

The Four-day School Week in Montana: A Comprehensive Study 2008-2023



Educational Leadership at the University of Montana



Research Team

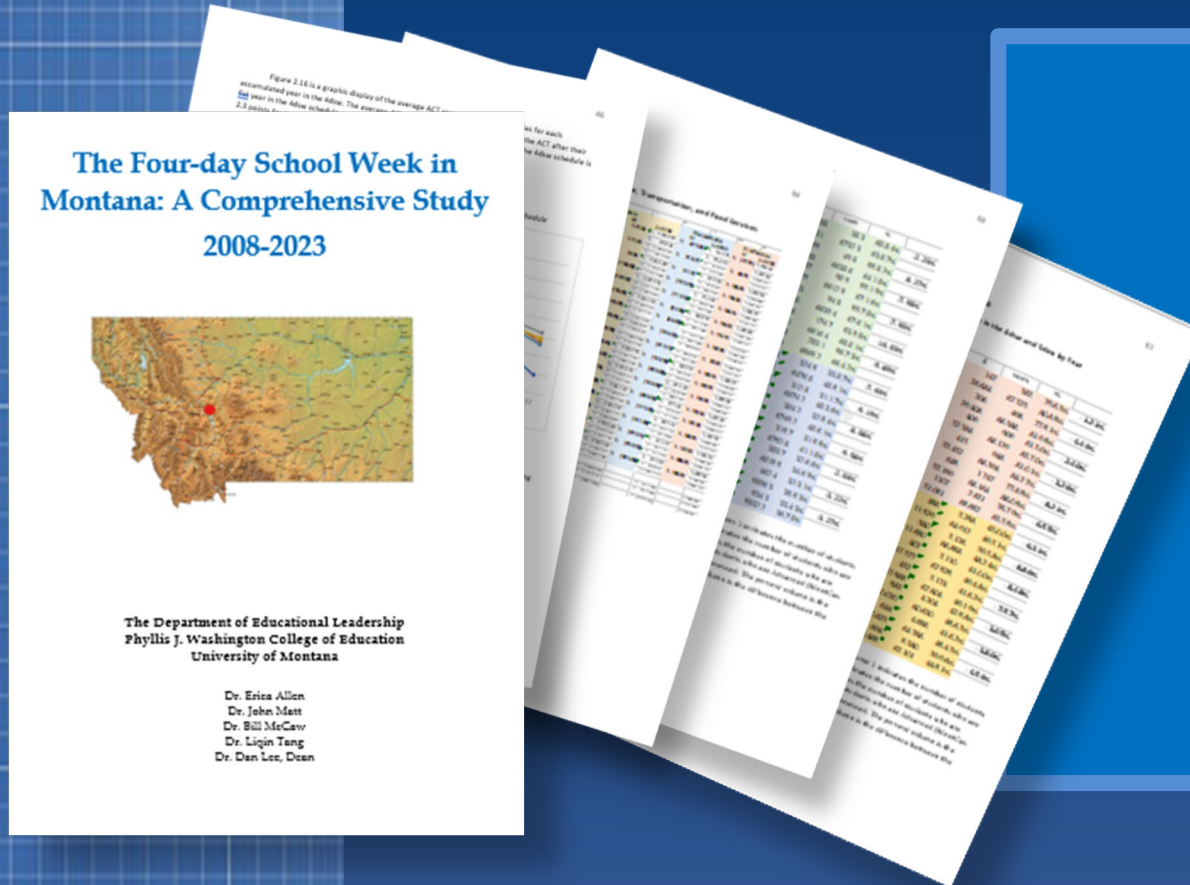
Educational Leadership at the University of Montana

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Discussion Topics



1. Expenditures
2. Student Achievement
3. Student Attendance
4. Graduation Rates
5. Student Behavior

Research Question

1

Expenditures

Is there a difference in cost effectiveness on instructional and non-instructional costs (instruction, maintenance, transportation, and food service) between schools operating on a four-day school week schedule and those operating on a five-day school week schedule?

