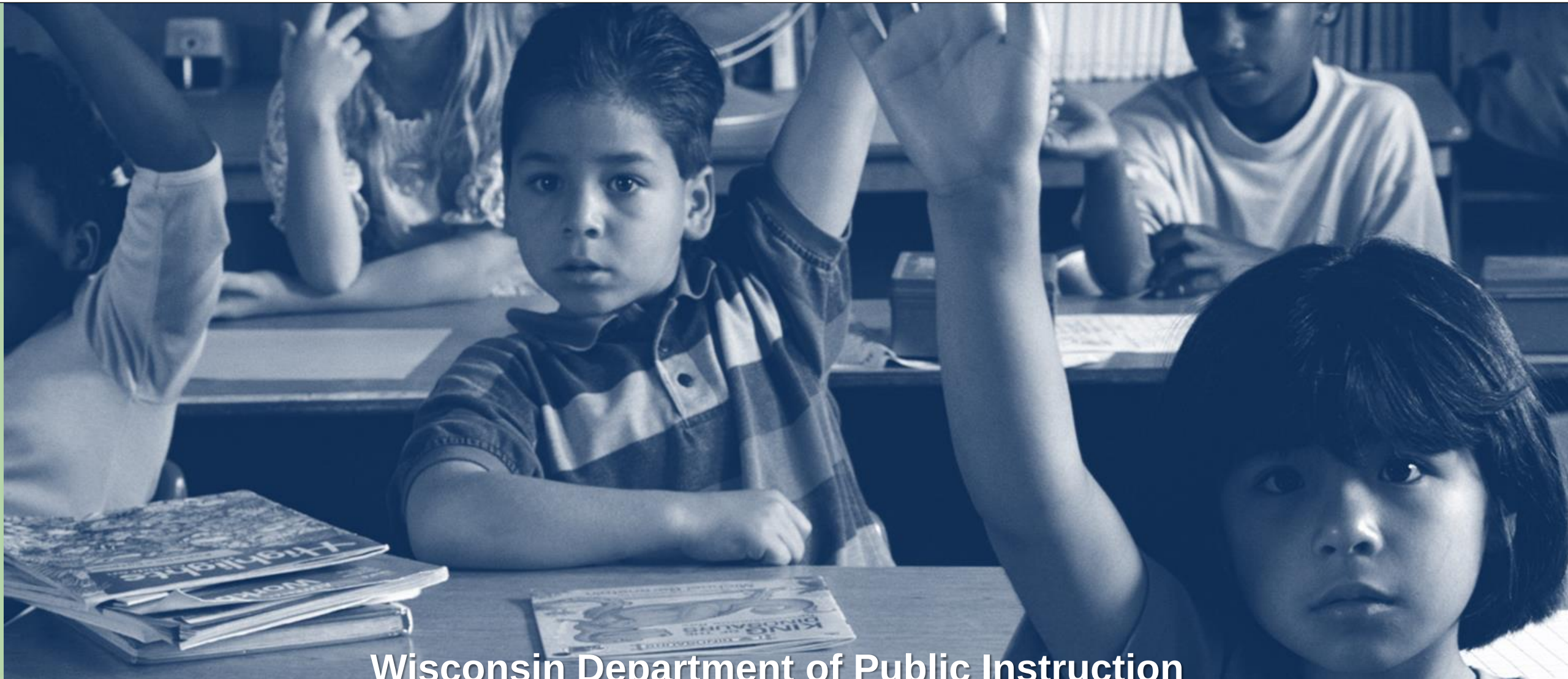
Safeguarding Student Data



Wisconsin Department of Public Instruction

Today's Objectives

Understand how data is used to improve student outcomes and inform policy decisions

Understand Wisconsin's student privacy protocols and data security measures

INSTRUCTION

Agenda

1. What can we learn from education data?
2. How do we use data?
3. How do we keep data private and secure?

WISCONSIN DEPARTMENT OF PUBLIC INSTRUCTION

Wisconsin Graduates are College and Career READY

ALL STUDENTS IN WISCONSIN GRADUATE FROM HIGH SCHOOL ACADEMICALLY PREPARED AND SOCIALLY AND EMOTIONALLY COMPETENT BY POSSESSING AND DEMONSTRATING...

Knowledge
Proficiency in academic content

Skills
Application of knowledge through skills such as critical thinking, communication, collaboration, and creativity

Habits
Behaviors such as perseverance, responsibility, adaptability, and leadership

These proficiencies and attributes come from rigorous, rich, and well-rounded public school experiences.

WISCONSIN DEPARTMENT OF PUBLIC INSTRUCTION
Tony Evers, PhD, State Superintendent

WISCONSIN DEPARTMENT OF PUBLIC INSTRUCTION

Why do we collect data?

Required State and Federal Reporting

- District and School Report Cards
- Public Reporting for Stakeholders (WISEdash)
- Federal Reporting (EdFacts / CRDC)
- Determine Funding Allocations

Additional Benefits

- Improvement planning at all levels
- Gaining a better understanding of education outcomes for all students

Wisconsin Information System for Education (WISE)

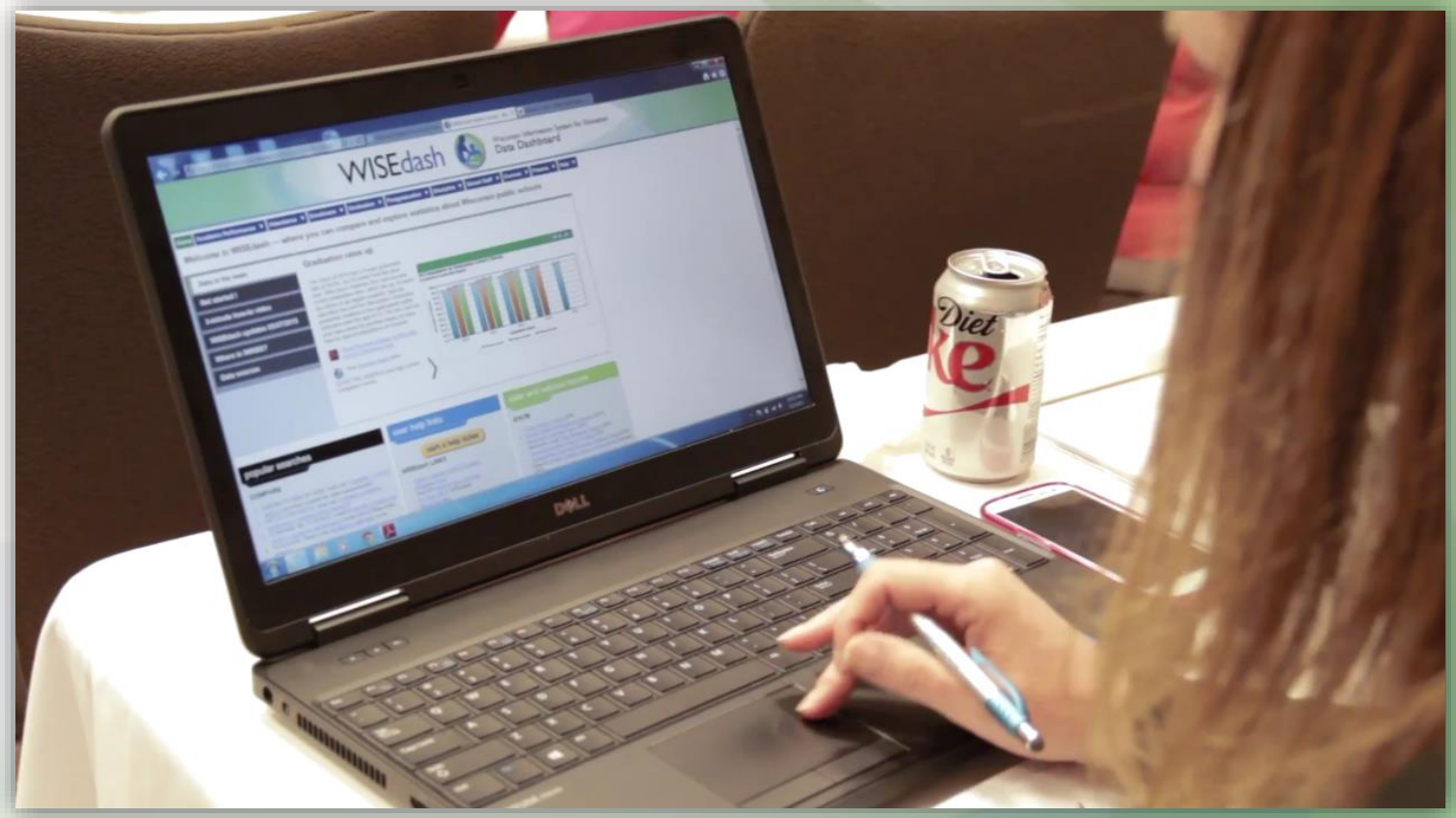
http://dpi.wi.gov/wise

WISCONSIN DEPARTMENT OF PUBLIC INSTRUCTION

Wisconsin Information System for Education (WISE)

Let's take a few minutes to learn about WISE:

http://dpi.wi.gov/wise



WISCONSIN DEPARTMENT OF PUBLIC INSTRUCTION

Part I. What Can We Learn from Education Data?

Kids Face Growing Poverty

A DATA STORY

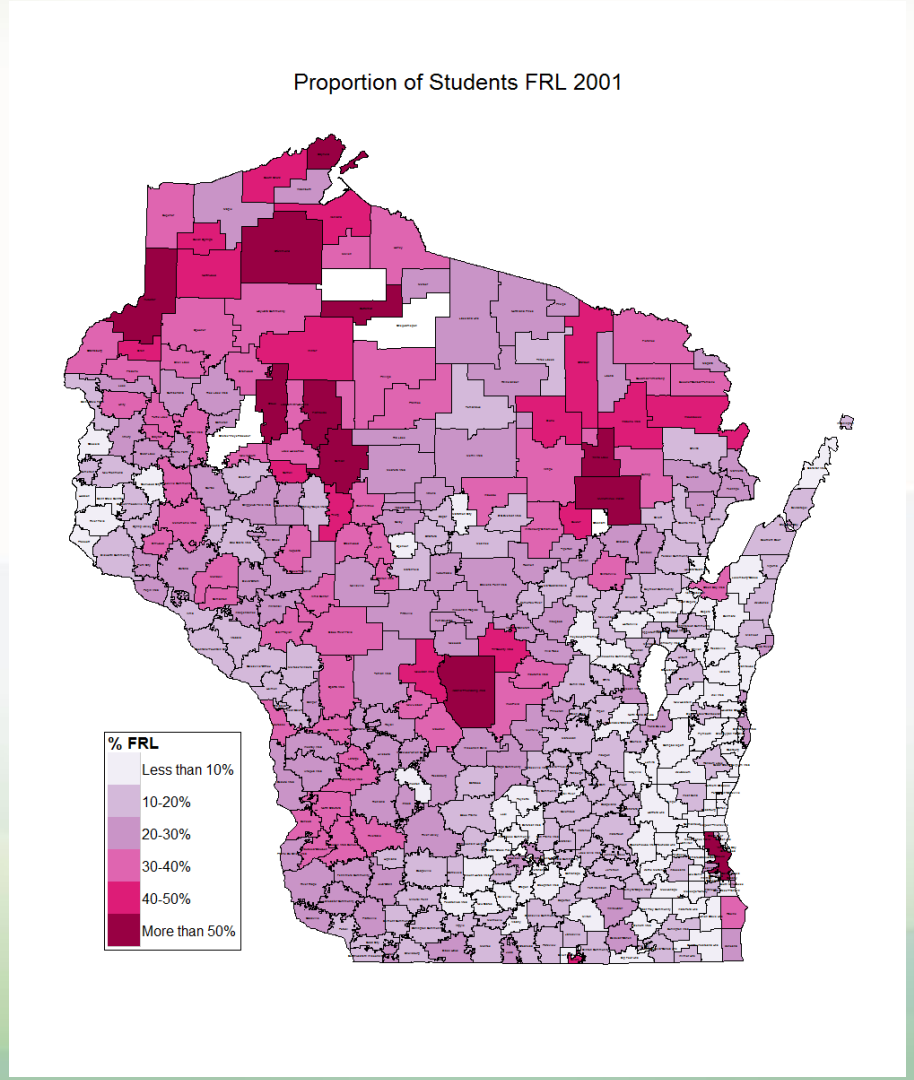
WISCONSIN DEPARTMENT OF PUBLIC INSTRUCTION

Poverty is Growing in Wisconsin

Change in Free & Reduced Lunch (2001-2012)

Wisconsin FRL Rate Doubles

2001: 21%
2012: 43%



In many rural districts, more than half the students are eligible for free-and-reduced lunch.

