Updates on Michigan COVID Learning Recovery and Teacher Workforce Studies
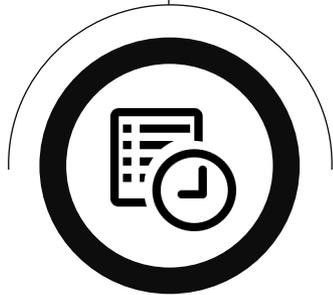
Presented to the P-20 Longitudinal Data System Advisory Council, March 20, 2025

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Education Policy
Innovation Collaborative

STUDIES

01 **Michigan's 2023-24 Benchmark Assessments**

K-8 student achievement and growth on tests administered to meet "Return to Learn" requirements, fall 2020 through spring 2024

Tara Kilbride, Wei-Chu Chen, & Erin Conley

02 **Michigan Teacher Shortage Study: 2025 Report**

Teacher vacancies, retention, and initial certification trends, 2012-13 through 2023-24

Tara Kilbride, Salem Rogers,

Jennifer Moriarty, & Tyler Powell

03 **The Shifting Landscape of Alternative-Route Teacher Certification in Michigan**

Where and how alternative pathways to teaching are expanding throughout Michigan

Salem Rogers & Tara Kilbride

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DATA SOURCES

These studies combine data from state databases, local districts, and publicly available resources.

Student Assessments

MAP Growth, i-Ready, Star 360, Smarter Balanced, & Michigan K-2 benchmark assessments (MiDataHub)

Comparisons with M-STEP, NAEP, SEDA, national trends on benchmark assessments

Registry of Educational Personnel (REP)

Employment status, duration, location, job assignment, mobility, retention/attrition

Michigan Student Data System (MSDS)

Student enrollment & demographics (General Collection)

Courses taught as "teacher of record" (TSDL)

Districts where teachers completed high school (GAD)

Michigan Online Educator Certification System (MOECS)

Initial teaching certificates, added endorsements, temporary teaching credentials, prep institution, certification pathway

Mode of Instruction

Extended Continuity of Learning plans (2020-21)

Individual students' learning modality in later years (MiDataHub)

Publicly Available Data Sources

Assessment manuals & norming studies

Teacher prep program enrollment & completion data (Title II)

Educator preparation provider types (CAP/AACTE)

PIC-UIC Crosswalk

Connect teachers' initial job placements to the locations of their hometowns & prep programs

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Part 1:

Michigan's 2023-24 Benchmark Assessments

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BACKGROUND

The "Return to Learn" law outlined new student testing and data reporting requirements for school districts.

- Choose 1+ math & reading benchmark assessment from a list of approved providers or another test that meets the criteria outlined in the law

- Administer the assessment(s) to all K-8 students in the fall & spring of each school year starting in 2020-21

- If using a state-approved assessment, provide aggregate data or allow EPIC to aggregate student-level data for use in a statewide report

As of 2023-24, districts are no longer required to administer benchmark assessments but can receive funding if they choose to do so.

The resulting dataset is complicated.

- The data came from multiple assessments and in multiple formats. The dataset begins in fall 2020, so there is no information about baseline achievement from before the pandemic.

- Our task is to interpret and translate the data into meaningful insights about student learning throughout the state during and after the COVID-19 pandemic.

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TEST PARTICIPATION

With benchmark assessments no longer required in 2023-24, fewer districts and students participated.

Sample	Students			Districts		
	2022-23	**2023-24**	change	2022-23	**2023-24**	change
Full sample (spring)	773,211	**715,896**	-57,315	769	**678**	-91
School year growth	725,399	**685,076**	-40,323	764	**667**	-97
Longitudinal growth	359,848	**299,078**	-60,770	663	**587**	-76

Test-takers resemble the overall student population, but there are notable differences across test-specific samples.

| Sample Characteristics	Full K-8 Population	MAP Growth	i-Ready	Star 360	DRC	All Vendors
% economically disadvantaged	56.1	54.1	58.0	51.0	44.5	54.7
% students of color	37.7	34.2	47.6	20.2	8.0	36.3
Months in-person in 2020-21	5.8	5.9	5.5	7.3	7.7	6.0
Total number of students	942,576	516,463	164,420	44,838	3,711	715,896
Total number of districts	844	570	70	74	11	678

DISTRIBUTION OF STUDENT ACHIEVEMENT

There is more variation in student achievement now than before the pandemic, though gaps between high- and low-performing readers improved in 2023-24

Math: improvements in '23-'24 for middle 50% of K-2 students, 3rd-8th grade students at all levels
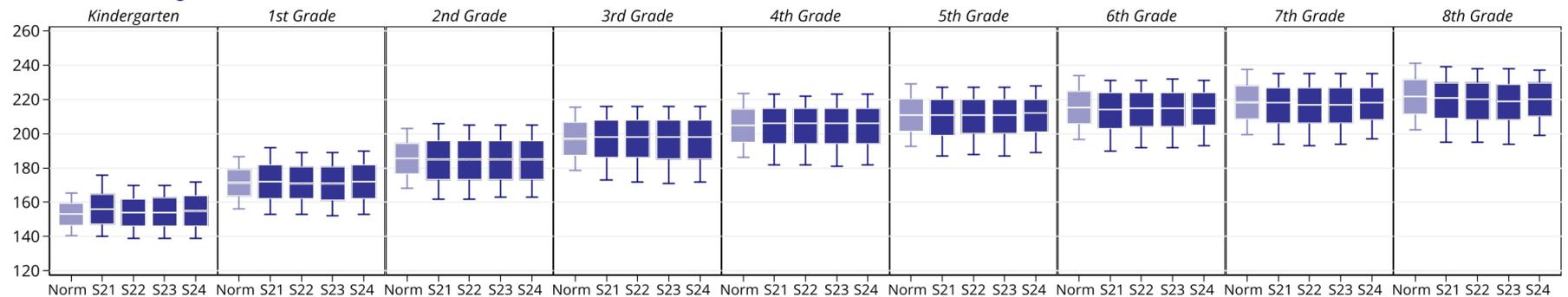**Reading:** improvements concentrated among low-performing students, esp. at middle school level

