May 31, 2025

Education Data Tools for Journalists

EWA National Seminar 2025 – St. Louis

URBAN INSTITUTE · ELEVATE · THE · DEBATE

Questions come from many audiences about ed data.

- State legislator: How has the number of public schools offering prekindergarten programs changed over the last 10 years? How does my state compare with neighboring states?
- Equity advocate: How much state funding does my city's school district receive, how does it compare with surrounding districts, and how has that changed over the last five years?
- Parents: How have test scores changed at schools in my community since the Covid-19 pandemic?

AP WORLD U.S. POLITICS SPORTS ENTERTAINMENT BUSINESS SCIENCE FACT CHECK ODDITIES MORE

EDUCATION

Trump restricts federal research funding, a lifeblood for colleges

1 of 2 | A New York City police officer keeps watch on the campus of Columbia University in New York, Monday, May 6, 2024. (AP Photo/Seth Wenig, File)

BY SHARON LURYE AND JOCELYN GECKER
Updated 9:29 AM EDT, March 28, 2025

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Feds' crackdown on Chinese student visas could hit WashU the hardest in Missouri

CHALKBEAT TENNESSEE COMMUNITIES JOBS BOARD

At a grim time for math test scores, these districts buck the trend

By Steven Yoder, The Hechinger Report | April 28, 2025, 6:00am EDT

Education data in the wild

- Data are generally at most two of:
  - (very) useful
  - (very) easy to get
  - (even the slightest bit) clean

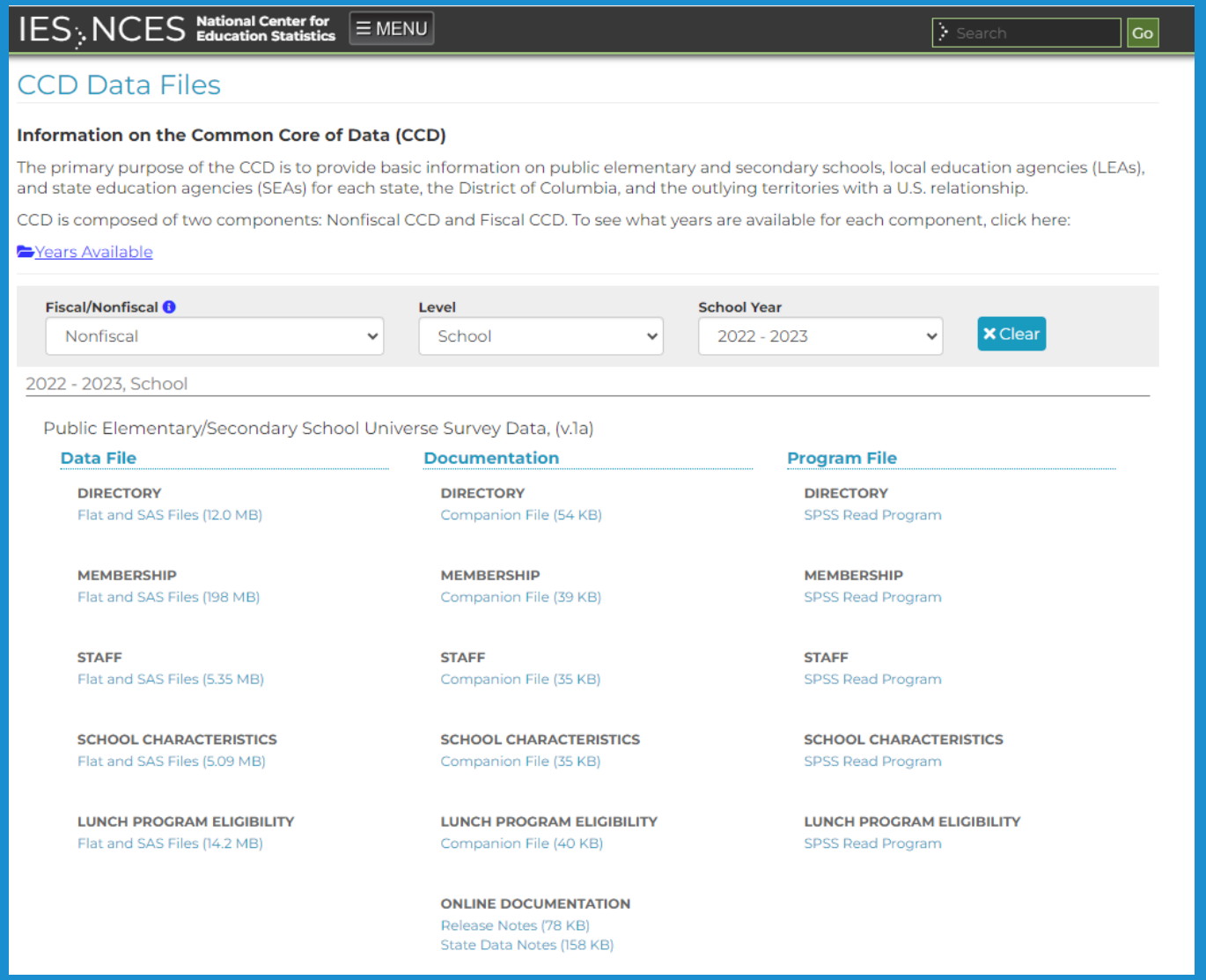
- Federally collected (ED, Census, etc.) data are in the sweet spot
  - Pretty useful, pretty easy to get, and pretty clean
  - Can’t do large scale longitudinal work
  - There are still LOTS of great research questions to ask from them
  - The only census-level data about (public) education in the US