Source: Wisconsin Department of Public Instruction. School Finance Maps. http://dpi.wi.gov/sfs/maps.html

WISCONSIN DEPARTMENT OF PUBLIC INSTRUCTION

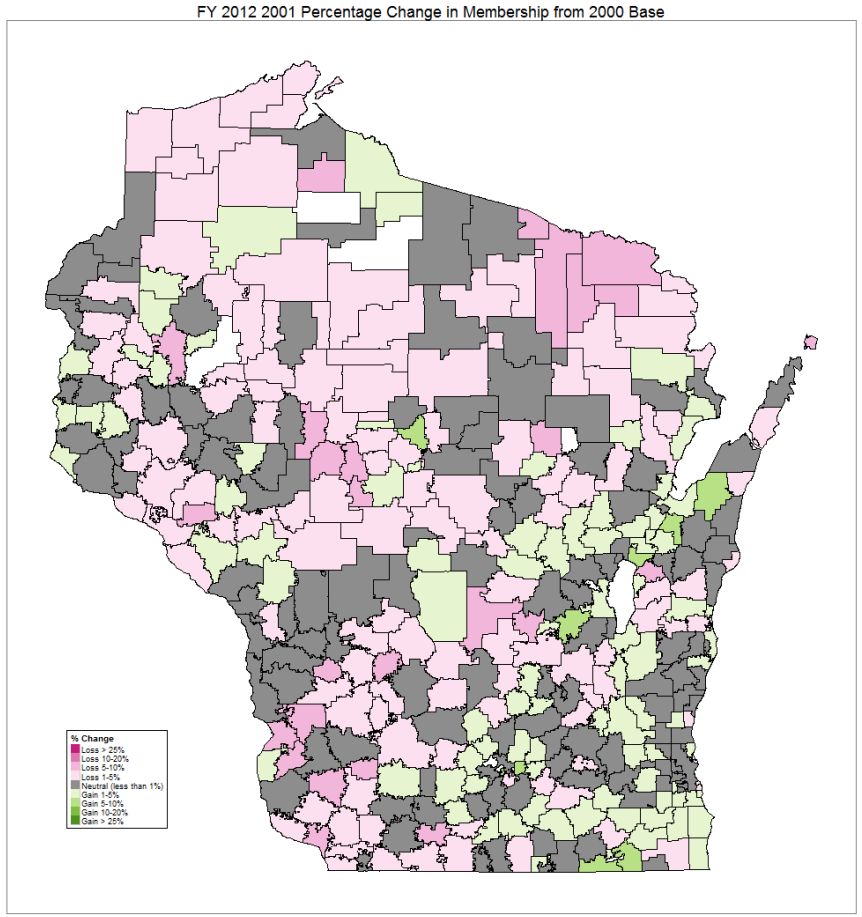
Students are in Fewer Districts

Change Student Membership (2001-2012)

In 2001, **1/3rd of districts** were in **declining enrollment**.

By 2012, over **2/3rds districts** were in **declining enrollment**.

Today**, 75% of our students** are located in just **30% of our districts**.



Cumulative Enrollment	Percentile	# of Districts	% of Districts
209,535	25%	8	2%
419,387	50%	41	11%
626,834	75%	114	30%
871,551	100%	424	100%

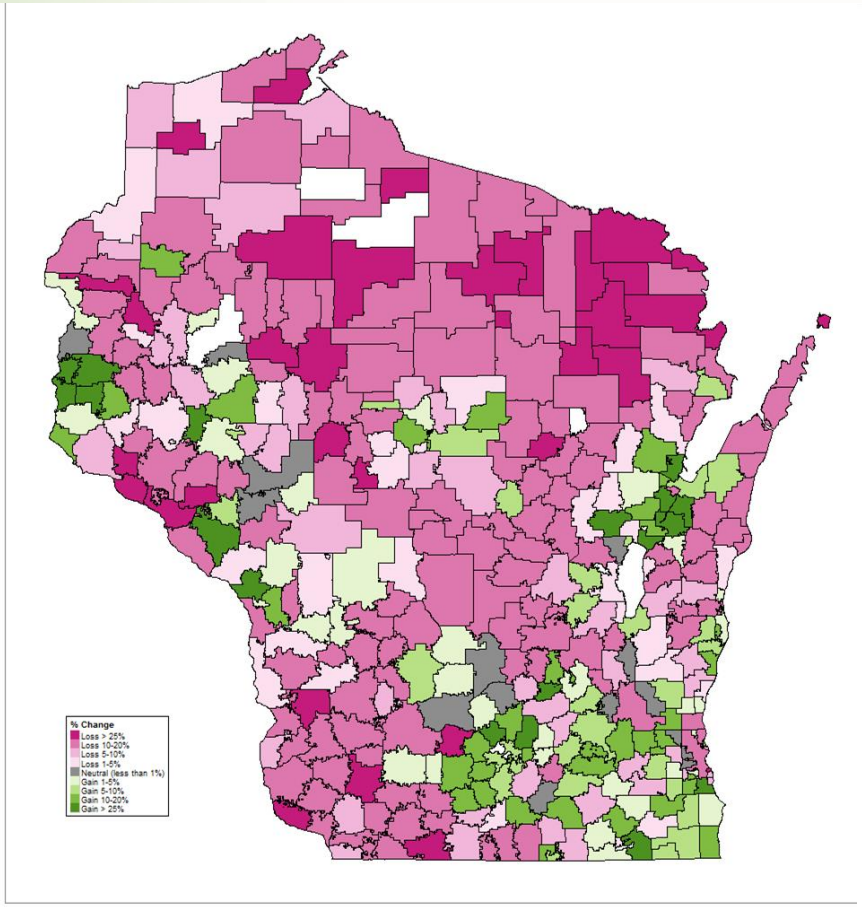
District Enrollment	% of Districts
Under 1,000	55%
Under 3,000	83%
Under 10,000	98%

Source: Wisconsin Department of Public Instruction. School Finance Maps. http://dpi.wi.gov/sfs/maps.html

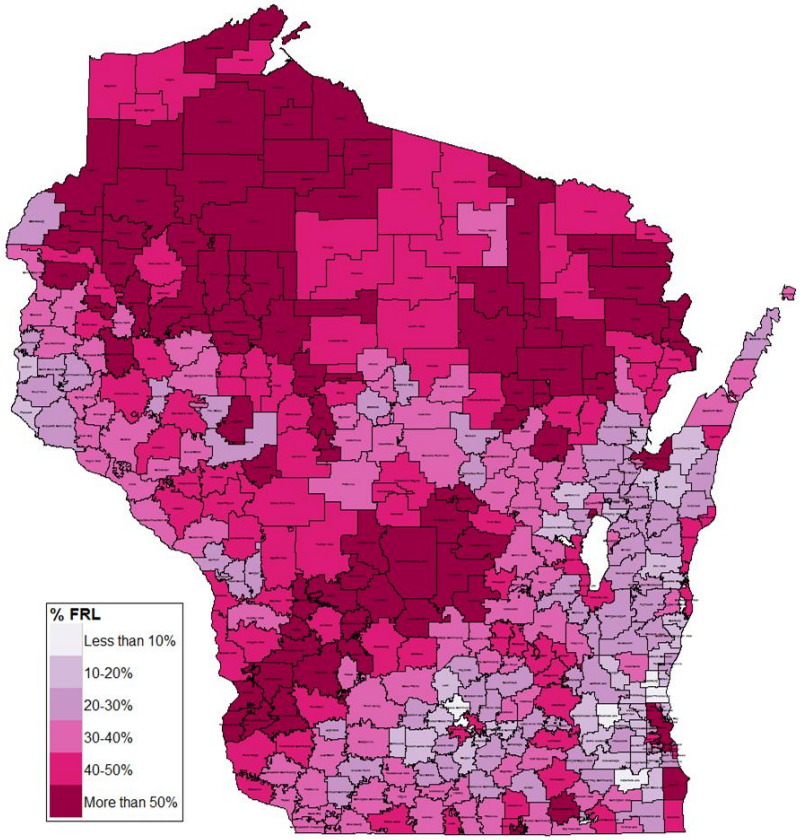
WISCONSIN DEPARTMENT OF PUBLIC INSTRUCTION

Rural Districts Have Fewer Kids & Greater Poverty

Change in Enrollment



Change in Poverty

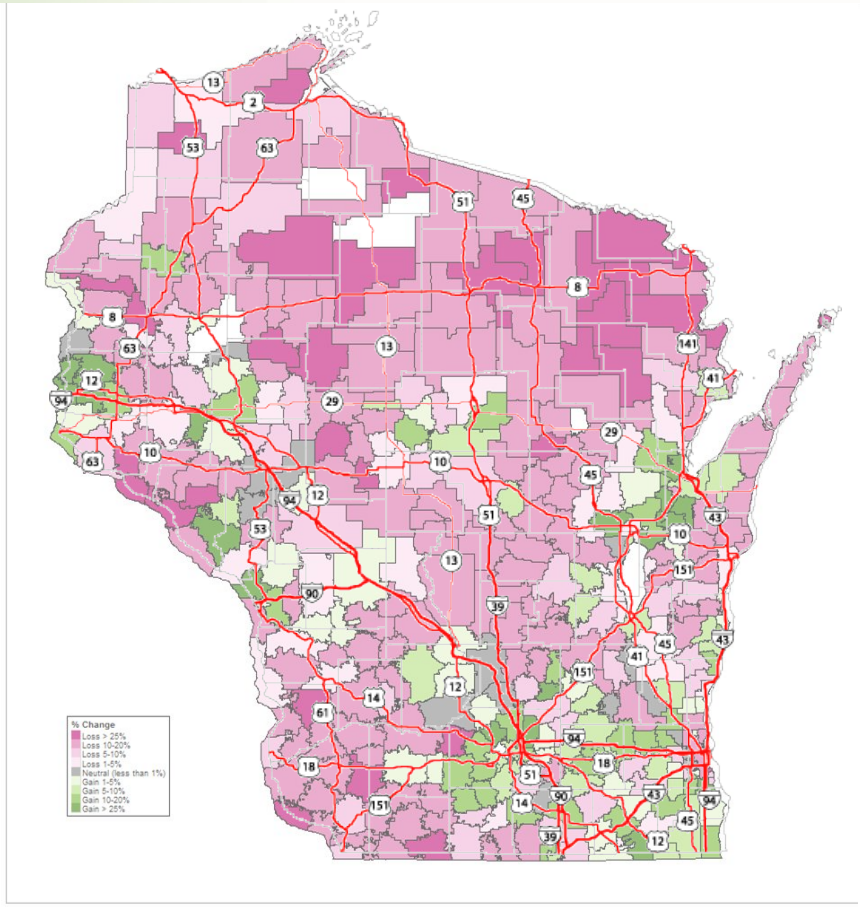


Source: Wisconsin Department of Public Instruction. School Finance Maps. http://dpi.wi.gov/sfs/maps.html

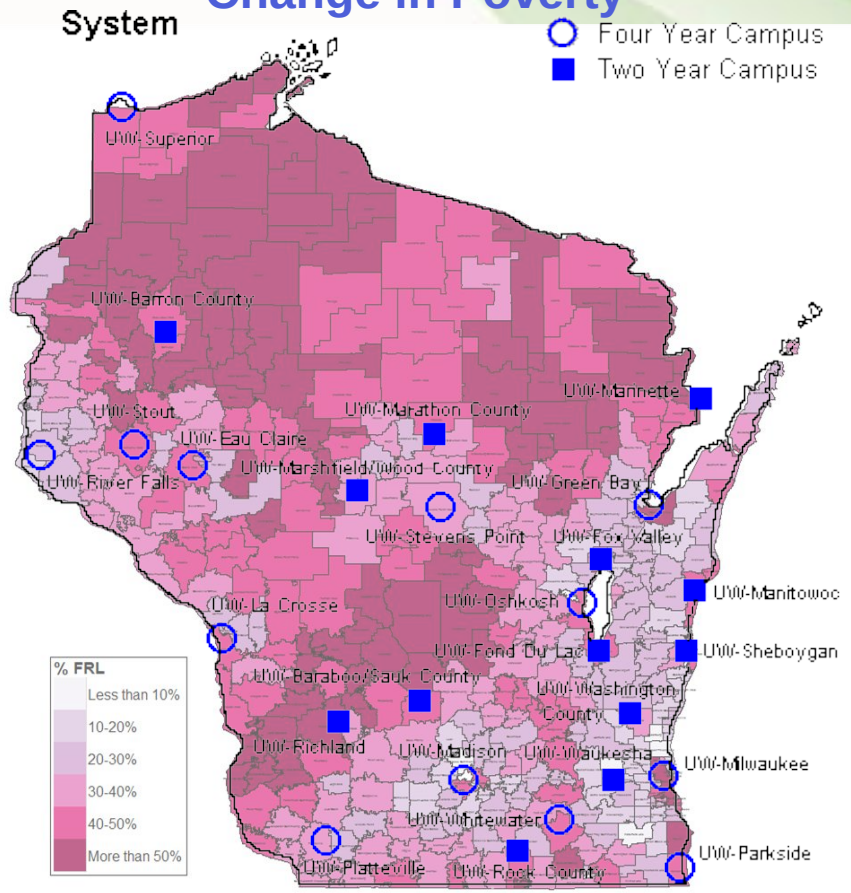
WISCONSIN DEPARTMENT OF PUBLIC INSTRUCTION