Similar patterns on i-Ready, little change on Star 360
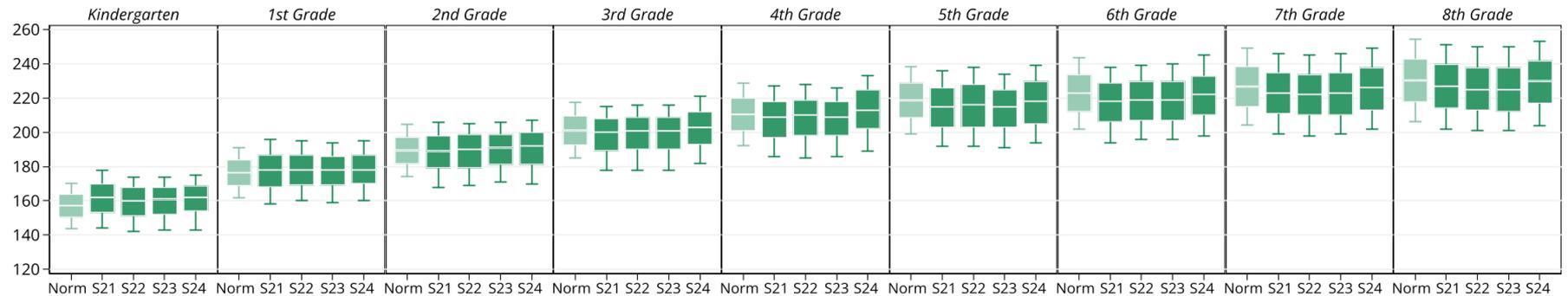

Notes: the bottom, middle, and top of each rectangle represent the 25th, 50th, and 75th percentiles; the bottom and top "whiskers" represent the 10th and 90th percentiles. Darker shades represent MI students, lighter shades show pre-COVID national norm. (Full sample)

7

REGRESSION-ADJUSTED PERCENTILE RANKS

After accounting for differences between grades, vendors, and districts, we find evidence of some recovery from initial math declines but little change in reading
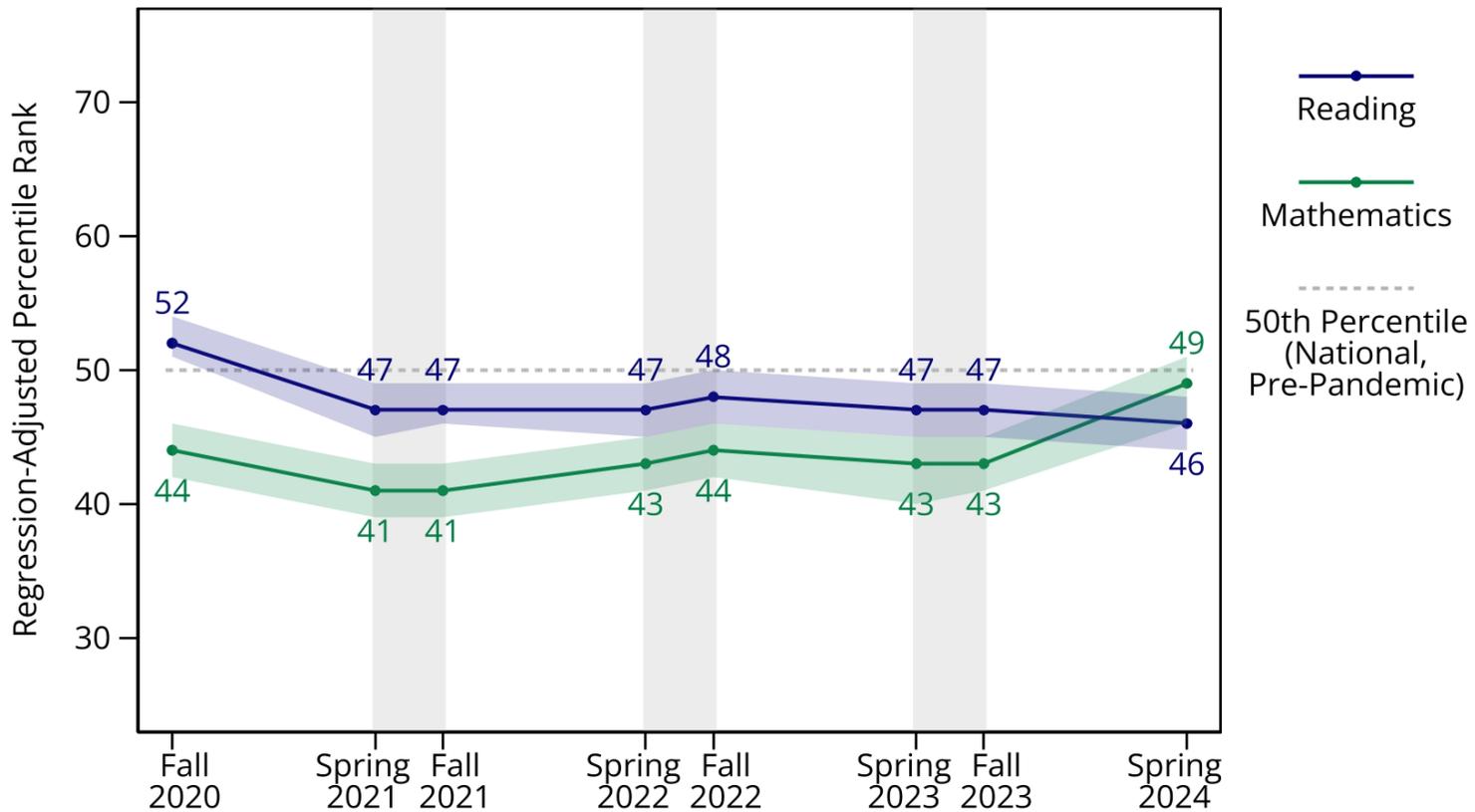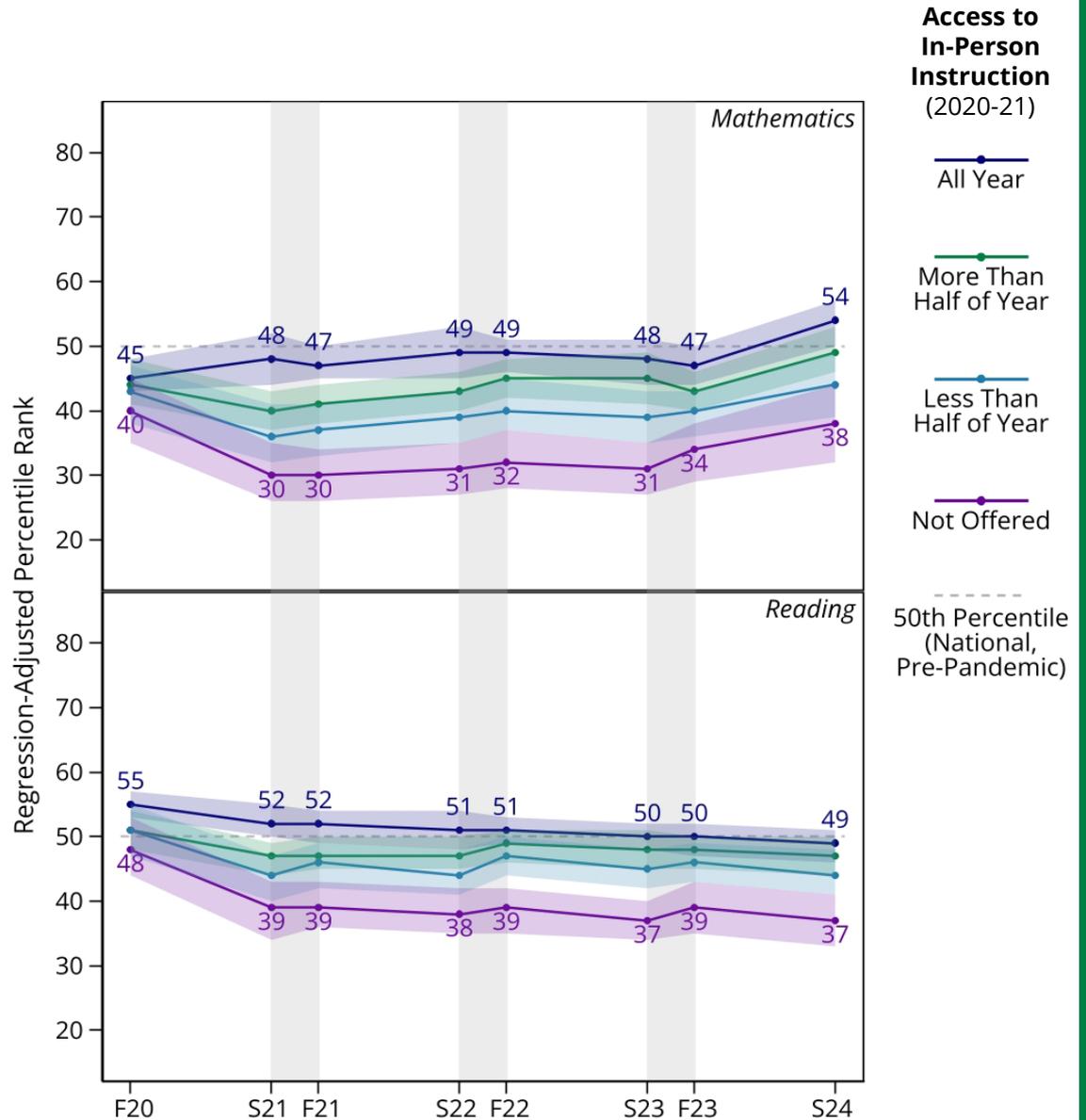