Research Question

1

Expenditures per ANB: All Districts

A	B	C	D	E	F	G	H	I	J	K	L	M
	Instruction				Maintenance				Transportation		Food Services	
	GF	perANB	All	perANB	GF	perANB	All	perANB	10	perANB	12	perANB
5dsw		\$4,908.92		\$7,314.41		\$1,231.13		\$1,834.33		\$ 672.88		\$ 290.82
4dsw		\$5,390.13		\$8,246.75		\$1,468.05		\$2,176.12		\$ 781.64		\$ 218.01
		8.93%		11.31%		16.14%		15.71%		13.91%		-33.40%
		\$ (481.20)		\$ (932.33)		\$ (236.93)		\$ (341.80)		\$ (108.76)		\$ 72.81

Research Question

1

Expenditures per ANB: Small Districts

	Instruction				Maintenance				Transportation		Food Services	
	GF	perANB	All	perANB	GF	perANB	All	perANB	10	perANB	12	perANB
5dsw		\$5,131.20		\$7,709.21		\$1,333.55		\$2,012.04		\$ 732.62		\$ 295.36
4dsw		\$5,390.13		\$8,246.75		\$1,468.05		\$2,176.12		\$ 781.64		\$ 264.45
		4.80%		6.52%		9.16%		7.54%		6.27%		-11.69%
		\$ (258.92)		\$ (537.54)		\$ (134.50)		\$ (164.08)		\$ (49.03)		\$ 30.91

Research Question

2

Achievement

Is there a difference in academic achievement by grade-level and sub-groups between schools operating on a four-day school week schedule and those operating on a five-day school week schedule?

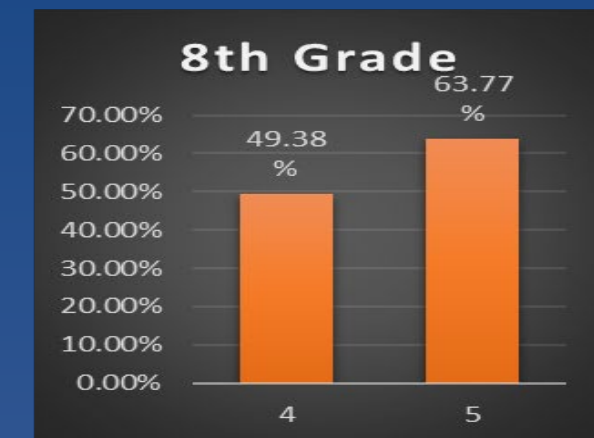
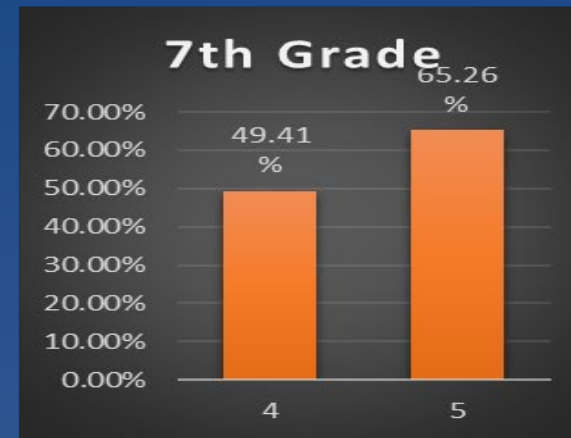
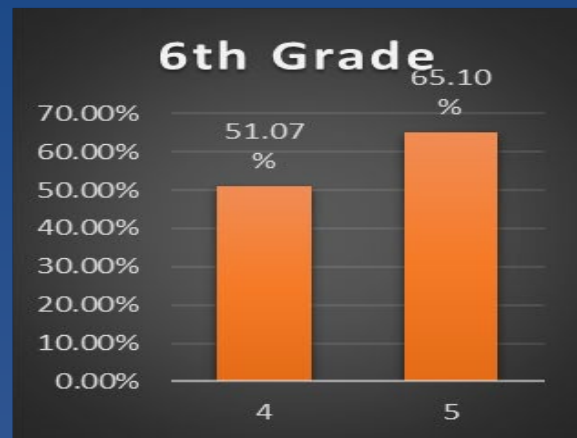
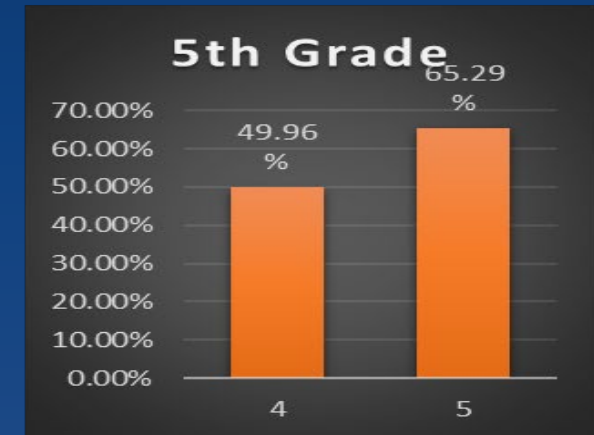
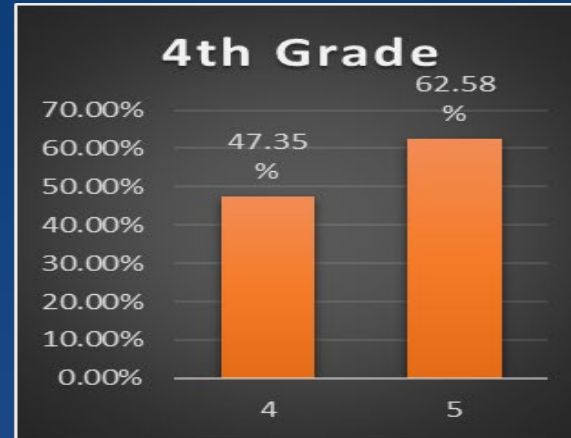
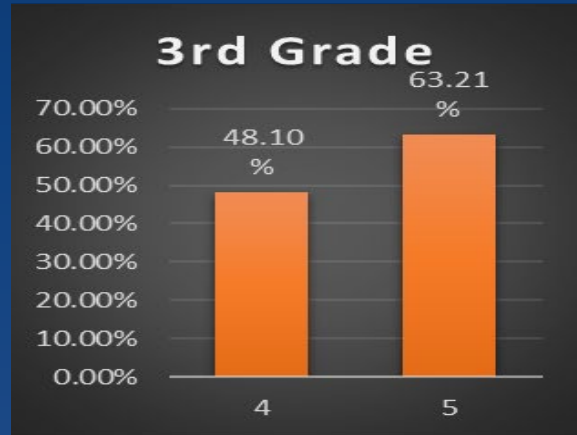
Research Question