Rural Districts Have Fewer Kids & Greater Poverty

Change in Enrollment



Change in Poverty

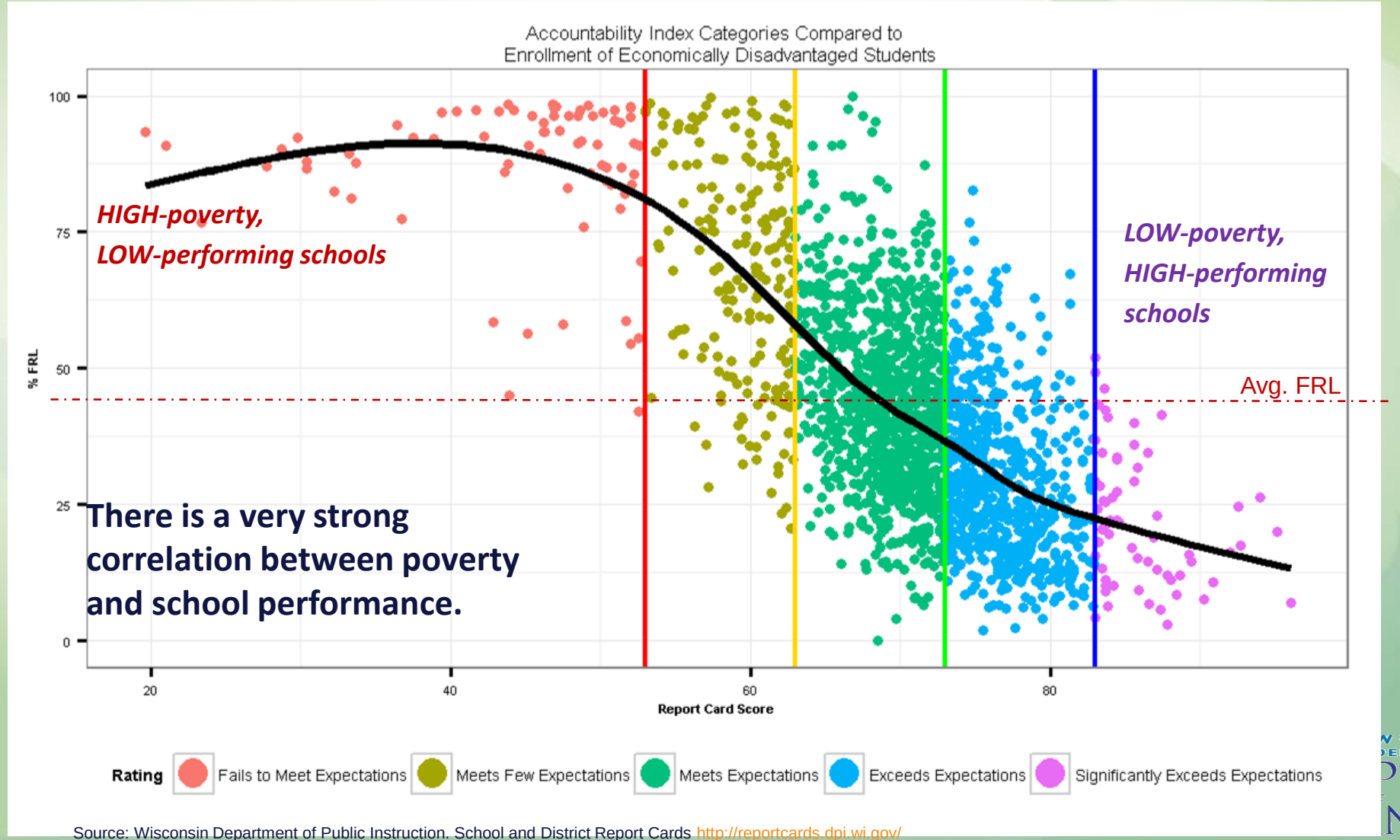


Source: Wisconsin Department of Public Instruction. School Finance Maps. http://dpi.wi.gov/sfs/maps.html

WISCONSIN DEPARTMENT OF PUBLIC INSTRUCTION

And Poverty Impacts Achievement

(2012-13 Report Card Data)



Source: Wisconsin Department of Public Instruction. School and District Report Cards http://reportcards.dpi.wi.gov/

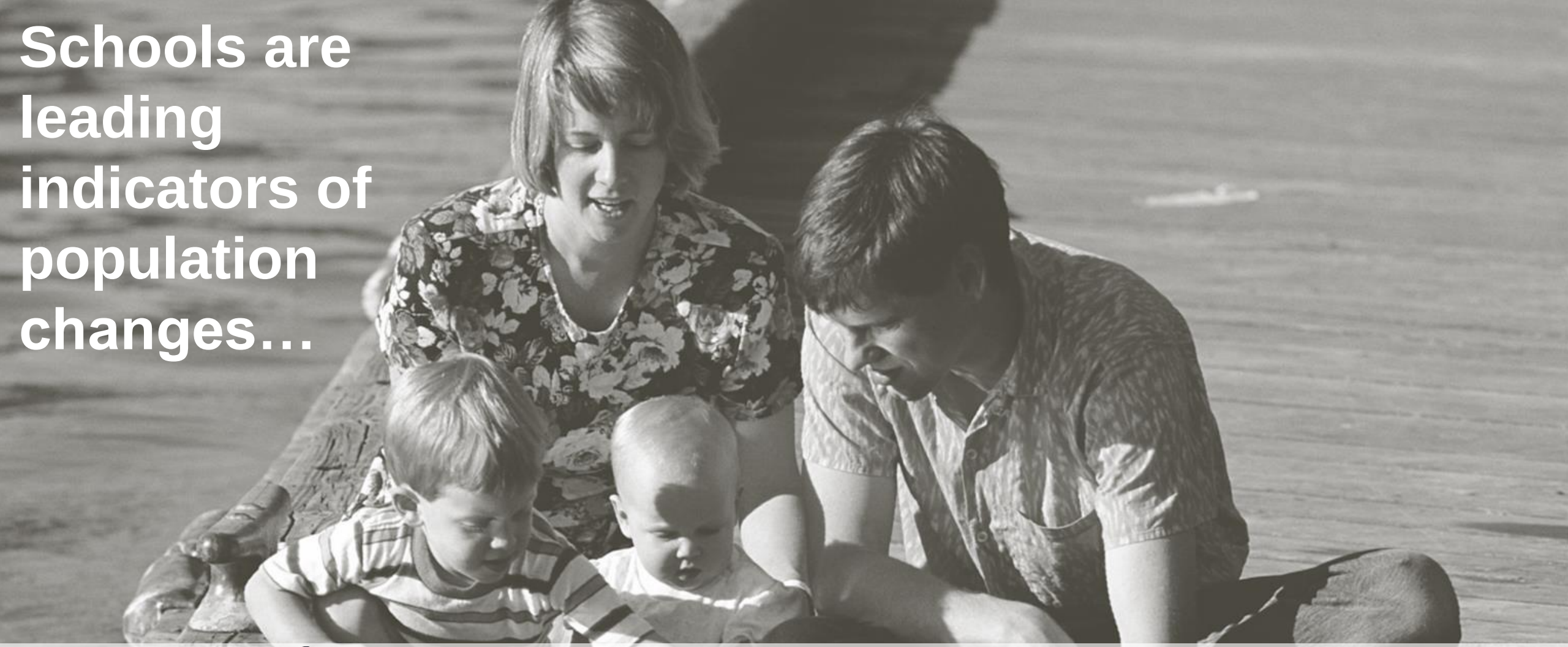
WISCONSIN DEPARTMENT OF PUBLIC INSTRUCTION

The Faces of Wisconsin are Changing

A DATA STORY

WISCONSIN DEPARTMENT OF PUBLIC INSTRUCTION

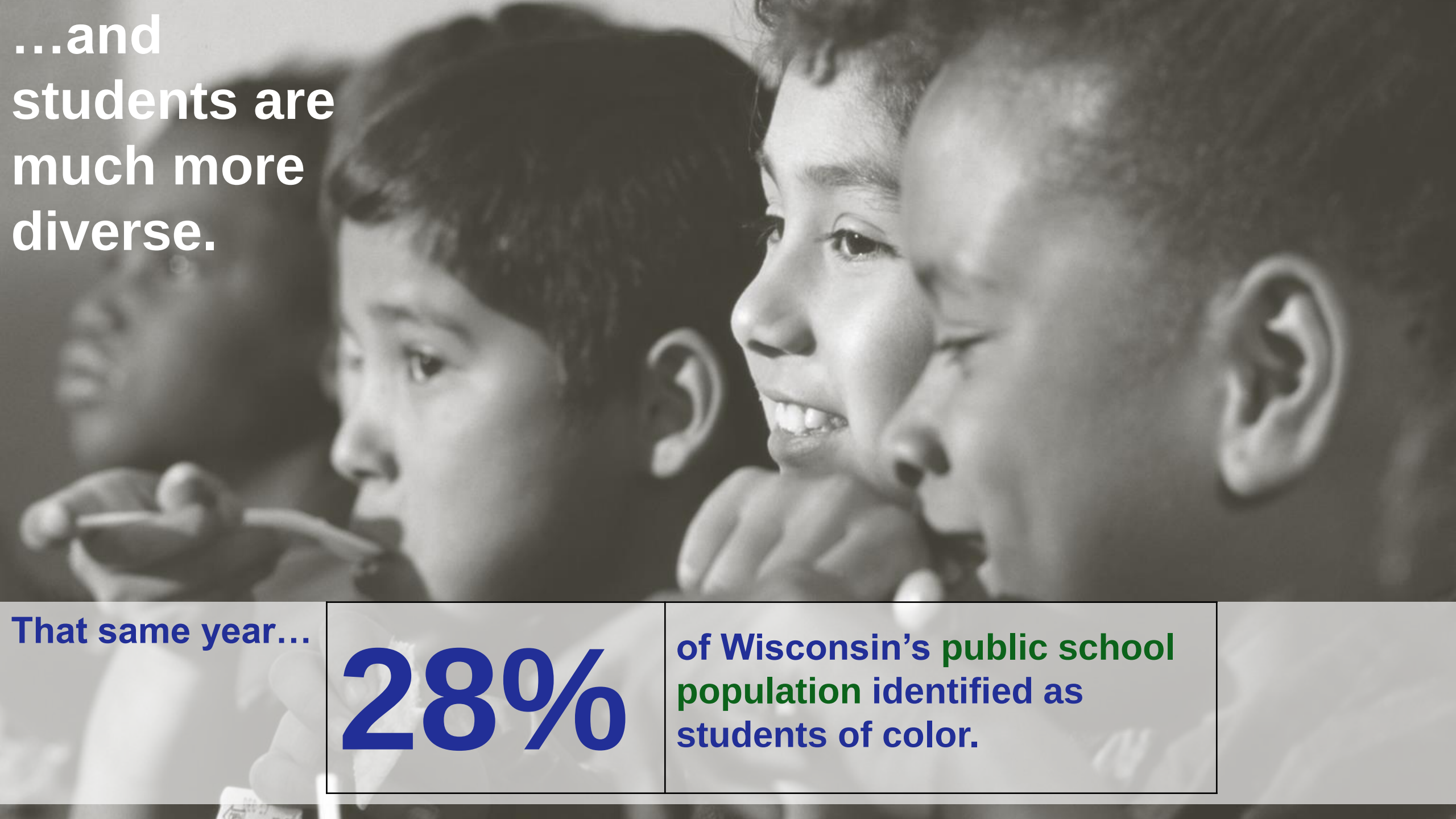
Schools are leading indicators of population changes…



In 2013…

12%

of Wisconsin's overall population identified as people of color.



…and students are much more diverse.

That same year…

28%

of Wisconsin's public school population identified as students of color.

25 Districts with the Most Students of Color

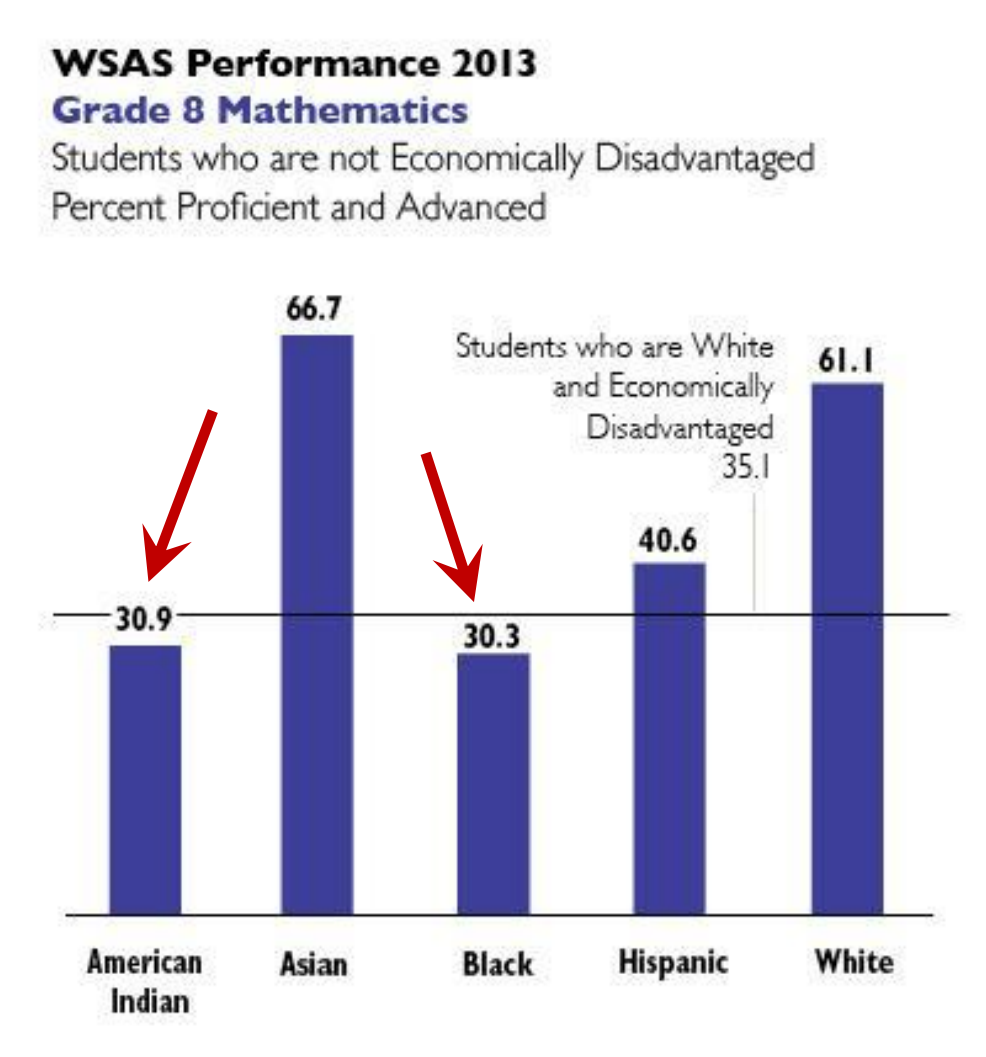
#	District Name	% Native	% API	% Black	% Hispanic	% White	Enrollment
1	**Menominee Indian**	**94%**	**0%**	**1%**	**5%**	**0%**	**796**
2	**Milwaukee**	**1%**	**6%**	**56%**	**24%**	**14%**	**78,363**
3	**Bayfield**	**74%**	**1%**	**2%**	**3%**	**21%**	**413**
4	**Brown Deer**	**1%**	**12%**	**52%**	**6%**	**30%**	**1,622**
5	**Beloit**	**1%**	**1%**	**28%**	**30%**	**41%**	**6,985**
6	**Racine Unified**	**1%**	**2%**	**29%**	**25%**	**44%**	**20,577**
7	**Madison Metropolitan**	**1%**	**11%**	**25%**	**19%**	**45%**	**27,112**
8	**Bowler**	**44%**	**1%**	**2%**	**4%**	**49%**	**394**
9	**Delavan-Darien**	**0%**	**2%**	**3%**	**44%**	**50%**	**2,438**
10	Green Bay Area Public	5%	7%	10%	25%	53%	20,685
11	Gresham	42%	0%	1%	3%	53%	294
12	Kenosha	0%	2%	18%	25%	55%	22,570
13	Glendale-River Hills	1%	6%	33%	6%	55%	1,024
14	West Allis-West Milw.	2%	4%	13%	21%	61%	9,390
15	Sheboygan Area	1%	16%	5%	17%	61%	10,374
16	Greenfield	2%	8%	7%	21%	61%	3,890
17	Abbotsford	0%	1%	1%	36%	62%	736
18	Arcadia	0%	0%	1%	36%	62%	1,171
19	Crandon	31%	1%	1%	3%	64%	932
20	Shorewood	1%	10%	17%	6%	67%	2,059
21	Whitewater Unified	1%	3%	3%	26%	67%	1,948
22	Wauwatosa	1%	6%	20%	6%	67%	7,204
23	Hayward Community	27%	1%	1%	2%	68%	1,977
24	Menasha Joint	2%	6%	6%	18%	68%	3,714
25	Cudahy	2%	1%	9%	19%	69%	2,623