Notes: Blue/green shaded regions represent 95% confidence intervals. Regression analyses include 3rd-8th grade NWEA and i-Ready assessments. (Longitudinal growth sample)

SUBGROUP DIFFERENCES

Large disparities across districts offering different instructional modalities emerged in 2020-21 and persisted through at least 2023-24

Socioeconomic and racial/ethnic achievement gaps also worsened in 2020-21; reading gaps have improved since but math gaps remain larger than in fall 2020

Notes: Shaded areas represent 95% confidence intervals. Regression analyses include 3rd-8th grade NWEA and i-Ready assessments. (Longitudinal growth sample)

Access to In-Person Instruction (2020-21)

— All Year
— More Than Half of Year
— Less Than Half of Year
— Not Offered
- - - 50th Percentile (National, Pre-Pandemic)

Mathematics
- 45, 48, 47, 49, 49, 48, 47, 54
- 40, 30, 30, 31, 32, 31, 34, 38

Reading
- 55, 52, 52, 51, 51, 50, 50, 49
- 48, 39, 39, 38, 39, 37, 39, 37

Regression-Adjusted Percentile Rank

F20, S21, F21, S22, F22, S23, F23, S24

Key Takeaways & Policy Implications

STRONG PROGRESS IN MATH

Michigan students made **substantial recovery in math** on their 2023-24 benchmark assessments. Other assessments show similar patterns: math proficiency rates increased on the 2024 M-STEP, recent NAEP data show 4th grade **math recovery in MI is above the national average**.

FOCUS ON EARLY LITERACY

Average reading scores have changed relatively little since declining in 2020-21. While gaps in reading achievement have improved in higher grade levels, **elementary-level reading remains a top concern**.

VARIED LEARNING NEEDS

With a **wider range of skill levels and learning needs** in Michigan schools and classrooms, teachers will need appropriate **instructional resources and support** to meet their students where they are.

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Part 2:

Teacher Shortages & Alternative Certification

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BACKGROUND

This portion of the presentation covers results from two recent studies about Michigan's teacher workforce.

MICHIGAN
TEACHER SHORTAGE
STUDY

Legislatively-mandated report due Jan 1st of each year, covering:

1) Educator Vacancies

2) Retention Rates

3) Teacher Prep Graduates

4) Highest-Need Regions

THE SHIFTING LANDSCAPE OF
ALTERNATIVE-ROUTE
TEACHER CERTIFICATION
IN MICHIGAN

Where and how alternative certification pathways are expanding

Differences in educator diversity and early-career retention by certification pathway
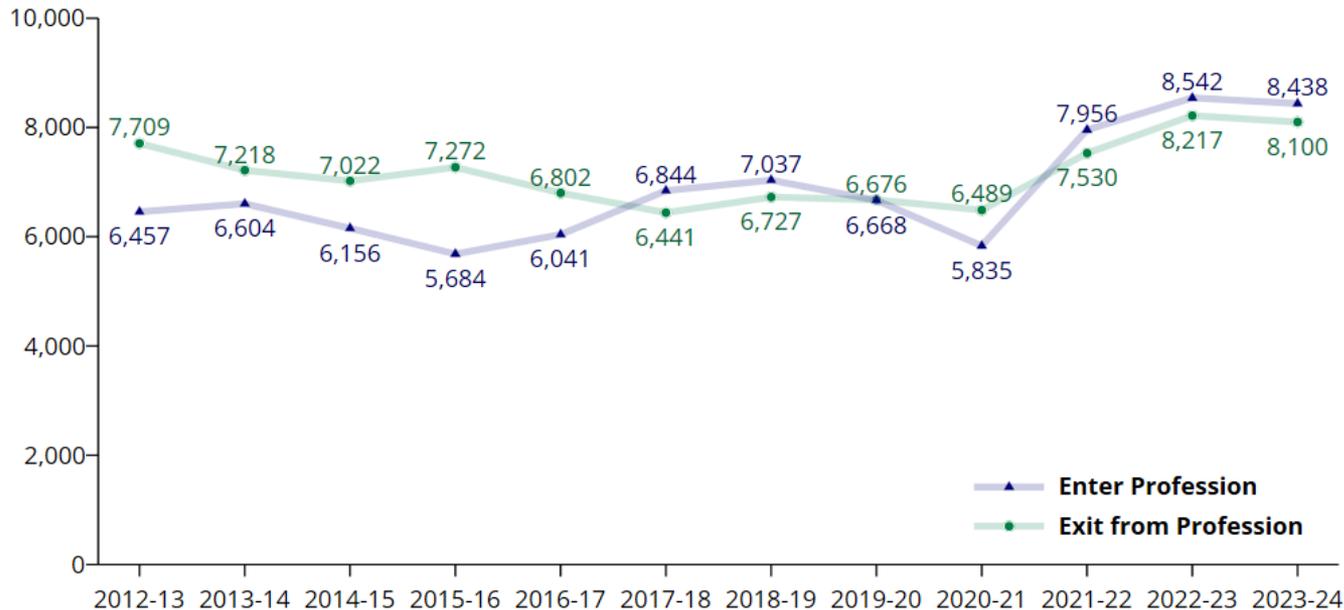
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Number of Teachers