The Feds collect A. LOT. OF. DATA

But people have to work a bit to get the answers.

- Look for the data you need
  - Start with knowing what data even exist
- Find out you need four datasets from two websites formatted three different ways
- Combine data sets and make it harmonized across years

Some data wrangling…



OK maybe a LOT of data wrangling…

Civil Rights Data Collection
Office for Civil Rights
U.S. Department of Education

About | Explore the Data | Publications | Search by school, district, or state

Data File Downloads

Collected Year	State and National Data	Downloadable Data Files	CRDC School Survey Form	CRDC District Survey Form	Data File User's Manual	Data Notes	Data Definitions	Data Notes Appendix
2023-24			Download	Download				
2021-22			Download	Download			Download	
2020-21		Download	Download	Download	Download		Download	Download
2017-18	Download	Download	Download	Download	Download	Download	Download	Download
2015-16	Download	Download	Download	Download	Download	Download	Download	Download

The Education Data Portal solves those problems.

- One-stop-shop for all major national datasets on schools, districts, and colleges
- Contains everything the federal government knows about every school, district, and college
- Launched in 2018 and updated quarterly, now with 120+ datasets harmonized across sources and over time
- Remains available even when the federal government shuts down

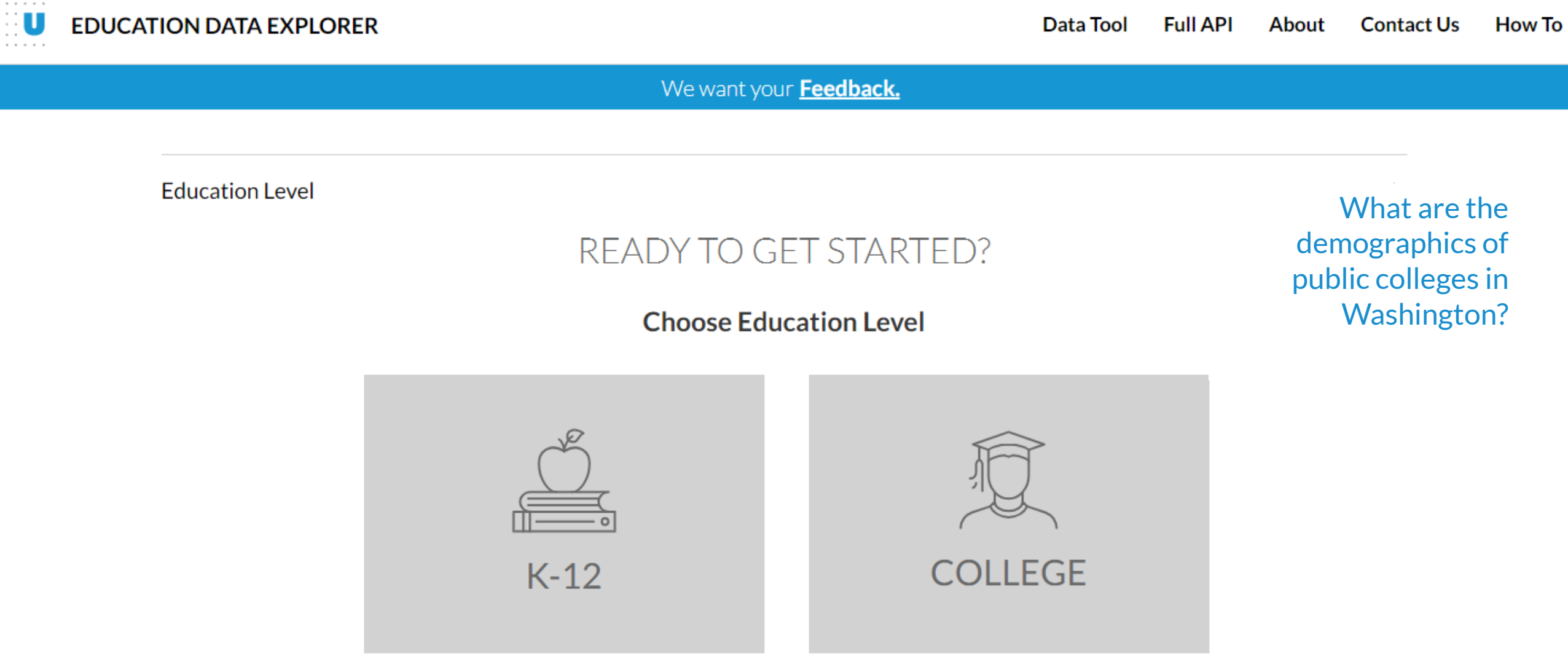
People use it a lot and it accommodates different audience needs.

- 2,000+ monthly users and 10,000+ monthly requests
- Finding out about our users
  - Researchers: Stata and R packages for more technical users (researchers)
  - Advocates, journalists, funders: Data Explorer for less technical users
- All powered by an Application Programming Interface (API)
  - We update one database and all tools update automatically
  - Empowers users to get just the data they need
  - Allows anyone to develop their own app or data tool using the Portal

So what's it like to use the Education Data Portal?

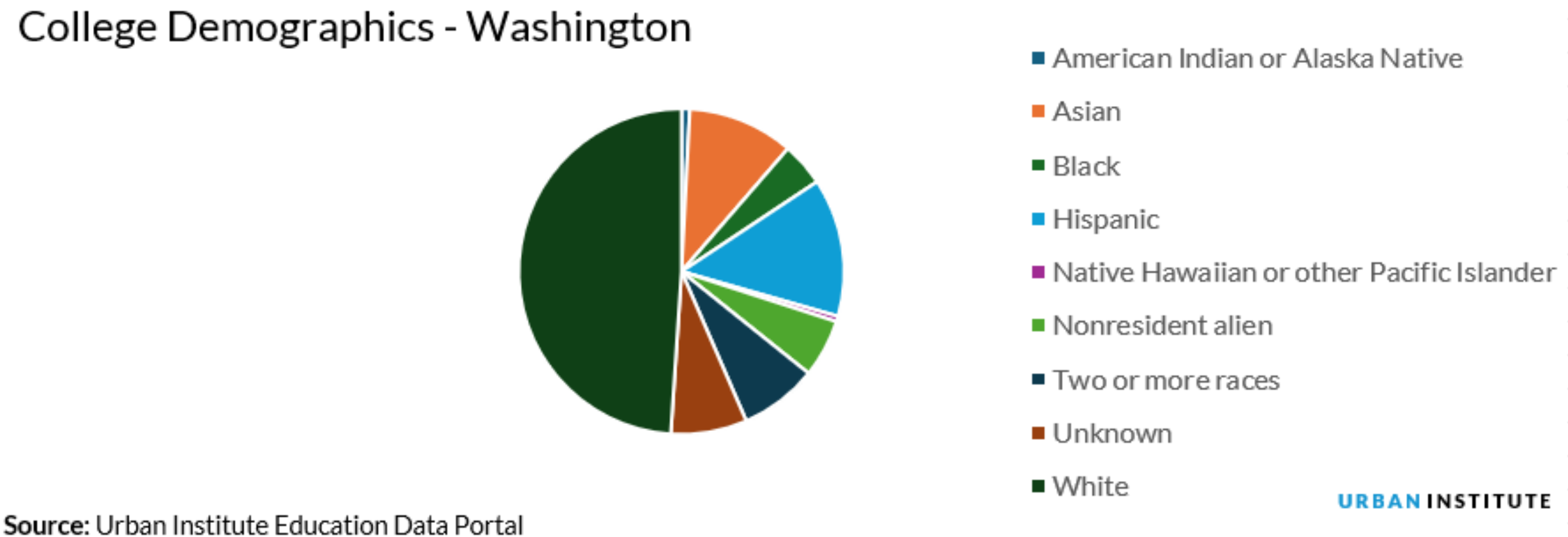
- Types of questions to ask with the Portal
  - What are the demographics of public colleges in Washington?
  - How many Black college graduates in Maryland received degrees in education?
  - How many teachers are there in DC, Virginia, and Maryland public schools?
  - Where should I go to recruit underrepresented minority women in computer science?