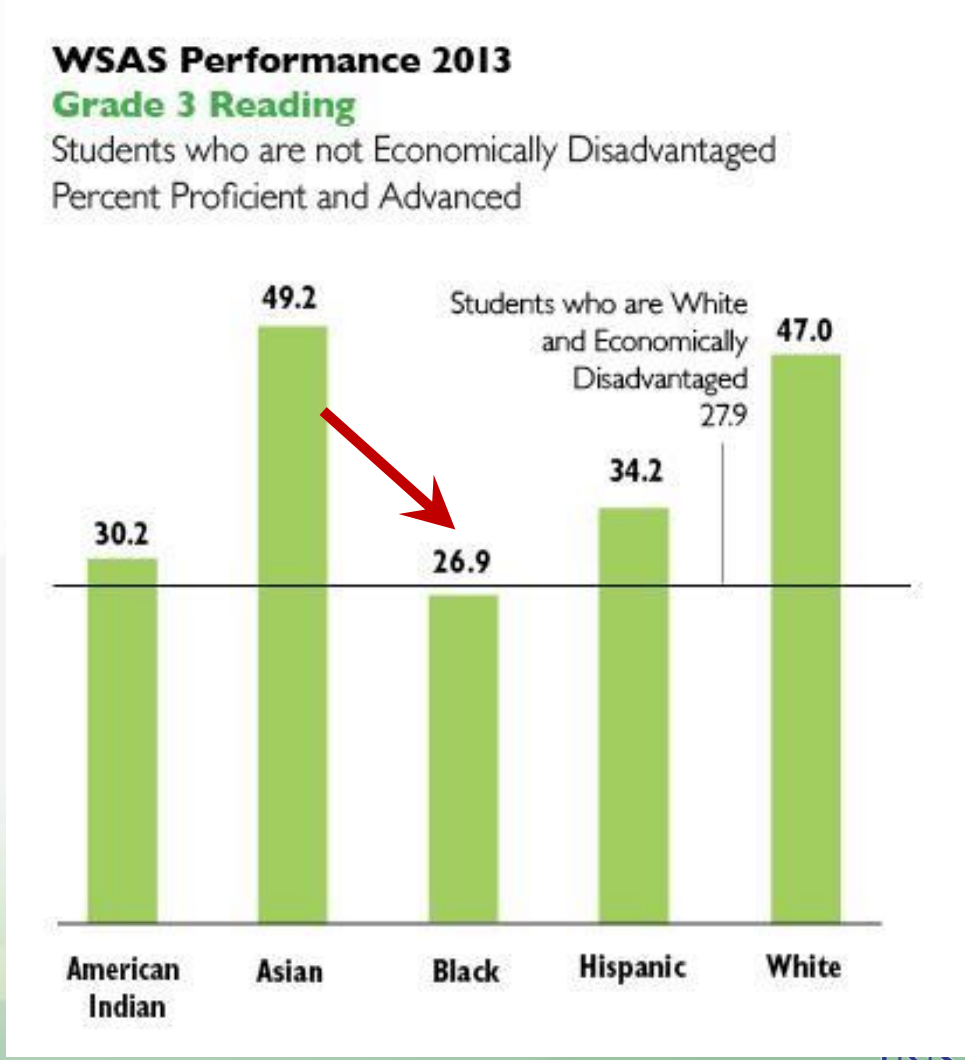
These districts enroll 27% of all Wisconsin students.

Nine are "majority-minority" districts.

WISCONSIN DEPARTMENT OF PUBLIC INSTRUCTION

Poverty Can't Explain All of the Racial Achievement Gap





Students have Lots of Options;
Most Attend Public School

A DATA STORY

WISCONSIN DEPARTMENT OF PUBLIC INSTRUCTION

Student Enrollment Options

Traditional Public School

- *Neighborhood school*
- *Within district transfer*
- *Open enrollment*

Charter School

- *Instrumentality*
- *Non-instrumentality*
- *Independent*

Virtual Charter

- *Within district*
- *Open enrollment*

Private School

- *Milwaukee PCP*
- *Racine PCP*
- *Wisconsin PCP*
- *Tuition*

Home School

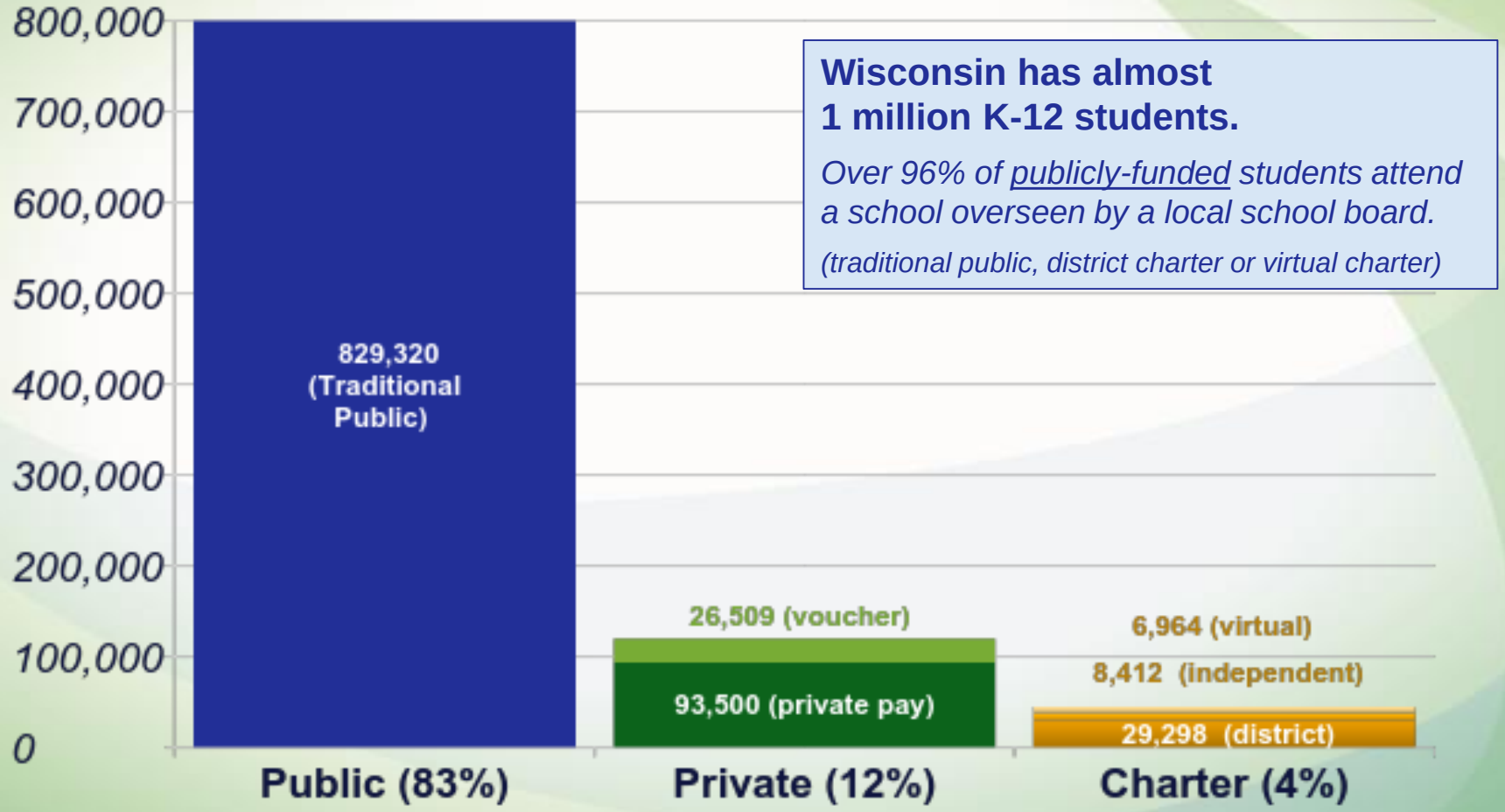
Dual Enrollment

Youth options
Dual enrollment
AP/IB classes

Whole grade sharing

WISCONSIN DEPARTMENT OF PUBLIC INSTRUCTION

Snapshot of School Enrollment



Wisconsin has almost 1 million K-12 students.

Over 96% of publicly-funded students attend a school overseen by a local school board.

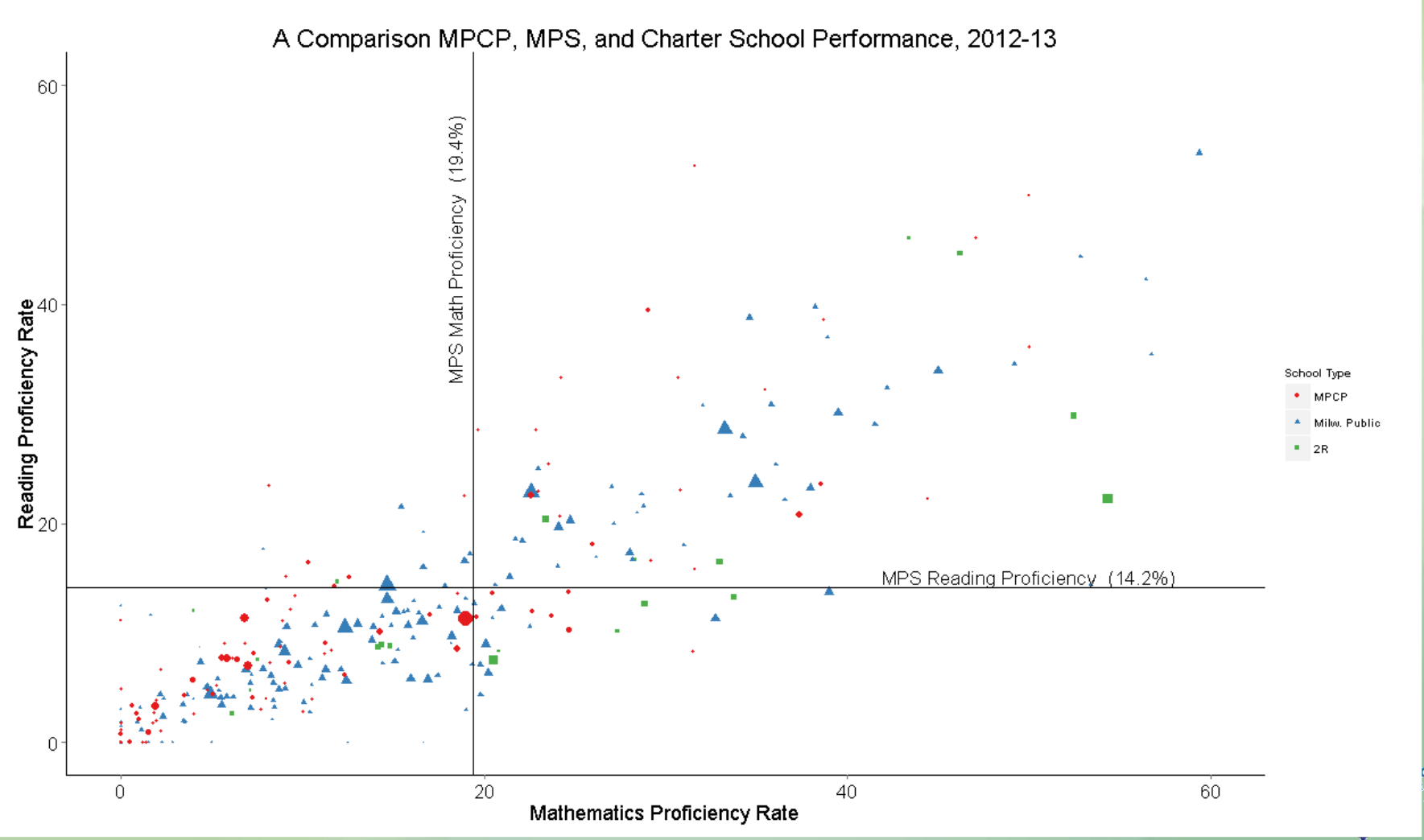
(traditional public, district charter or virtual charter)

Source: Department of Public Instruction. Public School Enrollment Data http://lbstat.dpi.wi.gov/lbstat_pubdata3
Private School Enrollment Data http://lbstat.dpi.wi.gov/lbstat_privdata

WISCONSIN DEPARTMENT OF PUBLIC INSTRUCTION

Improved Student Achievement Needed In All Sectors

Poverty, **Mobility**, and **Race** are the biggest factors in achievement.