Enter Profession / Exit from Profession

Year	Exit from Profession	Enter Profession
2012-13	7,709	6,457
2013-14	7,218	6,604
2014-15	7,022	6,156
2015-16	7,272	5,684
2016-17	6,802	6,041
2017-18	6,441	6,844
2018-19	6,727	7,037
2019-20	6,676	6,668
2020-21	6,489	5,835
2021-22	7,530	7,956
2022-23	8,217	8,542
2023-24	8,100	8,438

Percent of Teachers

New Hire / First Year Teaching / Newly Certified

Year	New Hire	First Year Teaching	Newly Certified
2012-13	5.7%	4.3%	4.7%
2013-14	6.0%	4.1%	4.3%
2014-15	5.9%	3.9%	4.0%
2015-16	5.8%	3.6%	3.7%
2016-17	6.4%	3.8%	3.9%
2017-18	6.9%	4.2%	4.0%
2018-19	7.0%	4.5%	4.1%
2019-20	6.8%	4.2%	3.9%
2020-21	4.6%	3.5%	3.4%
2021-22	7.7%	5.2%	4.4%
2022-23	7.7%	5.3%	4.3%
2023-24	7.0%	5.1%	4.5%

SIZE AND STABILITY OF WORKFORCE

In each of the last 3 years, new teachers entering the profession out-numbered those leaving
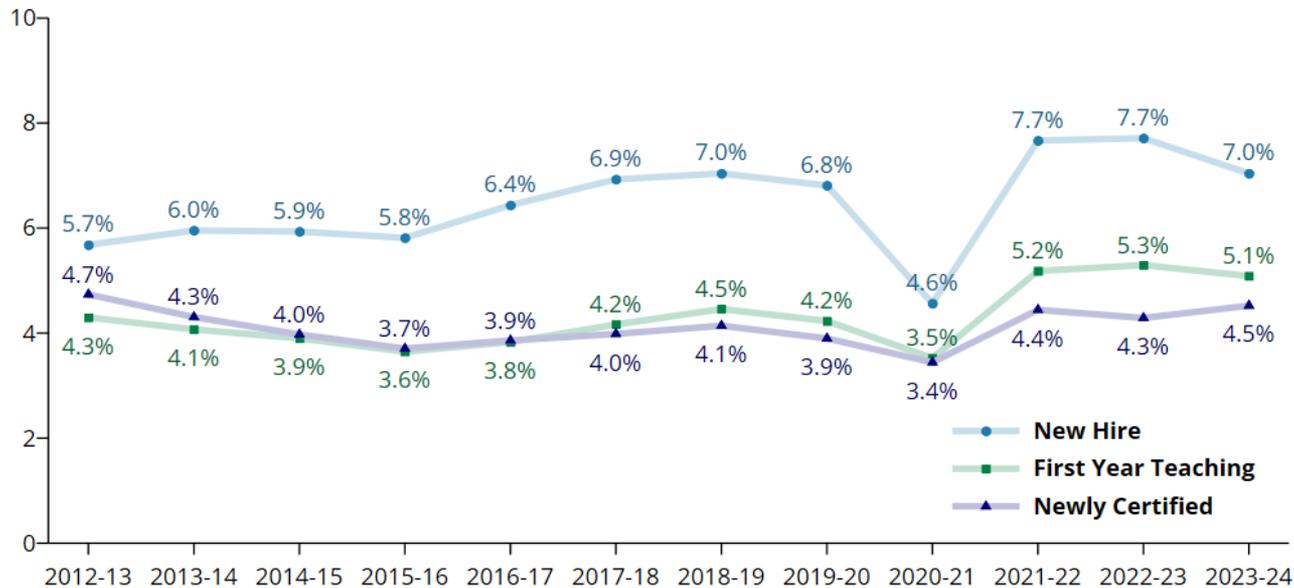
The workforce has been growing larger but facing unusually high rates of turnover

