachers indicated the four-day school week was beneficial to the school culture.

60. Positives

Although the four-day school week began as a means for school districts to reduce costs and save money, the study indicated there were other advantages to the four-day school week for both teachers and families, including providing additional time for teacher/lesson planning, allowing families more quality time together, and increased school attendance.

61. Can create Negative social circumstances for students

However, there is limited information regarding the influence shortened school weeks have on students' social choices, particularly the choices they make with activities on weekends. As a result of lengthened weekends, the purpose of this case study was to examine the perception four-day school weeks has left on the various stakeholders of a rural Montana high school, with an emphasis on extended weekends, and to investigate the specific activities high school students participate in during three-day weekends. The findings of this case study emphasize the importance and advancement in adolescent involvement with extracurricular activities, workforce, time spent with family and peers, and religious practices. However, the findings also bring forth further questions about adolescents not involved in athletics, clubs, religious endeavors, and the workforce.

62. Neutral achievement

Data from students with disabilities were also compared and examined separately to determine if there was a disproportionate change in performance for this subgroup. The researcher found no significant difference in student achievement for any Rockbridge County students (including those students with disabilities), and student performance actually increased after the change to the amended calendar.

63. Positives for supt. Leadership.

Superintendents believed the four-day school week calendar provided the time to make a positive impact on the vision and goals, planning, design, resources, and evaluation components of a high quality professional development program. The study supported current research that district planners should provide professional development time that is organized, structured, and purposefully driven. Common themes among respondents included (a) articulate and set as a strategic goal during the calendar adoption process the importance of implementing a high quality professional development program for teachers and set specific dates within the calendar assigned for professional development (b) incorporate student remedial activities into the calendar (c) provide fiscal resources to support the professional development program, and (d) demonstrate effective administrative leadership to ensure fidelity in the design and implementation of the district's professional development program.

64. Achievement mixed

The total percentage of students identified as proficient and advanced was compared to state-wide averages disaggregated by cohort and in composite over the academic years of 2006-2007 through 2012-2013. Findings indicate that student achievement may increase the first year of implementation of the four day week, but over time, student achievement decreases, compared to the rest of the students in the state of Montana.

65. Neutral

The need for an operations manual surfaced as the team examined four-day school week research and during the interviews of state department leaders from many states expressing limited guidance existed for districts investigating or making the transition to a four-day school week. District leaders considering this change have been forced to conduct their own research and develop an implementation plan without any guidance. As more and more districts consider this option, it will be beneficial for them to have a guide with the resources needed to implement the four-day school week. The purpose of this study was to identify what school leaders and policymakers need to know when considering or implementing a four-day school week. An expert panel, consisting of school leaders and state education officials knowledgeable in educational policy and in the research and practice of school district administration reviewed the operations manual as part of the pilot. Following the expert panel review, the manual was refined based on recommendations