2

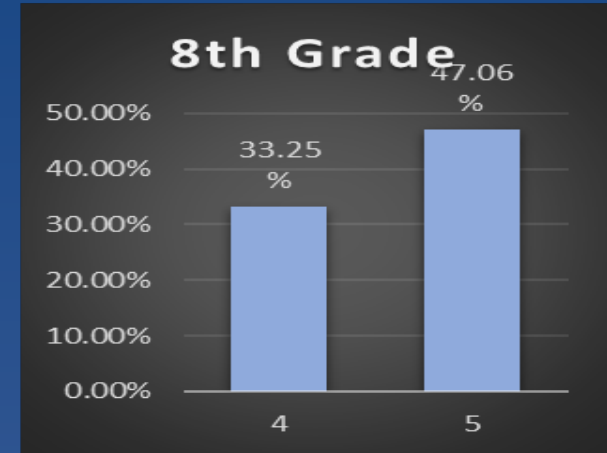
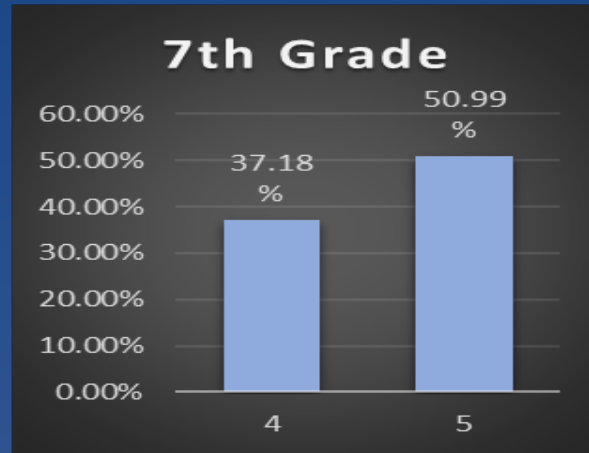
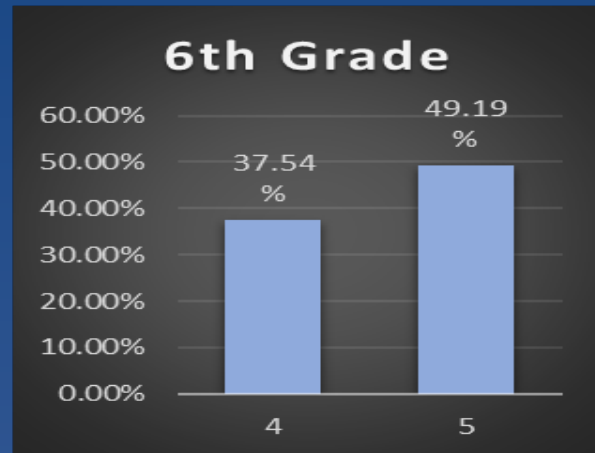
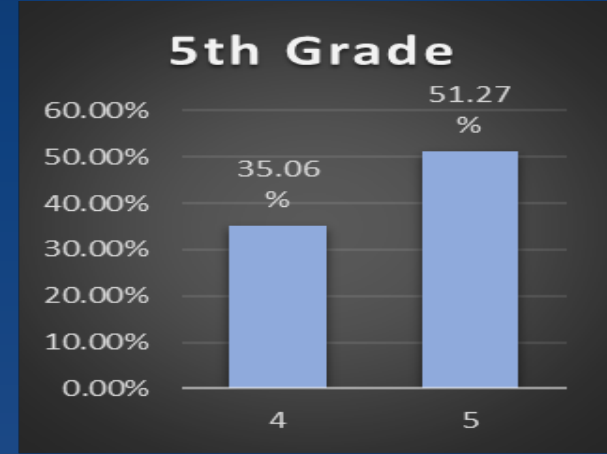
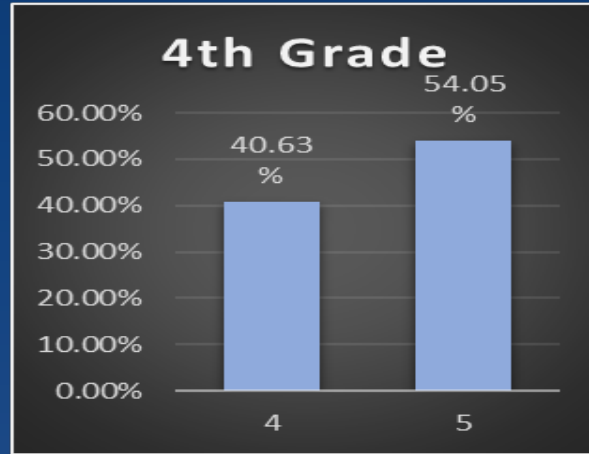
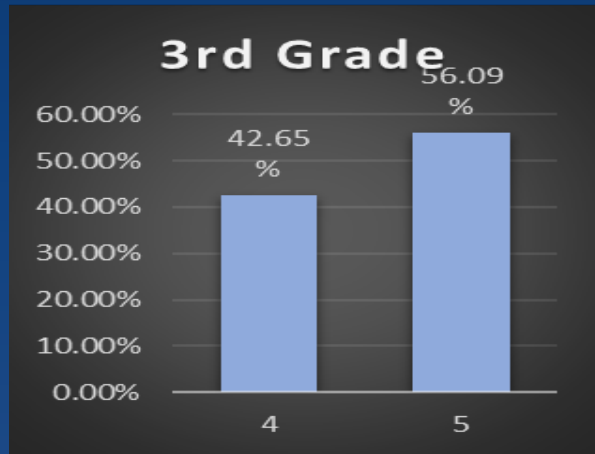
Achievement