New teachers make up a larger share of the workforce than ever before
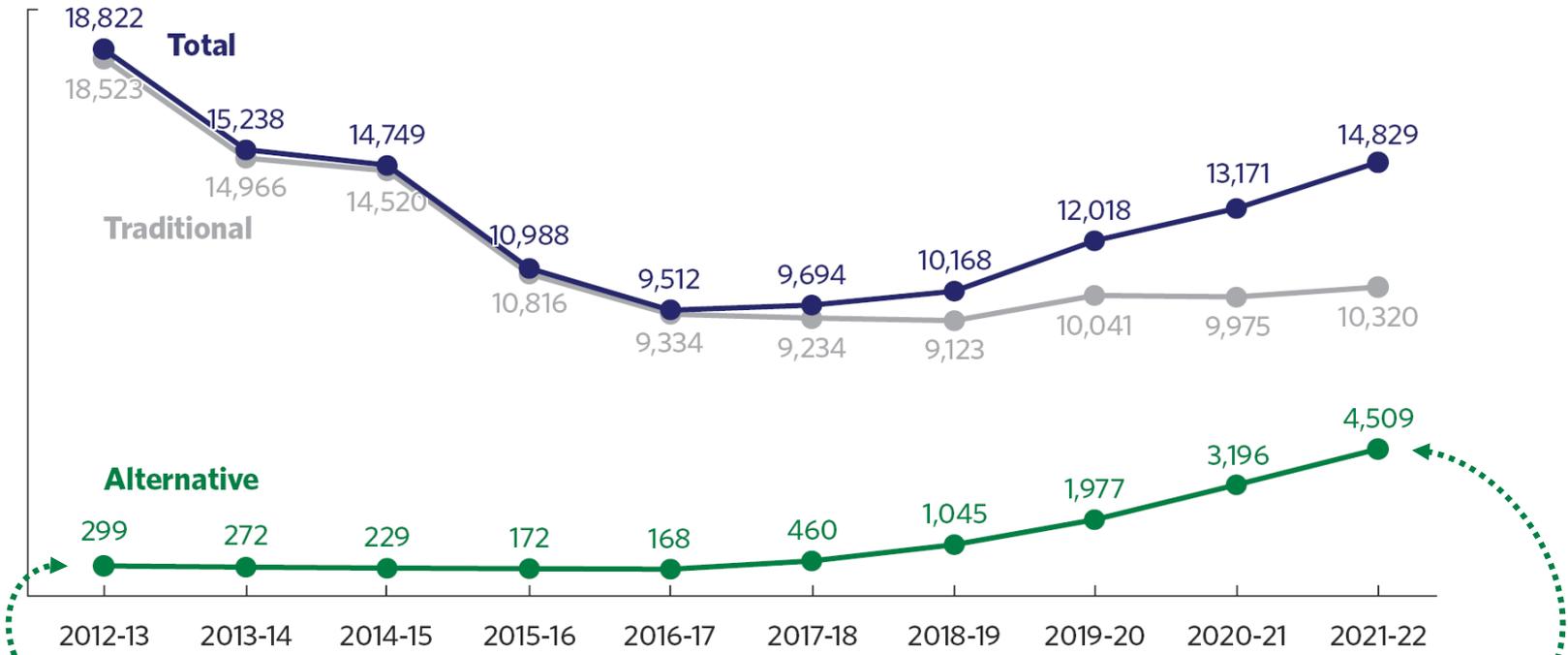
13

TEACHER PREPARATION

Recent increases in MI's teacher preparation program enrollment reflect growth in alternative-route programs

Traditional-route: concurrent with an undergraduate degree program

Alternative-route: candidates already have bachelor's degrees, work as teachers of record under interim certificate while completing training

Michigan TPP Enrollment

Total
18,822 — 15,238 — 14,749 — 10,988 — 9,512 — 9,694 — 10,168 — 12,018 — 13,171 — 14,829

Traditional
18,523 — 14,966 — 14,520 — 10,816 — 9,334 — 9,234 — 9,123 — 10,041 — 9,975 — 10,320

Alternative
299 — 272 — 229 — 172 — 168 — 460 — 1,045 — 1,977 — 3,196 — 4,509

2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 | 2021-22

2% of total enrollment

(12% nationally)

30% of total enrollment
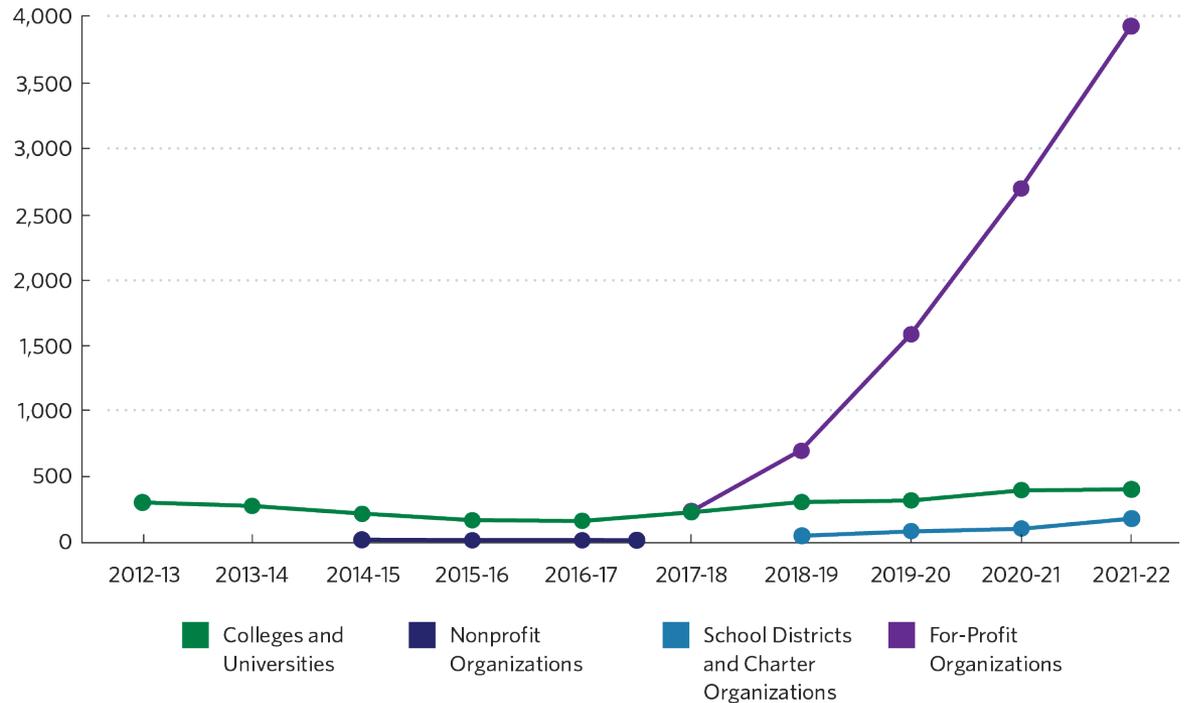
(30% nationally)