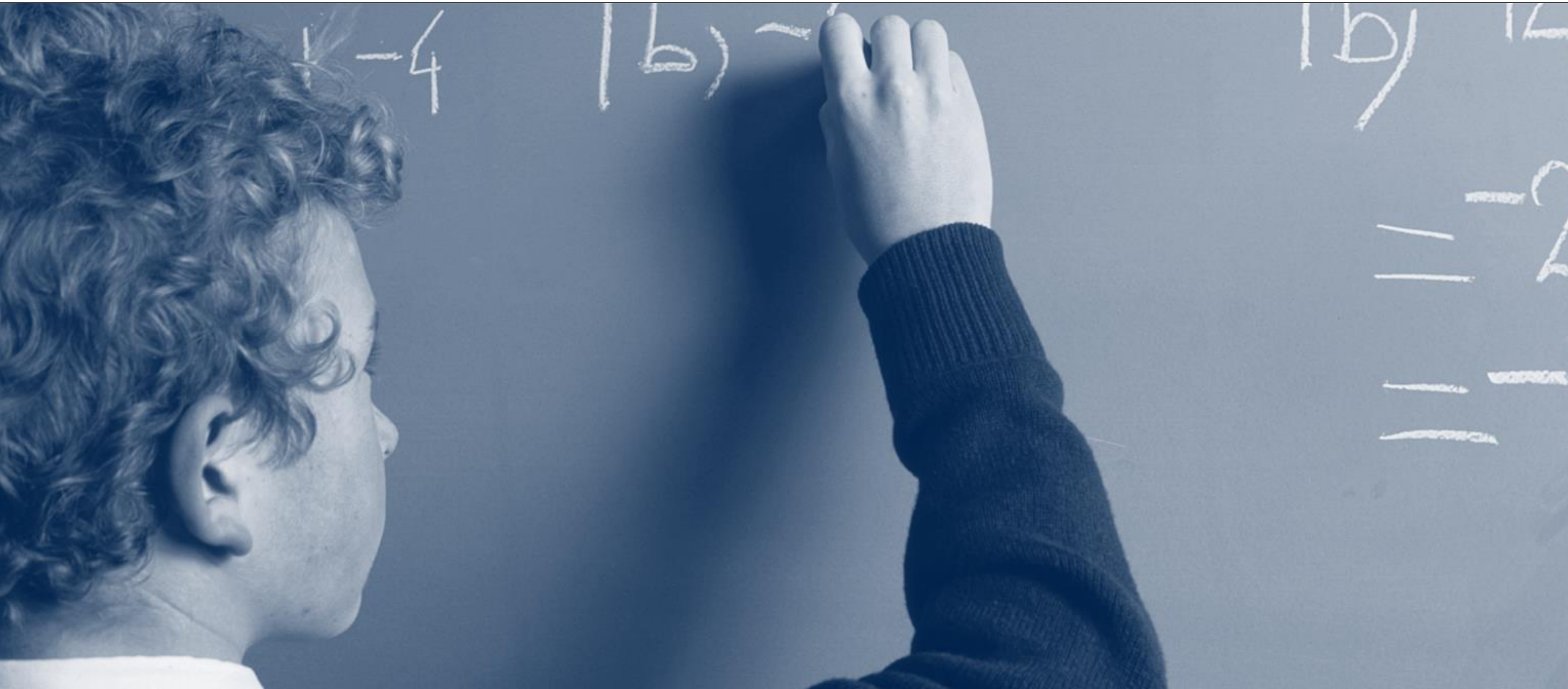


WISCONSIN DEPARTMENT OF PUBLIC INSTRUCTION

Questions?

WISCONSIN DEPARTMENT OF PUBLIC INSTRUCTION

Part II. How We Use Data



Data Elements

DPI only collects required data

Student Indicators

- Student demographics
- Enrollment counts
- Attendance rates
- High school completion

Academic performance data

- Wisconsin Student Assessment System (WSAS)
- ACT
- Advanced Placement (AP)
- National Assessment of Educational Progress (NAEP)

Postsecondary enrollment data

- National Student Clearinghouse (NSC).

Not collected

School and district level pupil records such as:

- Patient healthcare records;
- Pupil physical health records; or
- Biometric data.

Unrelated personal information

- Religious preference
- Political affiliation
- Gun ownership

WISCONSIN DEPARTMENT OF PUBLIC INSTRUCTION

WISEdash

PUBLIC REPORTING

WISCONSIN DEPARTMENT OF PUBLIC INSTRUCTION

WISEdash Public

NO student-level data.

Data is summarized and redacted

WISEdash

Wisconsin Information System for Education
Data Dashboard

Home | WSAS | Other Assessments | Attendance-Dropouts | Enrollment | Graduation | Postgraduation | Other Topics | Help

HS Completion (Trends)

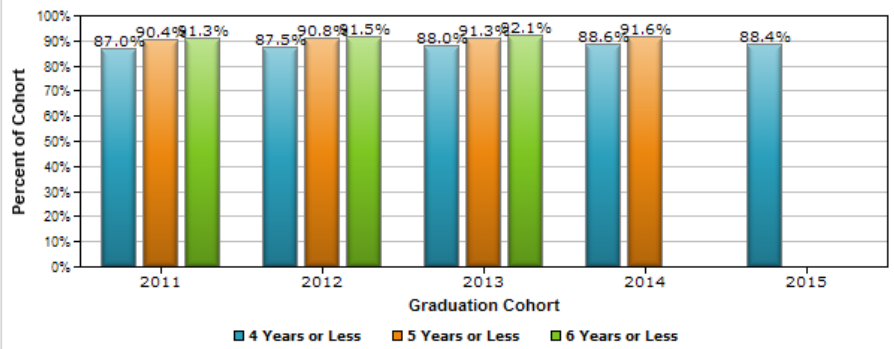
District: [Statewide] | Grade Group: [All Types] | School: [All Schools] | Data View: Certified / Current

Completion Credential: Regular | ELL Status: [All] | Gender: [All] | Migrant Status: [All] | Race/Ethnicity: [All]

Dashboard Help: Glossary | Reset filters | No graph data? | FAQ | Get help | Data files

Latest Certified School Year 2014-15
Latest Current School Year 2014-15

HS Completion by Graduation Cohort (Trends)
Completion Credential: Regular



<< What does this graph measure?

This graph shows the change in the 4, 5 and 6-year high school completion rates over several years. The cohort year indicates the year that the students were expected to graduate within the 4-year completion timeframe.

Explore the data

- HOW IS THE TREND CALCULATED? The denominator is the total of completers plus non-completers in all credentials and categories in that adjusted cohort. The numerator is the completion credential selected in the Completion Credential filter.
- Each cohort is adjusted at the end of its timeframe for student enrollment changes (transfers, moves to private school, etc.) Adjustment methods and rates are defined by federal law.
- Also view completion rate trend graph for students with disability or economic disadvantaged status.
- Learn more about this data. Visit Graduation About the Data.

Hints and tips

make a web link | show the data table | hover for data values | * data is redacted

Wisconsin Department of Public Instruction

INSTRUCTION

WISEdash Secure
Drop Out Early Warning System (DEWS)
Achievement Gap Dashboard
WISELearn

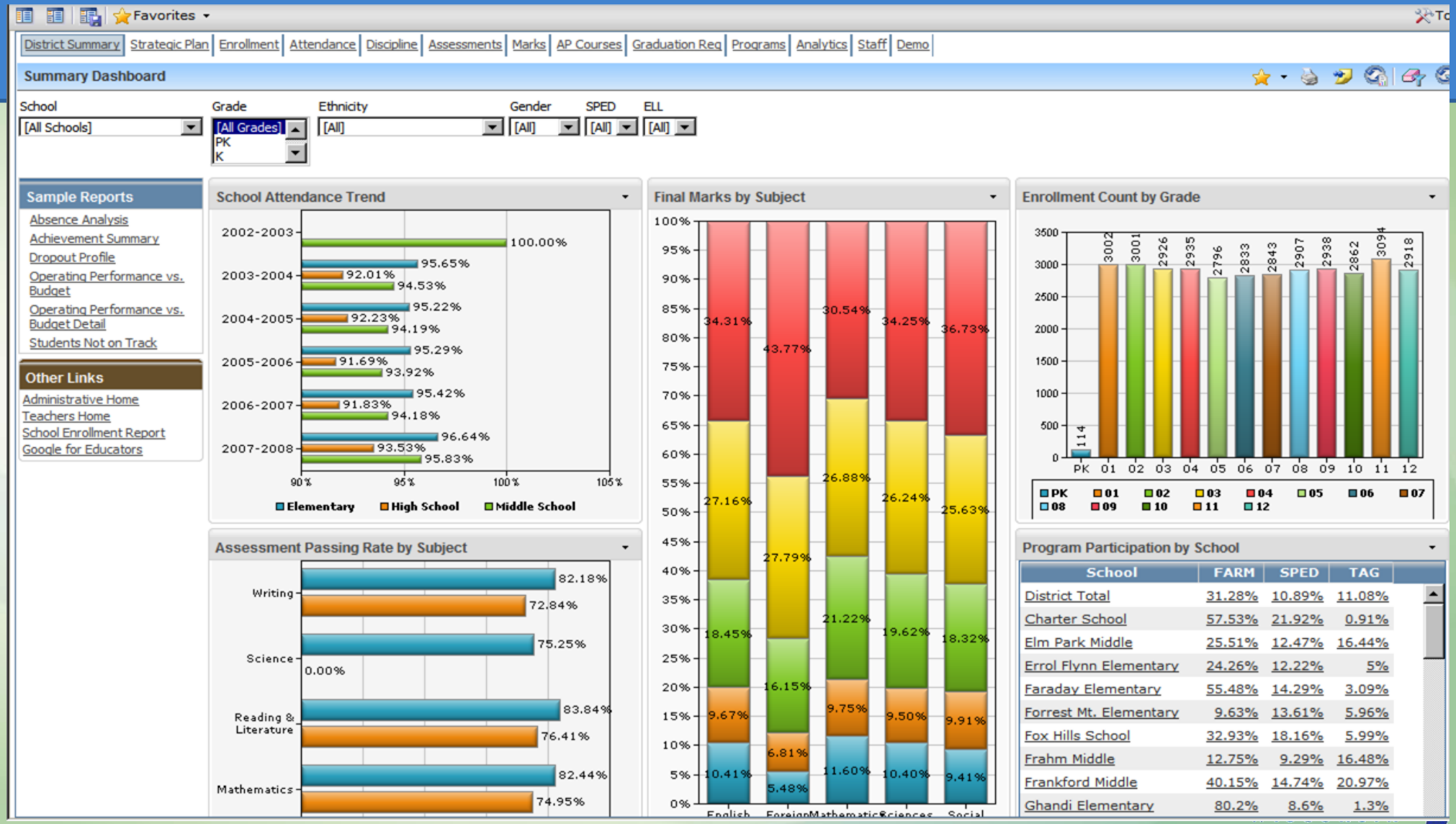
IMPROVING STUDENT OUTCOMES

WISCONSIN DEPARTMENT OF PUBLIC INSTRUCTION

WISEdash Secure

Secured access.

Districts only see their students.