- ✓ Reading and Math Achievement by Grade
- ✓ Reading and Math by Year
- ✓ Before and After: Student Achievement Analysis
- ✓ Basic/Novice Proficiencies Compared to Advanced in Cohort School Districts
- ✓ Students Receiving Special Education Services
- ✓ Reading and Math Cohorts
- ✓ ACT

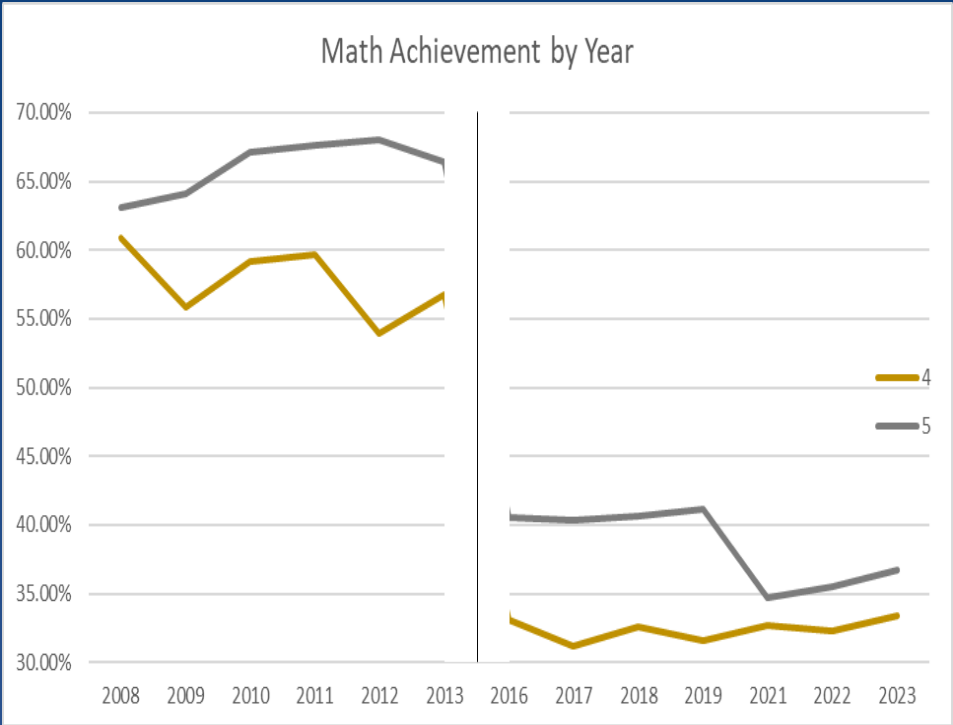
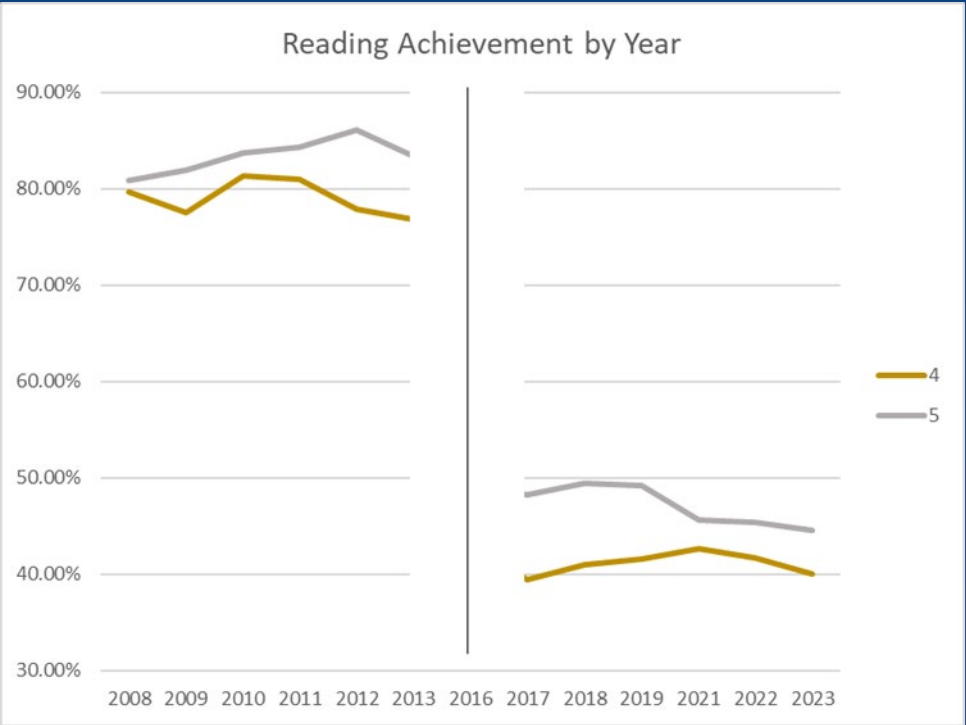
Reading Achievement by Grade