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14

TEACHER PREPARATION

This growth is driven by two fully virtual programs

These programs are run by organizations outside of the higher education sector that offer virtual teacher preparation in multiple states
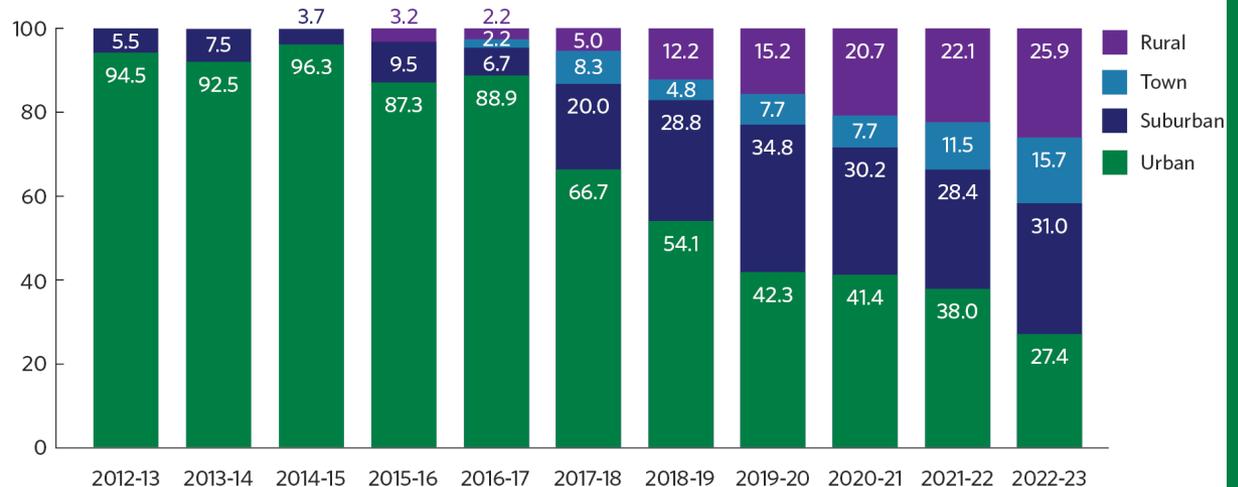
Fully virtual options have made alternative certification more accessible outside of urban areas

Alternative-Route Enrollment by Provider Type

Legend:
- Colleges and Universities
- Nonprofit Organizations
- School Districts and Charter Organizations
- For-Profit Organizations

Percent of New Alt-Route Teachers

Year	Urban	Suburban	Town	Rural
2012-13	94.5	5.5		
2013-14	92.5	7.5		
2014-15	96.3			3.7
2015-16	87.3	9.5		3.2
2016-17	88.9	6.7	2.2	2.2
2017-18	66.7	20.0	8.3	5.0
2018-19	54.1	28.8	4.8	12.2
2019-20	42.3	34.8	7.7	15.2
2020-21	41.4	30.2	7.7	20.7
2021-22	38.0	28.4	11.5	22.1
2022-23	27.4	31.0	15.7	25.9

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EDUCATOR STAFFING & CREDENTIALING IN RURAL AREAS

Distance from preparation institutions can present barriers from becoming a teacher and recruiting/hiring teachers

Smaller rural districts are susceptible to severe subject-specific shortages, face challenges aligning teachers' credentials with instructional needs

Teachers in these settings often wear many "hats"

Percent of New Teachers From Traditional In-State Preparation Programs, 2019-20 to 2023-24

Note: District shares are calculated based on the number of newly hired teachers who were certified at a traditional teacher preparation program no more than five years prior to their initial count date divided by the total number of new teachers hired between 2019-20 and 2023-24 in that district. "Insufficient data" indicates that a school district hired too few newly certified teachers within the timeframe of interest.
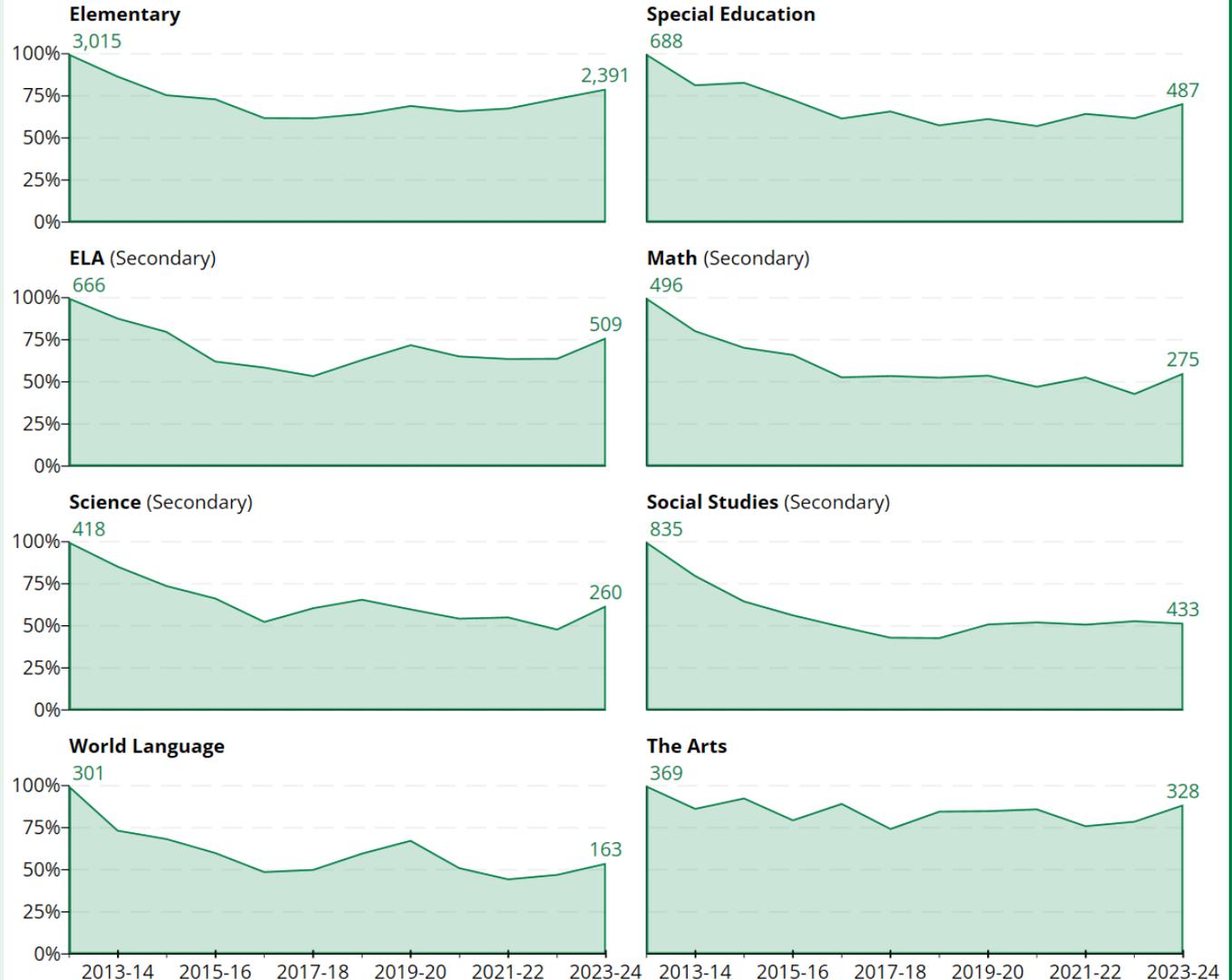