DEPARTMENT OF PUBLIC INSTRUCTION

Dropout Early Warning System (DEWS)

Key indicators

- Attendance
- Discipline
- Mobility
- Assessment results

Enrollment by Grade Level (Current) Details

District: Please Select a District / 21st Century Preparatory School / Abbotsford

School Type: [All Types] / Elementary School / High School / Middle School

School: [All Schools]

Grade Level: [All Grades] / K4 / PK / KG

Race/Ethnicity: [All] / Amer Indian / Asian / Black

Gender: [All]

Disability Status: [All]

ELL Status: [All]

Econ Disadv Status: [All]

Enrollment Point: Any Enrollment

Grade Level: 7

Total of 111 row(s) with 10000 Row Limit

Name	Student ID	Gender	Race/ Ethnicity	School	Current Indicator	DEWS Outcome	DEWS Score	DEWS ± Margin of Error	Grade Level
		Female	White		Active				7
		Female	White		Active				7
		Male	White		Active				7
		Male	Amer Indian		Active				7
		Male	White		Active				7
		Male	White		Active				7
		Female	Two or More		Active				7
		Female	White		Active				7
		Male	White		Active	High	54.2	9.4	7
		Male	White		Active	High	64.1	8.9	7
		Male	White		Active	High	64.8	9.1	7
		Male	White		Active	High	66.8	8.6	7
		Female	White		Active	High	67.5	8.8	7
		Male	White		Active	High	67.8	8.4	7
		Female	Hispanic		Active	Moderate	71.4	8.2	7
		Male	White		Active	Moderate	71.9	7.9	7
		Male	White		Active	Moderate	73.4	8.0	7
		Male	White		Active	Moderate	75.8	7.4	7
		Male	White		Active	Moderate	77.3	7.1	7
		Male	Hispanic		Active	Moderate	77.4	7.2	7
		Male	White		Active	Moderate	77.6	7.0	7
		Male	White		Active	Moderate	77.8	7.0	7
		Male	White		Active	Moderate	78.2	6.9	7
		Female	White		Active	Moderate	81.1	6.6	7
		Male	White		Active	Moderate	81.6	6.2	7
		Male	White		Active	Moderate	81.7	6.2	7
		Female	White		Active	Moderate	82.2	6.1	7
		Male	Two or More		Active	Moderate	83.2	6.2	7

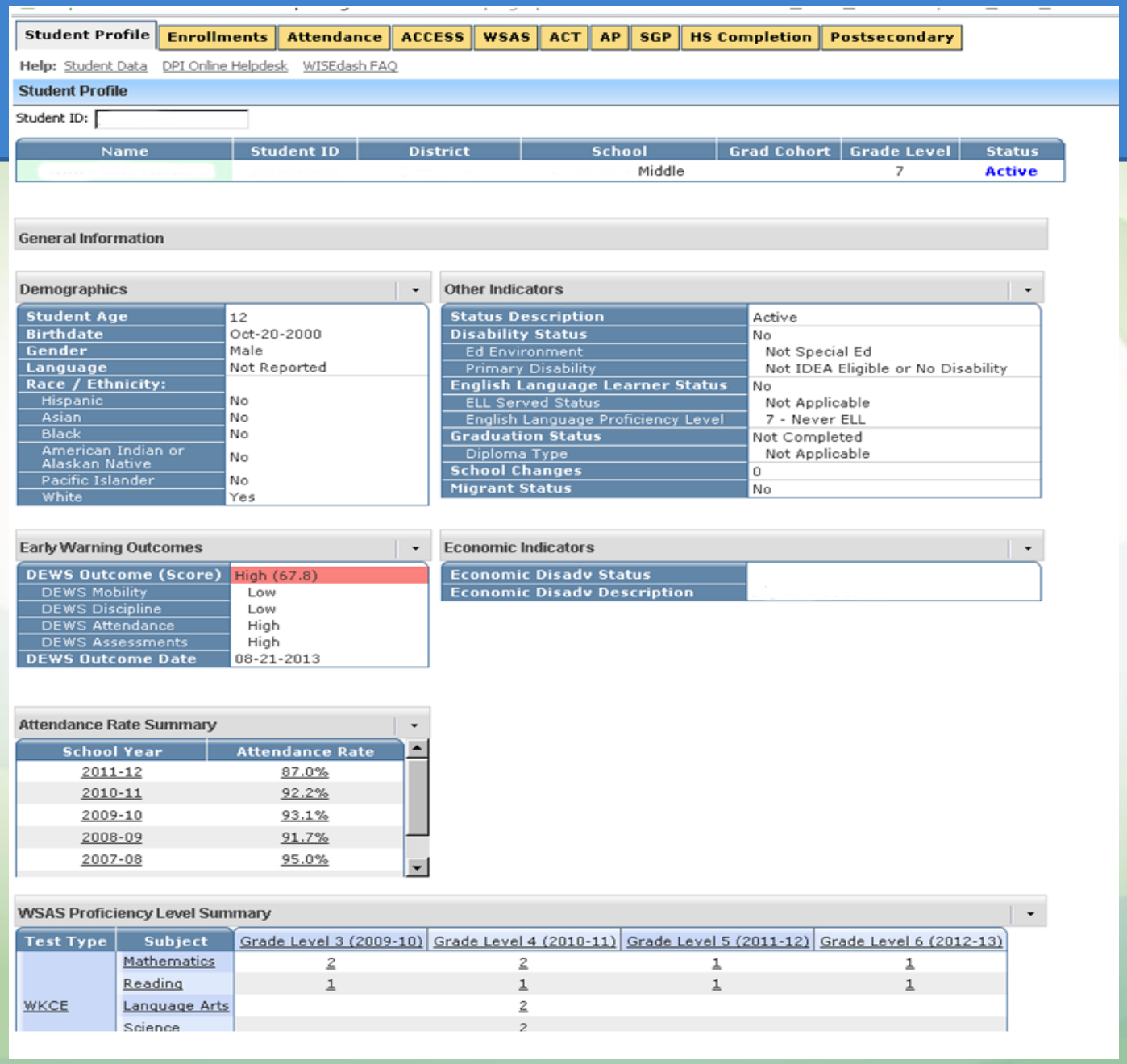
Classroom Roster

WISCONSIN DEPARTMENT OF PUBLIC INSTRUCTION

Dropout Early Warning System (DEWS)

Key indicators

- Attendance
- Discipline
- Mobility
- Assessment results



Student Profile

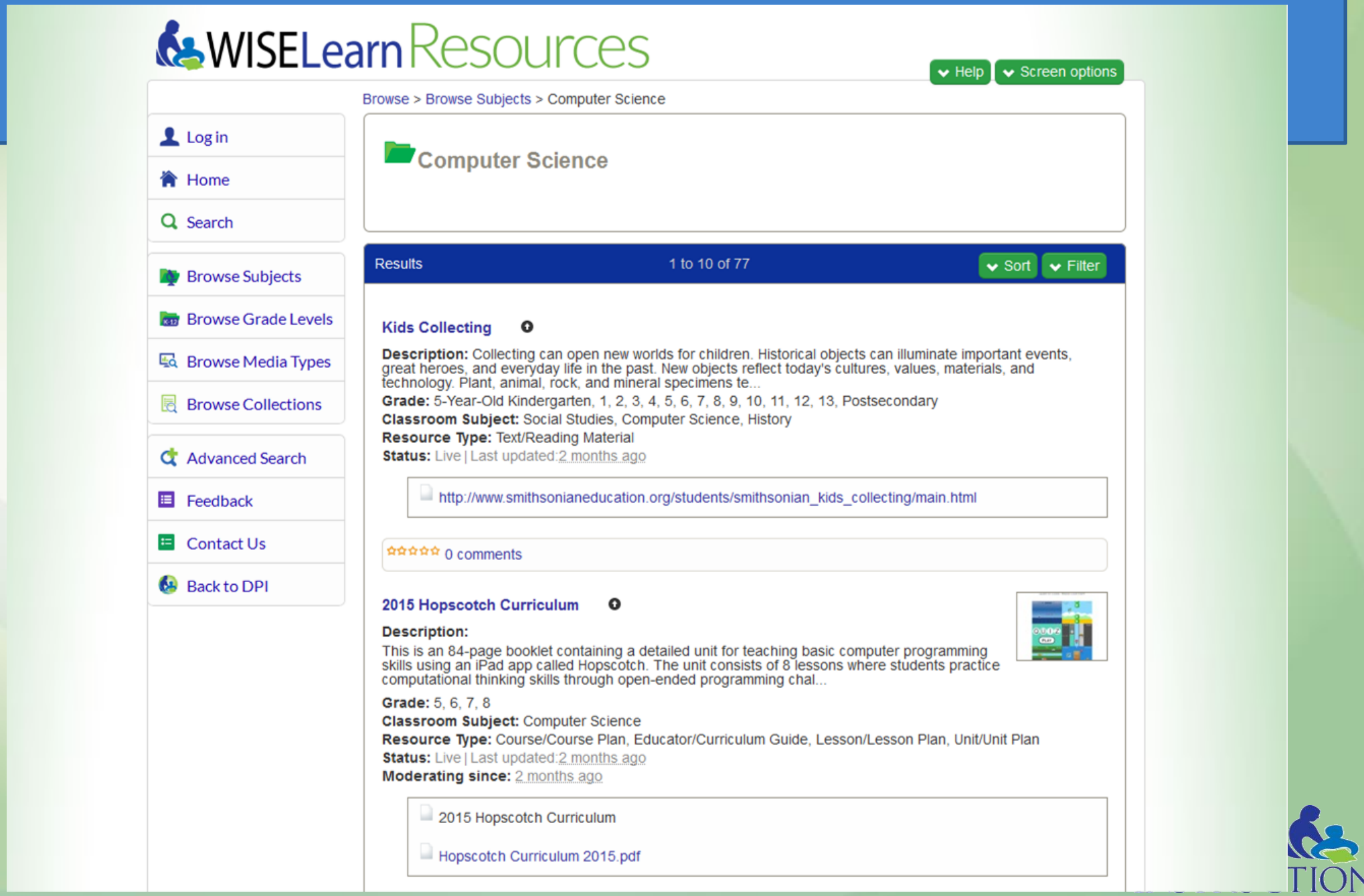
WISCONSIN DEPARTMENT OF PUBLIC INSTRUCTION

Achievement Gap Dashboard

WISCONSIN DEPARTMENT OF PUBLIC INSTRUCTION

WISELearn

An online repository for educators to share resources, curricula, and lesson plans.



District & School Report Cards

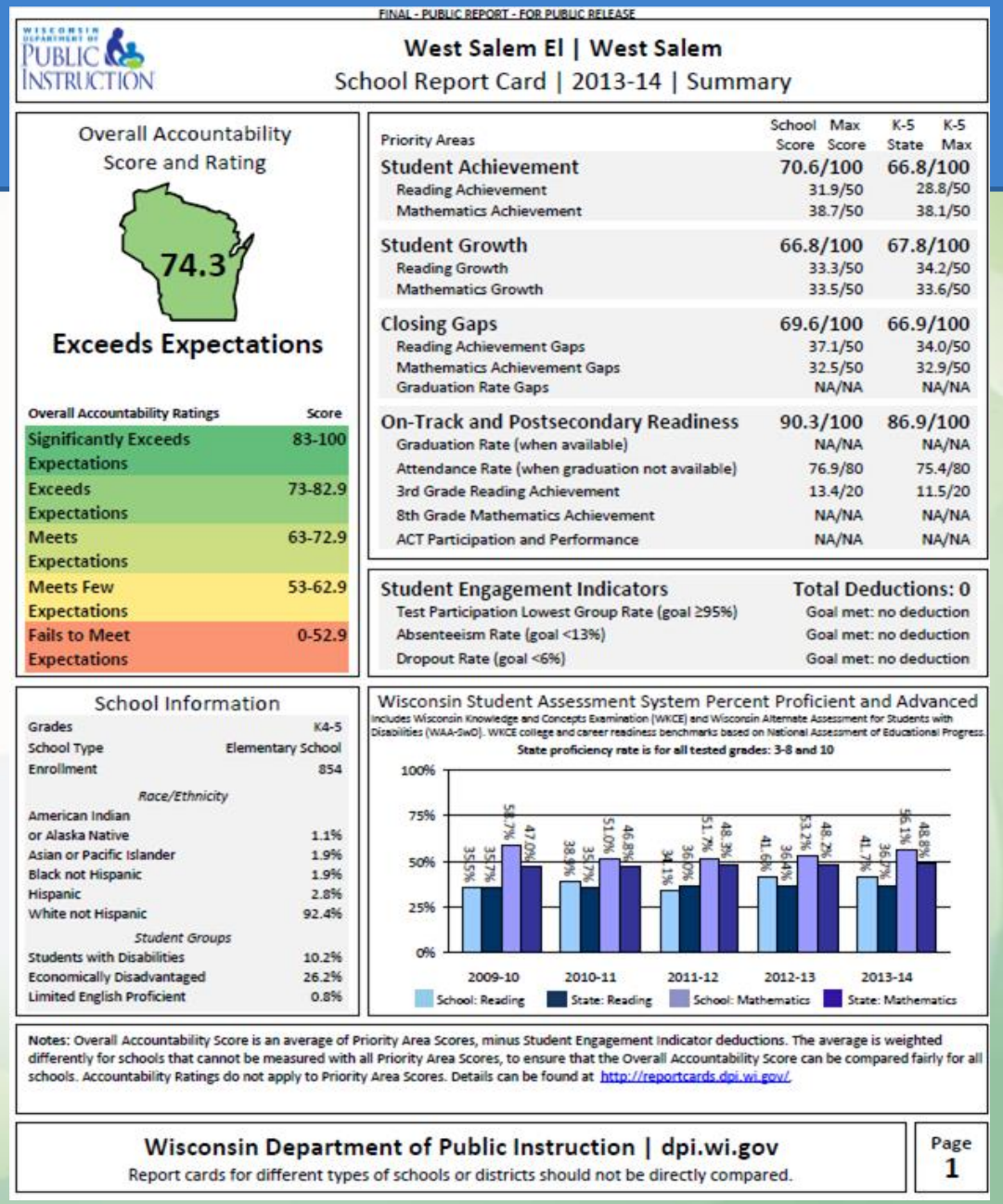
ACCOUNTABILITY

WISCONSIN DEPARTMENT OF PUBLIC INSTRUCTION

School Report Cards

Four Priority Areas

1. Student Achievement
   - Reading and Mathematics Proficiency
2. Student Growth
   - Schools earn credit for student growth within and across performance levels (e.g., basic or proficient)
3. Closing Gaps
   - Subgroup Performance (e.g., race/ethnicity or economic status)
   - Reading and mathematics gaps
   - Graduation gaps
4. On Track to Graduation & Postsecondary Readiness
   - Attendance (K-8) or graduation rates (9-12)
   - Reading (3rd grade), math (8th grade), and ACT (12th grade)



FINAL - PUBLIC REPORT - FOR PUBLIC RELEASE

WISCONSIN DEPARTMENT OF PUBLIC INSTRUCTION

West Salem El | West Salem

School Report Card | 2013-14 | Summary

Overall Accountability Score and Rating

74.3

Exceeds Expectations

Overall Accountability Ratings	Score
Significantly Exceeds Expectations	83-100
Exceeds Expectations	73-82.9
Meets Expectations	63-72.9
Meets Few Expectations	53-62.9
Fails to Meet Expectations	0-52.9