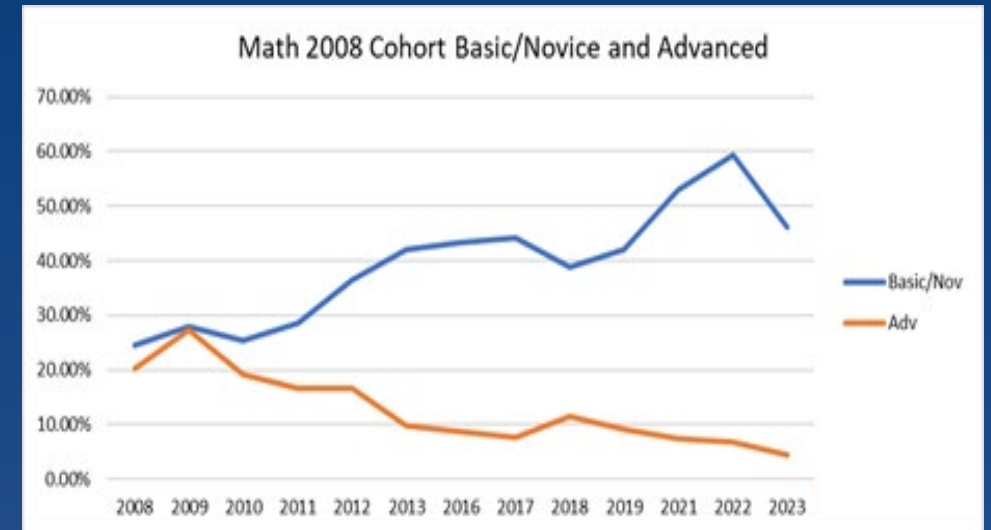
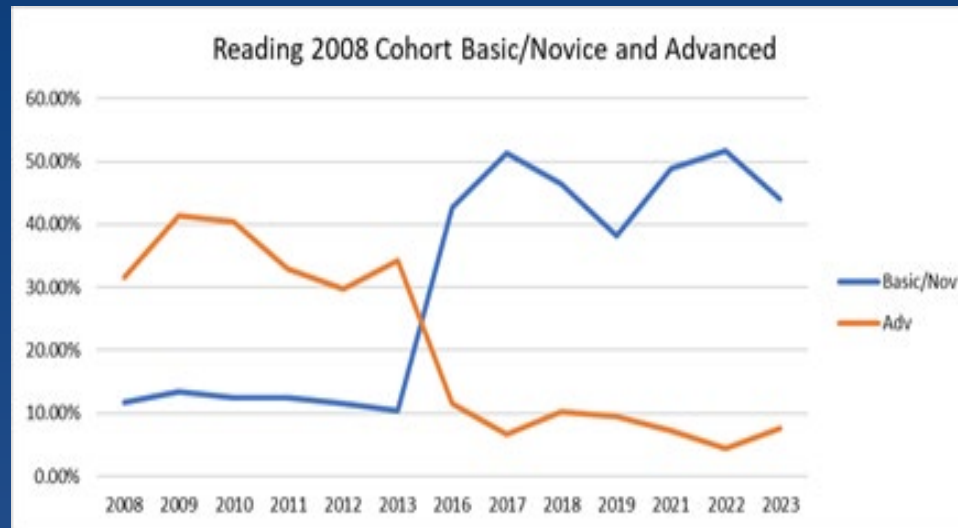
Math Achievement by Grade



Achievement by Year

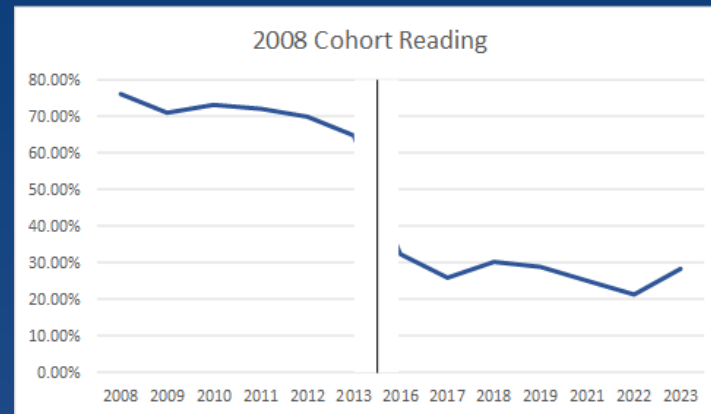


Basic/Novice and Advanced

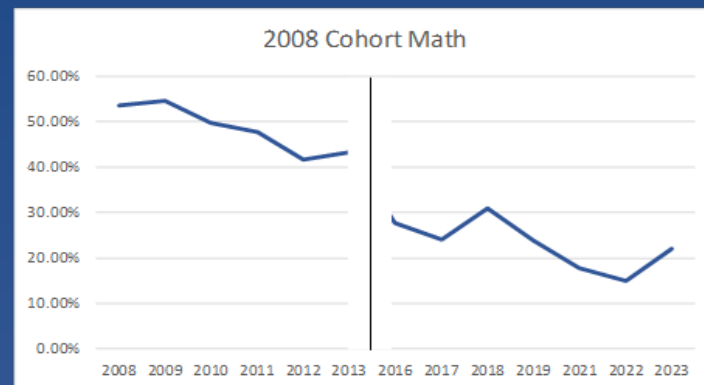


Cohorts

2008 Cohort	2008	2009	2010	2011	2012	2013	2016	2017	2018	2019	2021	2022	2023
7 Districts	76.10%	70.95%	73.08%	72.00%	69.79%	64.85%	32.37%	25.97%	30.12%	28.73%	25.00%	21.35%	28.26%