Percent of new Teachers

- >80%
- 71-80%
- 61-70%
- 51-60%
- 41-50%
- 31-40%
- 0-30%

- Insufficient Data
- ● Public TPP
- ▲ Private TPP
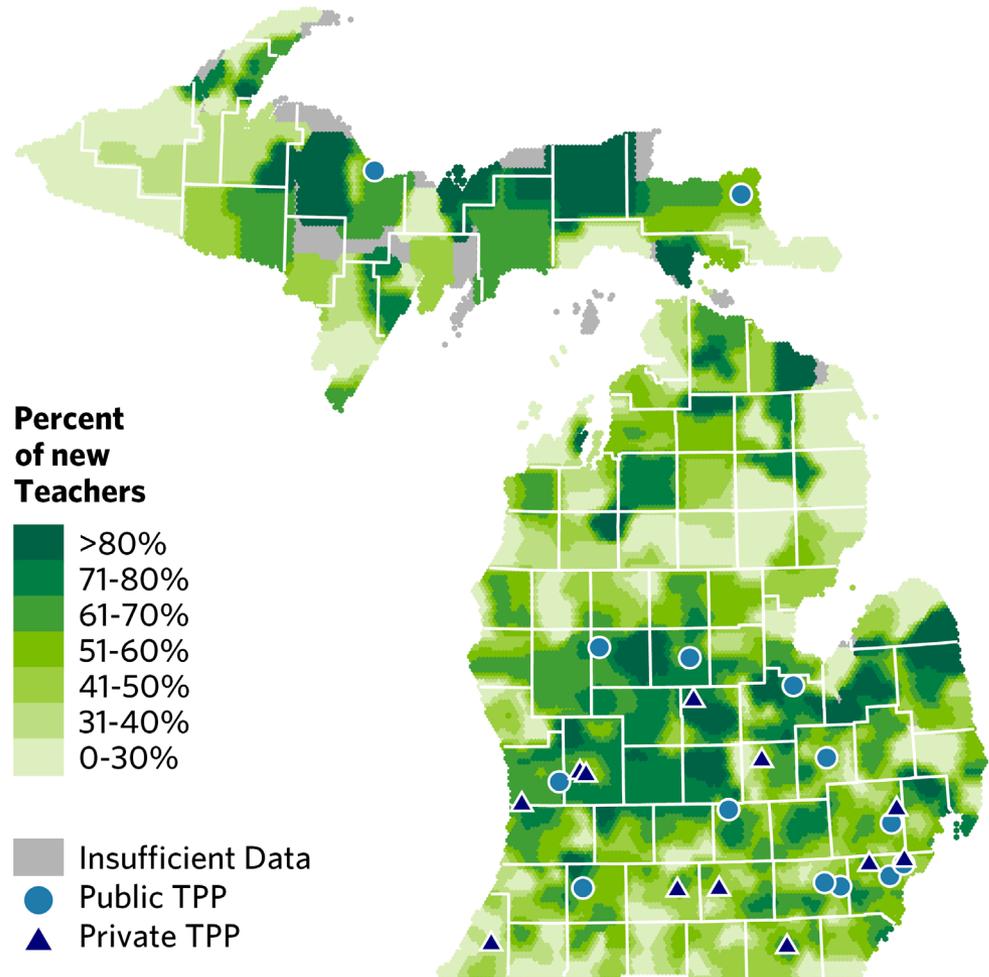
SUBJECT AREA SHORTAGES

Declines in initial certification rates persisted longer for special education and secondary-level core subject teachers

By 2023-24, initial certification rates were increasing in most subject areas.

Elementary certificates began to rebound a few years earlier.

Change in the Number of Teachers Issued Initial Certificates by Subject Area
(Percent Relative to 2012-13 Rate)

Elementary
3,015
2,391

Special Education
688
487

ELA (Secondary)
666
509

Math (Secondary)
496
275

Science (Secondary)
418
260

Social Studies (Secondary)
835
433

World Language
301
163

The Arts
369
328

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VACANCIES

Vacancy rates are higher for special education than any other type of teaching position

Recent improvements in data coverage/quality make it possible to analyze district-reported vacancies
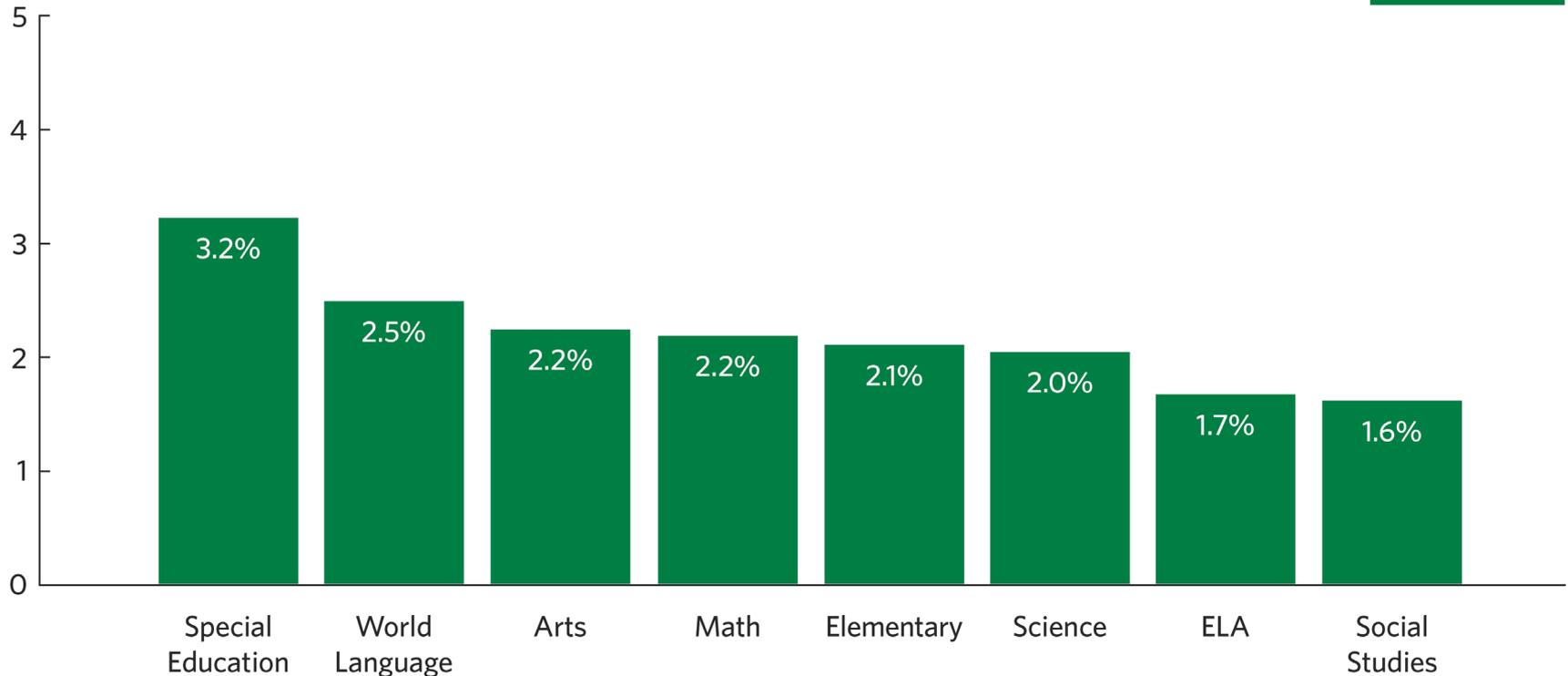
Not all districts reported vacancies. Of those that did, many indicated >10% of special education positions were vacant