Priority Areas	School Score	Max Score	K-5 State	K-5 Max
Student Achievement	**70.6/100**		**66.8/100**	
Reading Achievement	31.9/50		28.8/50	
Mathematics Achievement	38.7/50		38.1/50	
Student Growth	**66.8/100**		**67.8/100**	
Reading Growth	33.3/50		34.2/50	
Mathematics Growth	33.5/50		33.6/50	
Closing Gaps	**69.6/100**		**66.9/100**	
Reading Achievement Gaps	37.1/50		34.0/50	
Mathematics Achievement Gaps	32.5/50		32.9/50	
Graduation Rate Gaps	NA/NA		NA/NA	
On-Track and Postsecondary Readiness	**90.3/100**		**86.9/100**	
Graduation Rate (when available)	NA/NA		NA/NA	
Attendance Rate (when graduation not available)	76.9/80		75.4/80	
3rd Grade Reading Achievement	13.4/20		11.5/20	
8th Grade Mathematics Achievement	NA/NA		NA/NA	
ACT Participation and Performance	NA/NA		NA/NA	

Student Engagement Indicators	Total Deductions: 0
Test Participation Lowest Group Rate (goal ≥95%)	Goal met: no deduction
Absenteeism Rate (goal <13%)	Goal met: no deduction
Dropout Rate (goal <6%)	Goal met: no deduction

School Information

Grades	K4-5
School Type	Elementary School
Enrollment	854
Race/Ethnicity	
American Indian or Alaska Native	1.1%
Asian or Pacific Islander	1.9%
Black not Hispanic	1.9%
Hispanic	2.8%
White not Hispanic	92.4%
Student Groups	
Students with Disabilities	10.2%
Economically Disadvantaged	26.2%
Limited English Proficient	0.8%

Wisconsin Student Assessment System Percent Proficient and Advanced

Includes Wisconsin Knowledge and Concepts Examination (WKCE) and Wisconsin Alternate Assessment for Students with Disabilities (WAA-SwD). WKCE college and career readiness benchmarks based on National Assessment of Educational Progress.

State proficiency rate is for all tested grades: 3-8 and 10

Notes: Overall Accountability Score is an average of Priority Area Scores, minus Student Engagement Indicator deductions. The average is weighted differently for schools that cannot be measured with all Priority Area Scores, to ensure that the Overall Accountability Score can be compared fairly for all schools. Accountability Ratings do not apply to Priority Area Scores. Details can be found at http://reportcards.dpi.wi.gov/

Wisconsin Department of Public Instruction | dpi.wi.gov

Report cards for different types of schools or districts should not be directly compared.

Page 1

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Wisconsin's School Report Cards

A Nationally-Recognized Accountability System

Education Commission of the States

Parents want report cards that

- Are easy to understand;
- Provide sufficient data; and
- Are useful

ECS experts identified five essential indicators:

- Student achievement
- Student academic growth
- Achievement gap closure
- Graduation rates
- Postsecondary and career readiness

"Wisconsin and Ohio were the only two states whose report cards were top picks by parents, while also meeting and reporting all five essential indicators." – ECS Report

Source: Education Commission of the State, *Rating States, Grading Schools: What Parents and Experts Say States Should Consider to Make Accountability Systems Meaningful,* May 28, 2014.

Wisconsin Department of Public Instruction

Questions?

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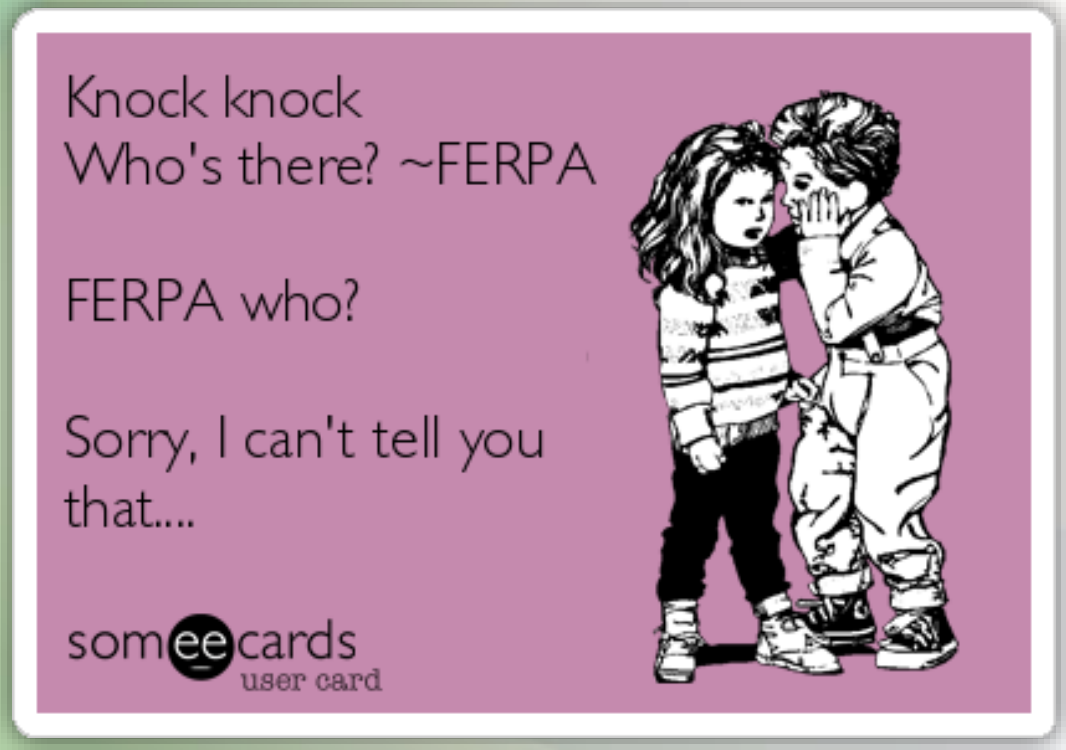
Part III. How Do We Keep Data Private & Secure?

Student Data Safeguarding

- Data Redaction
- Multi-Tiered Data Request Process with Data Destruction Protocol
- Three Tiers of Local Security Management

FERPA



Let's watch a short four-minute overview of FERPA:

http://dpi.wi.gov/wise/data-privacy/overview

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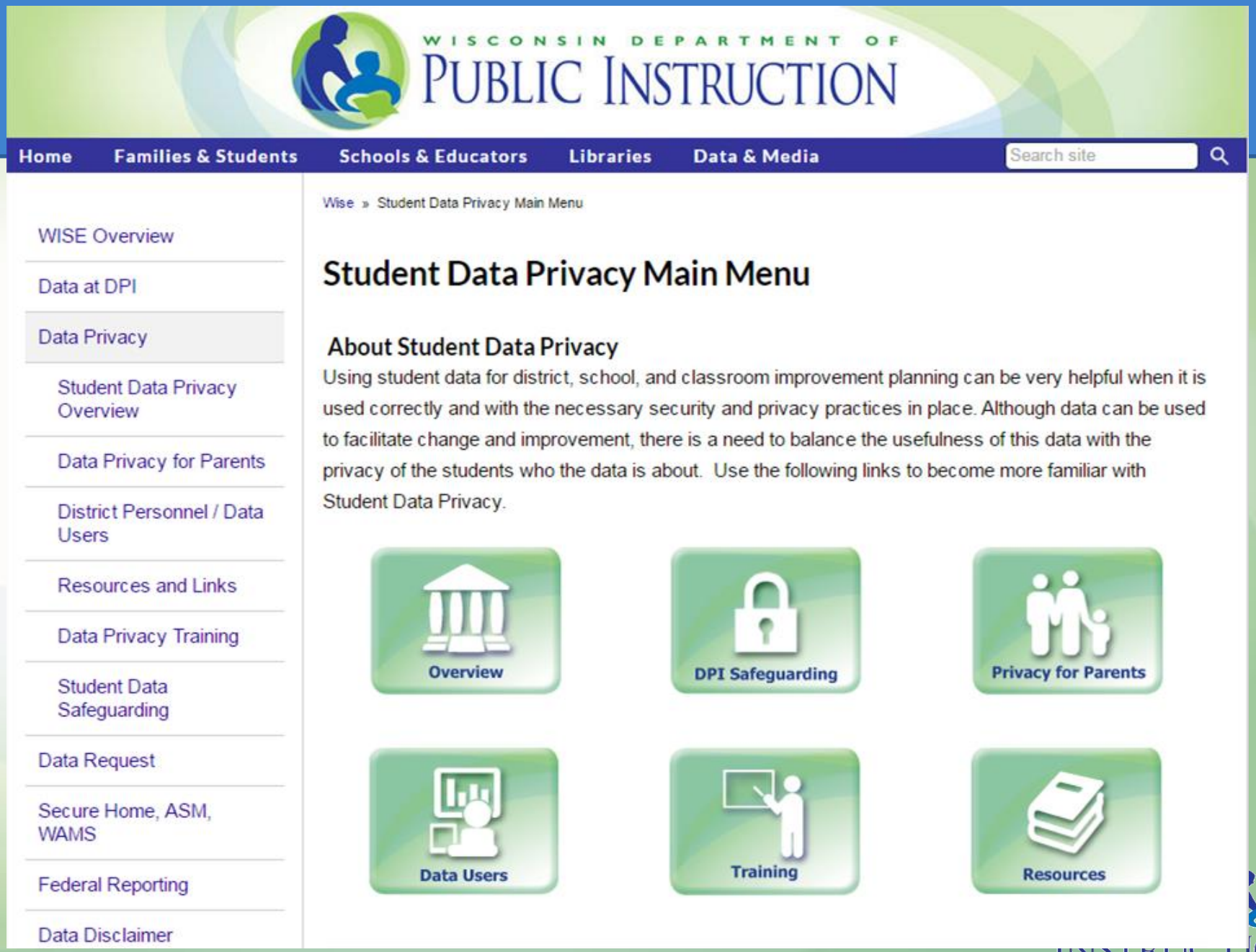
Online data privacy resources for parents & policy makers

http://dpi.wi.gov/wise/data-privacy



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REDACTION

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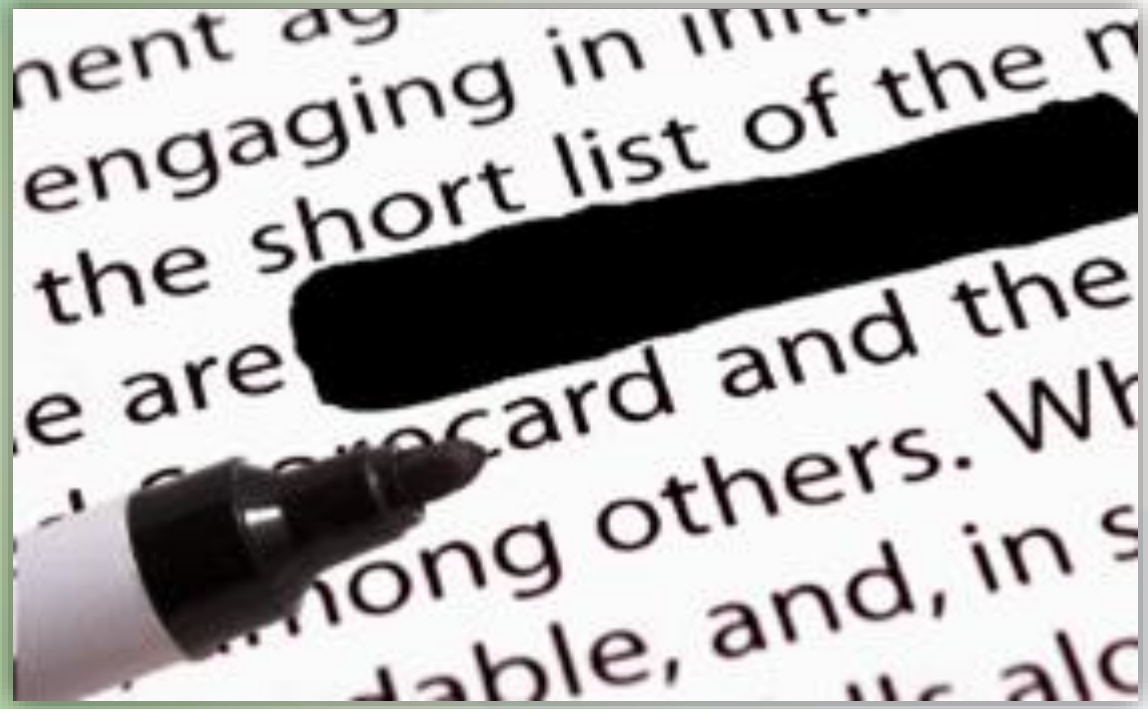
Why Redact Data?



Strict protocols protect confidential information, so there is not any ***direct*** or ***indirect*** disclosure of student data.

- ***Direct disclosure***: Reveals a student's identity and must be avoided by redacting the data when the number of students in the specific group is small.
- ***Indirect disclosure***: Reveals a student's identity based on secondary information and must be avoided by redacting the data when data from a larger group can reveal a small group of students.