We can get quick answers using the Explorer Tool.



What are the demographics of public colleges in Washington?

What are the demographics of public colleges in Washington?

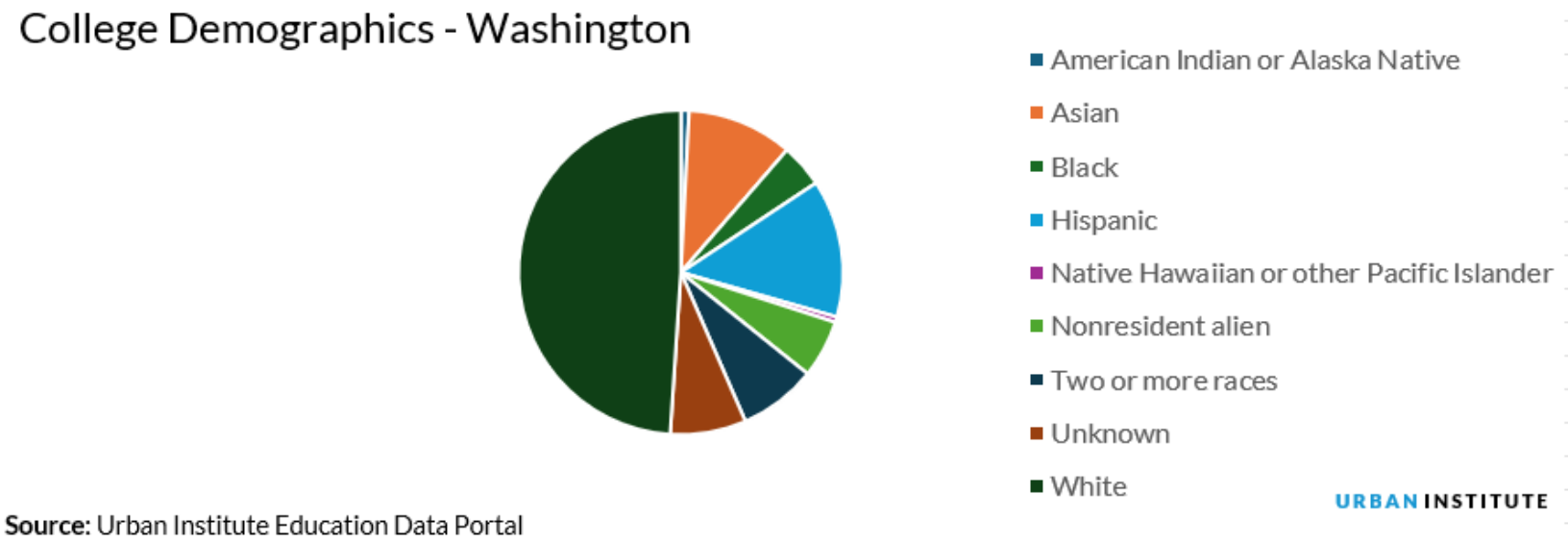


Source: Urban Institute Education Data Portal

Using data from the Portal and Excel took minutes rather than hours.