High turnover and reliance on under-credentialed teachers are also high for special education positions

## District-Reported Vacancies by Subject Area (Fall 2023)

Vacancy Rate (Percent of Total FTEs)

Bar chart showing vacancy rates:
- Special Education: 3.2%
- World Language: 2.5%
- Arts: 2.2%
- Math: 2.2%
- Elementary: 2.1%
- Science: 2.0%
- ELA: 1.7%
- Social Studies: 1.6%

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LOCAL & REGIONAL SHORTAGES

Teachers are not distributed equitably across school districts; close neighboring districts often face very different shortage conditions.

Estimated Extent of
Teacher Shortage
(Overall)

Greatest

Least

No data
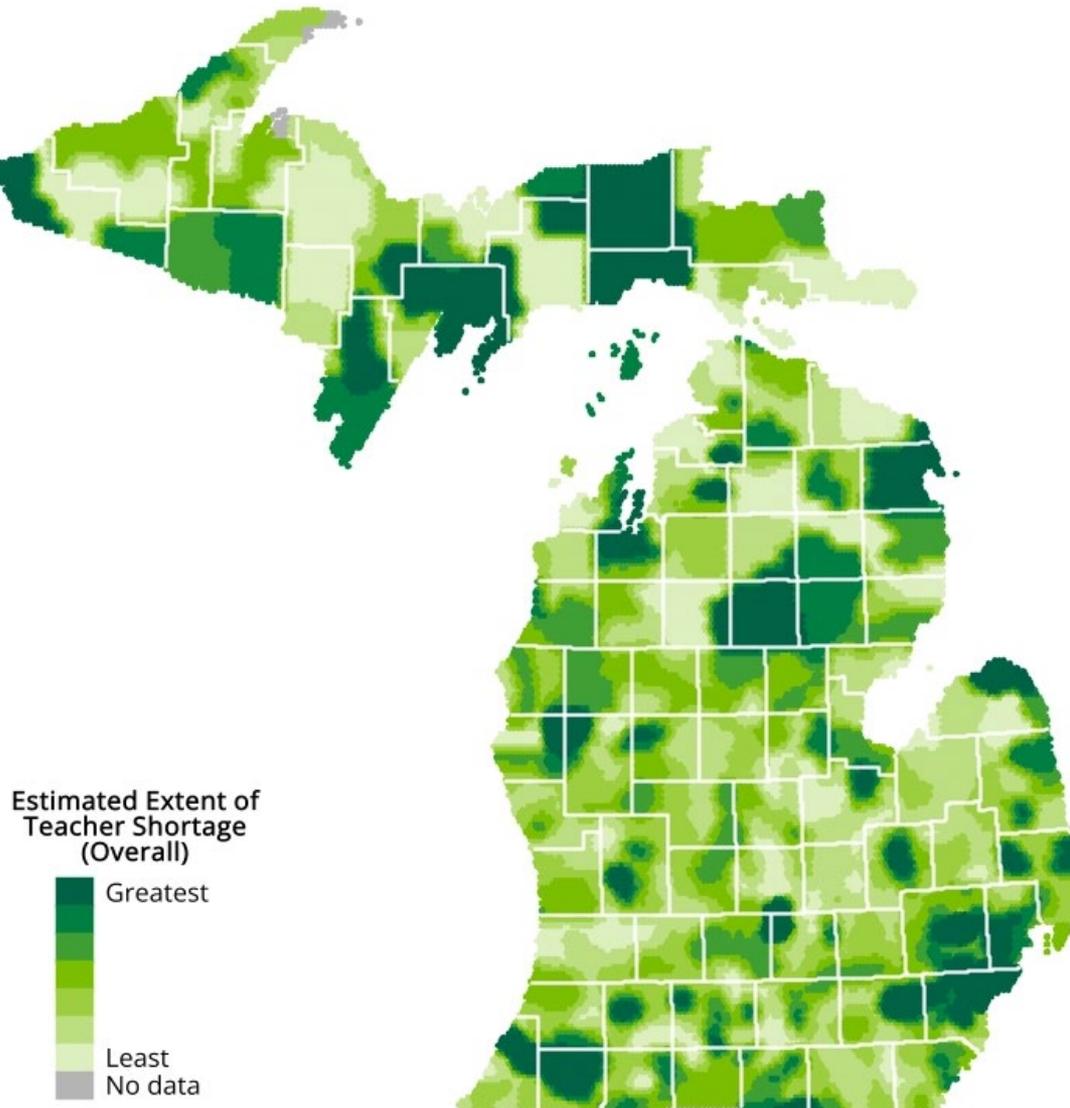
The 20% of districts with the most severe teacher shortages…

Serve more diverse student populations:

- On average, **students of color** make up 52% of the students in these districts, compared to 24% for the average MI district.

- 74% of students in these districts are **economically disadvantaged**, compared to 55% for the average MI district.

Are in communities with large charter sectors:

- 21% of students who live in high-shortage districts **attend charter schools**, compared to 6% in the average MI district.

Key Takeaways & Policy Implications

EARLY-CAREER TEACHERS

With teachers entering *and* leaving the profession at record-high rates, new teachers make up a larger part of the workforce than ever before. **Focusing on supporting and retaining these teachers will be critical in the coming years.**

MEETING LOCAL NEEDS

Teachers tend to work in communities near or like their own hometowns, student teaching placements, and preparation institutions. **Target recruitment efforts, clinical placements, and university partnerships to bring teachers to the communities that need them most.**

HARD-TO-STAFF POSITIONS

Shortages of special education teachers are a pervasive and persistent problem in Michigan. **To improve retention, consider strategies that address the increased responsibilities associated with these positions.**

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