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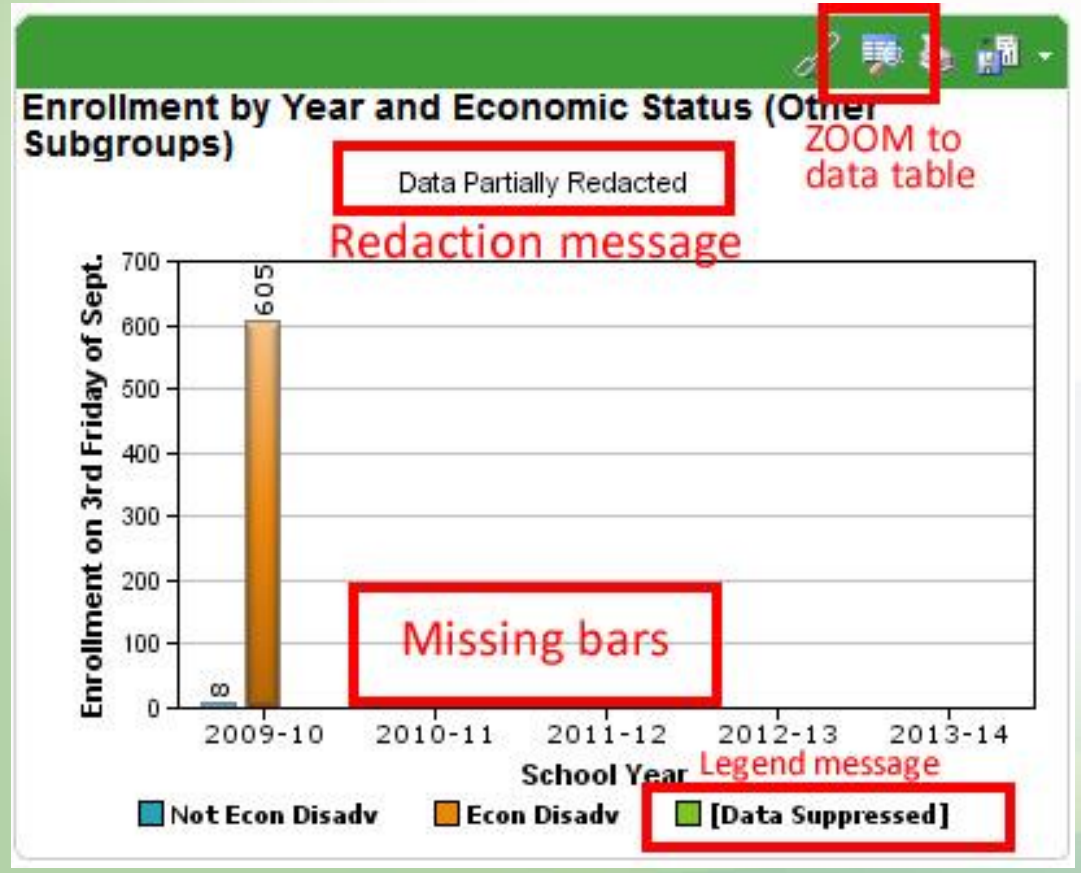
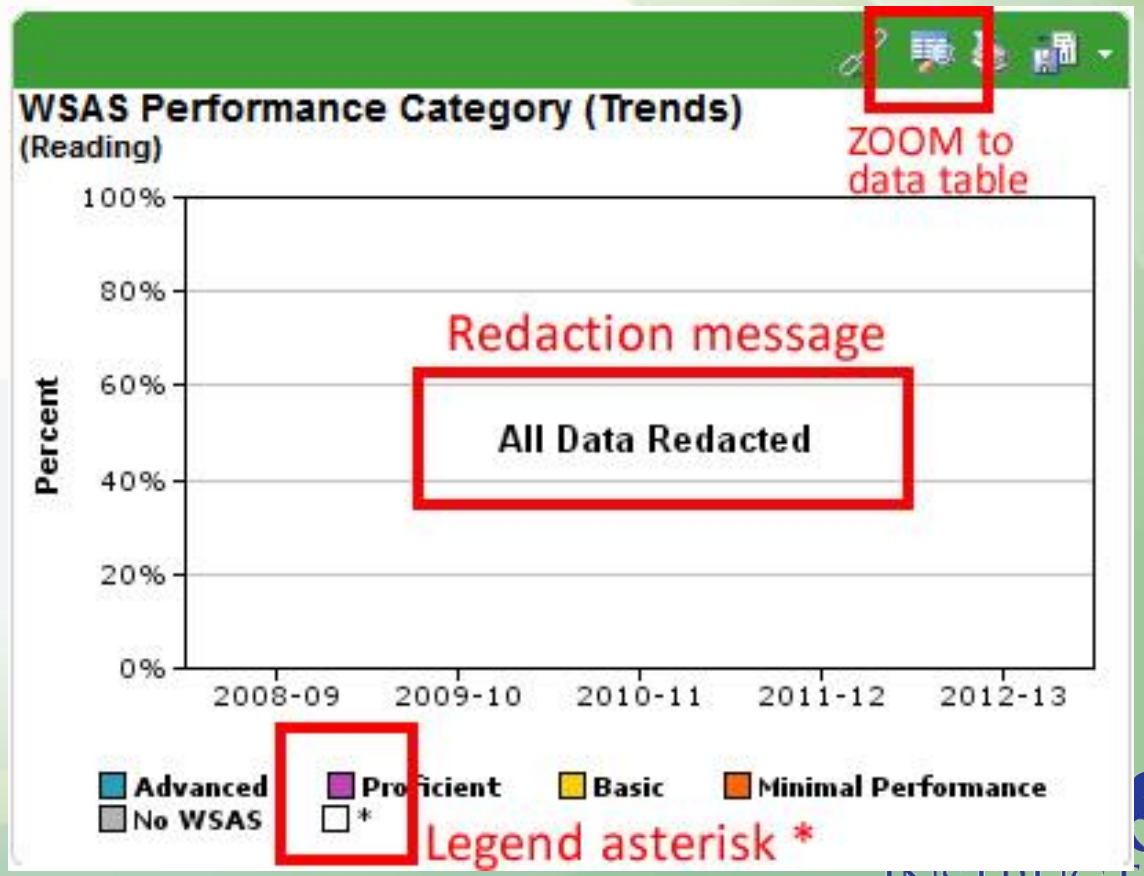
Data Redaction (WISEdash Public)

If certain student data groups are too small, then that data is redacted:



If all student groups are too small the entire graph is redacted:



Data Redaction (Report Cards)

If certain student data groups are too small, then that data is redacted:

FINAL - PUBLIC REPORT - FOR PUBLIC RELEASE

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Washington

District Report Card Detail | 2013-14 | Mobility

District Mobility — Supplemental Data

Mobility information is provided for informational purposes only and is not used to determine district accountability scores.

District Mobility

There are four types of mobility: new school, closed school, within district, and new to district. Within district mobile students are those who are enrolled for a full academic year in the district but not in one school.

Group	Total Enrollment	Non-Mobile Students	Mobile Students		New School (Current Year)		Closed School (Prior Year)		Within District Mobile (Not New or Closed School)		New to District	
	Count	Count	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
All Students	56	51	5	8.9%	0	0.0%	0	0.0%	0	0.0%	5	8.9%
American Indian or Alaska Native	*	*	*	*	*	*	*	*	*	*	*	*
Asian or Pacific Islander	*	*	*	*	*	*	*	*	*	*	*	*
Black not Hispanic	*	*	*	*	*	*	*	*	*	*	*	*
Hispanic	*	*	*	*	*	*	*	*	*	*	*	*
White not Hispanic	50	45	5	10.0%	0	0.0%	0	0.0%	0	0.0%	5	10.0%
Students with Disabilities	*	*	*	*	*	*	*	*	*	*	*	*
Economically Disadvantaged	*	*	*	*	*	*	*	*	*	*	*	*
Limited English Proficient	*	*	*	*	*	*	*	*	*	*	*	*

Answering Important Questions

RESEARCH

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Multi-Tiered Data Request Process with Data Destruction Protocol

Public/General Data Request

Anyone has a right to access ***public data***. This data includes: non-identifying data about students, scholastic resources, performance reports, school finance information and public library data. These reports are subject to redaction requirements.

Confidential Data Request

Usually involves confidential, student-level data for research or evaluation purposes. Individual student records are generally identified by a numeric key, with personal information (such as the student's name) removed. This enables longitudinal research with the inclusion of key data elements (race, disability status, achievement data, etc.) while protecting privacy.

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Multi-Tiered Data Request Process with Data Destruction Protocol

1. Request for confidential data is submitted.
2. DPI **Data Request Review Board (DRRB)** reviews all data requests.
   - Ensures that IRB approval has been received.
   - Verifies the proposal meets academic standards.
3. A written **Data Use Agreement (DUA)** governs the data exchange and use.
4. All research and other outcomes generated are subject to DPI approval prior to publication.
5. The DUA requires researchers to properly destroy data files when complete and notify DPI.

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Examples of Research

Center for Research on Educational Outcomes (CREDO)

Wisconsin Center for Education Research (WCER)

Institute for Research on Poverty (IRP)

Dept. of Workforce Development (DWD)

Dept. of Children and Families (DCF)

Dept. of Health Services (DHS)

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Three-tiered Security Process

MANAGING SECURED ACCESS

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Local Security Management

DPI Security Overview:
District Personnel and Data Users (3-Tiers)

Level 1 Security

District Security Administrators (DSAs)

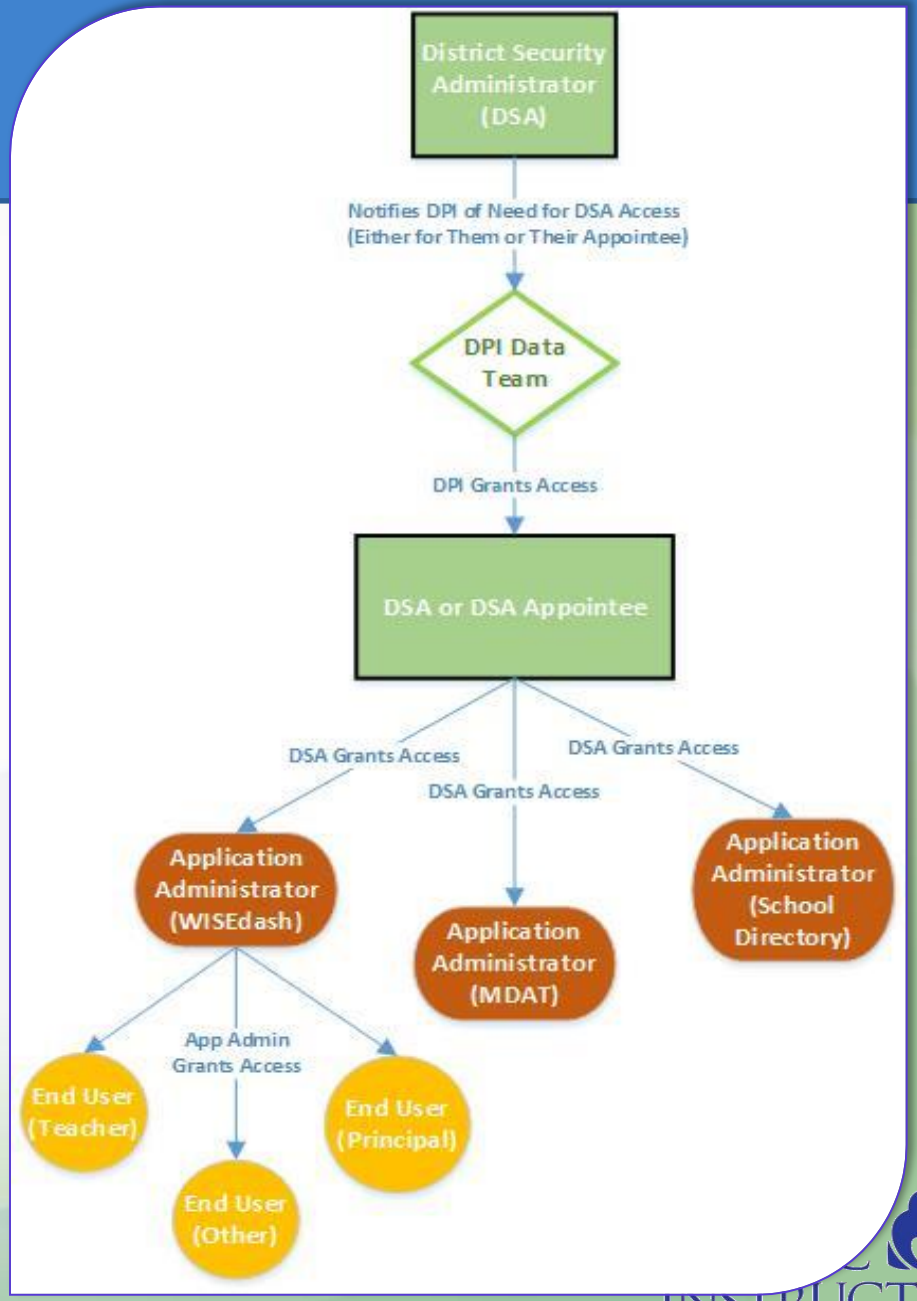
Level 2 Security

Application Administrators

Level 3 Security

Application Users

(teachers, administrators, and other district personnel)



User Security
Application Security
Network Security
Data Encryption
Email Safeguards

DATA SECURITY INFRASTRUCTURE

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Ironclad Data Security

User Security

- DPI single sign on authentication method
- Local control authorization

WISEdata Secured Data Services

- Vendor certification process
- Credentials assigned to software partners
- Districts have the control to allow certified vendors to transmit data

Data Encryption

- Sensitive data is encrypted at rest

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Ironclad Data Security

Application Security (access and rights)

- ASM update for Federated identity with districts
- NAM for protecting access to application servers

Network Security

- Access to core DPI network is controlled
- DET data center and security services

Districts

- Data transmissions with districts are encrypted and secure (Accellion SFTP)

Email Safeguards

- 92% of emails are blocked by spam filters

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The function of education is to teach one to think intensively and to think critically. Intelligence plus character - that is the goal of true education.

- Martin Luther King, Jr.

Questions?

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