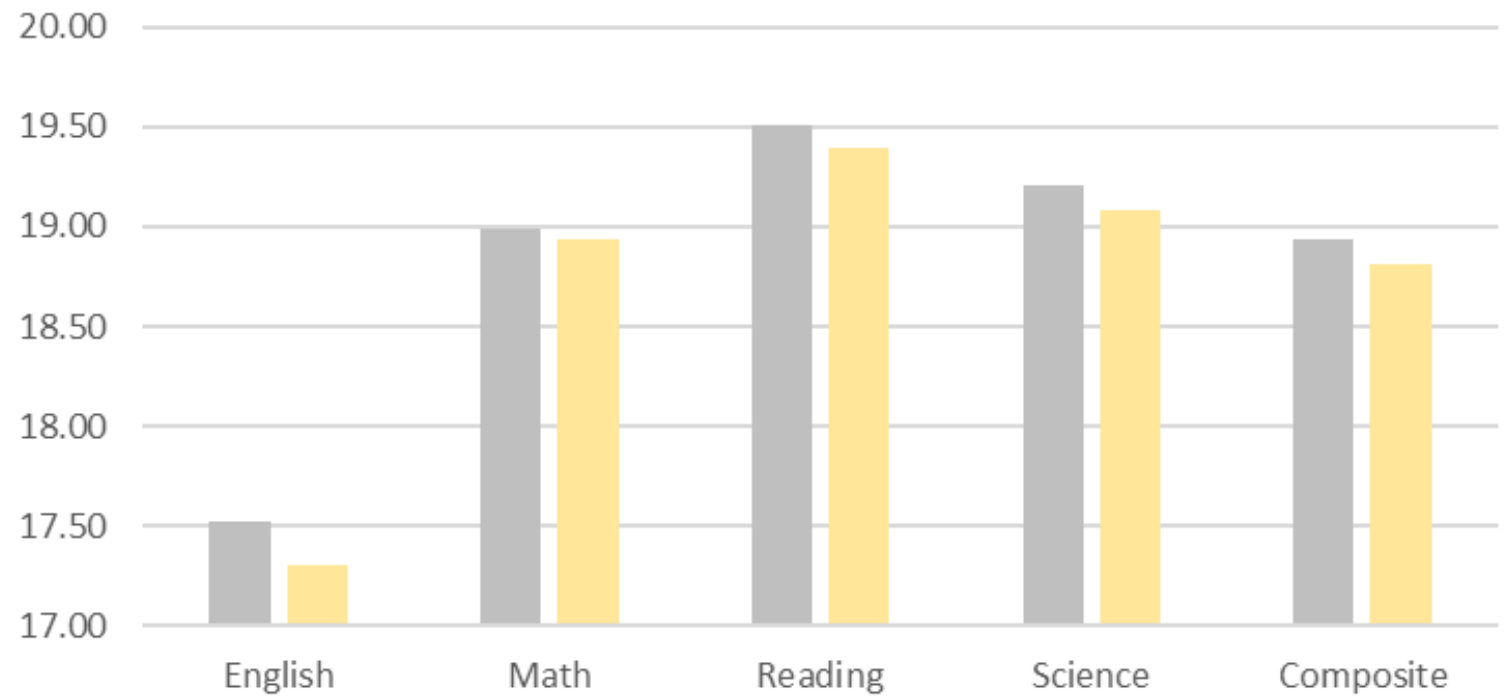


2008 Cohort	2008	2009	2010	2011	2012	2013	2016	2017	2018	2019	2021	2022	2023
7 Districts	53.57%	54.66%	49.69%	47.68%	41.72%	43.29%	27.75%	24.04%	30.91%	23.86%	17.80%	15.00%	21.98%



ACT

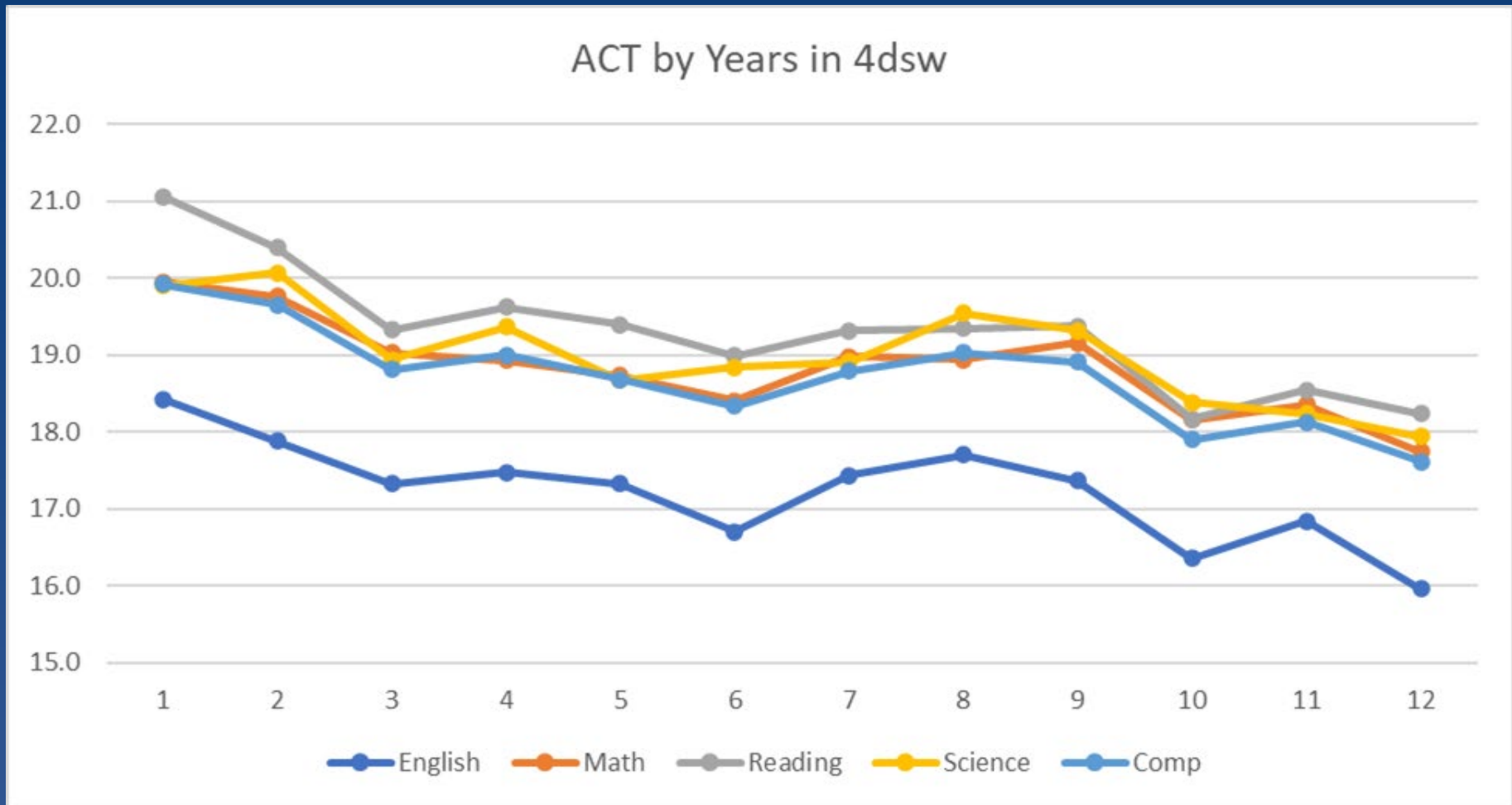
Average ACT Scores for All Montana Students
from 2013-2023



5dsw noted
by gray

4dsw noted
by yellow

ACT by Years in 4dsw



Research Question

3

Graduation

Is there a difference in educational engagement, as measured by cohort graduation rate, between the four-day school week schedule and the five-day school week schedule?

Graduation Rates

	Not Economically Disadvantaged		Economically Disadvantaged	
	Graduates	Cohort Members	Graduates	Cohort Members
5	68912	74019	44557	59122
4	2452	2573	3162	3930
5	93.10%		75.36%	
4	95.30%		80.46%	

Research Question

4

Attendance

Is there a difference in student attendance between the four-day school week schedule and the five-day school week schedule

Attendance

Schedule	All Students			Special Education Students			Homeless Students		
	Days Present	Days Enrolled	Percentage	Days Present	Days Enrolled	Percentage	Days Present	Days Enrolled	Percentage
5	123,736,219.01	133,720,912.77	92.53%	16,291,172.47	17,917,076.53	90.93%	2,422,627.92	2,821,299.50	85.87%
4	5,484,867.55	5,949,851.00	92.18%	836,020.56	923,239.00	90.55%	62,191.82	72,522.00	85.76%

Research Question

5

Behavior

Is there a difference in student behavior between the four-day school week schedule and the five-day school week schedule?

Behavior

Schedule	Expulsion, placed in interim alternative educational setting				
	250	260	400	410	500
	Expulsion, without services				
	Suspension, out-of-school, placed in interim alternative educational setting				
	Suspension, out-of-school, without services				
	Suspension, in-school				
5	0.02%	0.07%	0.68%	4.18%	1.94%
4	0.01%	0.05%	0.39%	1.99%	1.98%

Discussion

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Dr. Dan Lee, Dean

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Thank You

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Panel Questions (from the OPI)

In conducting this research, what was surprising?

How do you account for the staggered role out of schools adopting the 4dsw schedule and how long did it take to see the impact of this change in schedule?

Could you speak to your survey findings regard teacher professional development and planning?

What challenges did you encounter in this research and what future direction(s) do you see for future research?

What are the important take-aways from the study?