- Why
  - One place to search
  - Plain language category names
  - Data cleaned and harmonized

What are the demographics of public colleges in Washington?



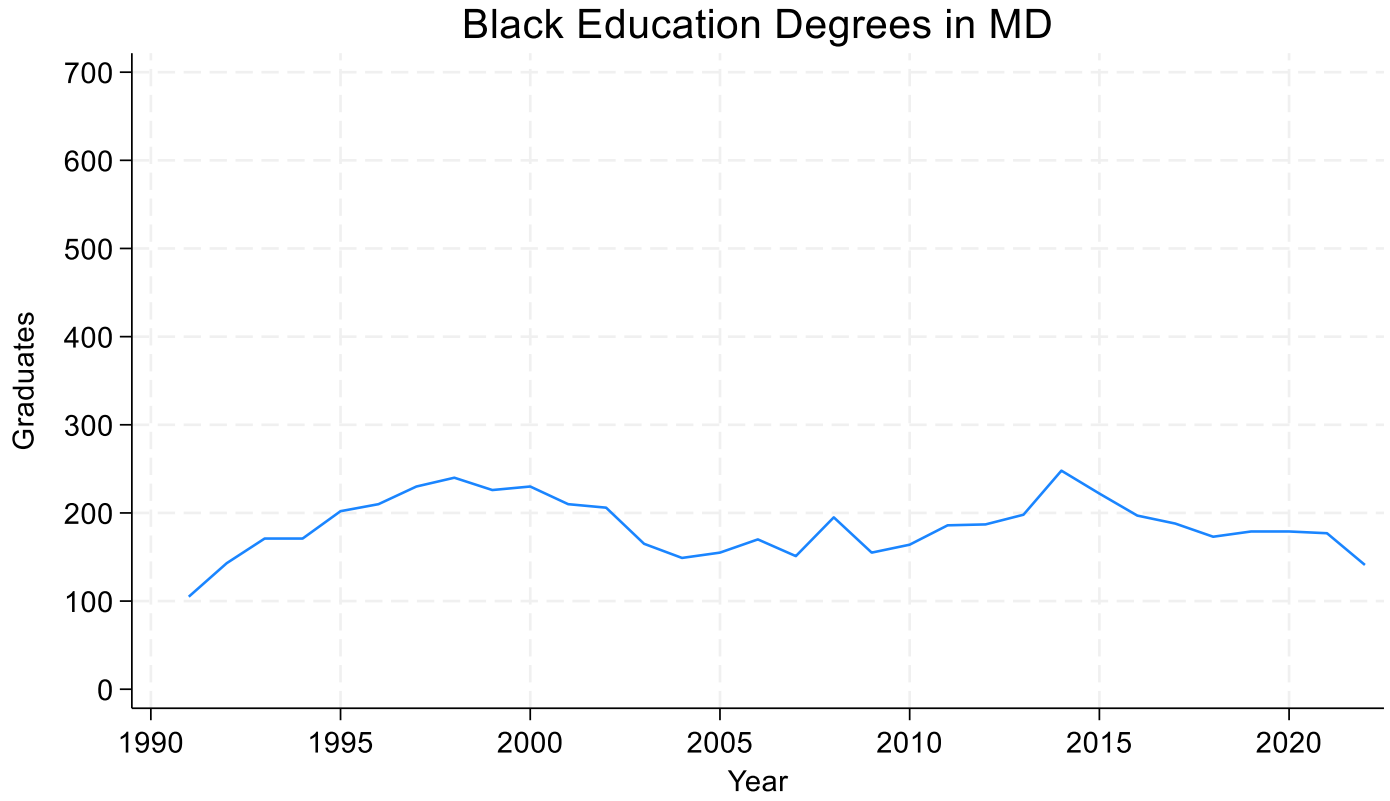
Source: Urban Institute Education Data Portal

What if you love coding? You can write two lines of code and be done.

- How many Black college graduates in Maryland received degrees in education?

```
educationdata using "college ipeds completions-cip-2",
summaries(sum awards by year) sub(cipcode=130000
award_level=7 majornum=1 sex=99 race=2 fips=24) clear

twoway line awards year, title("Black Education Degrees
in MD") xlabel(1990(5)2020) ylabel(0(100)700) ytitle(
"Graduates") xtitle("Year")
```

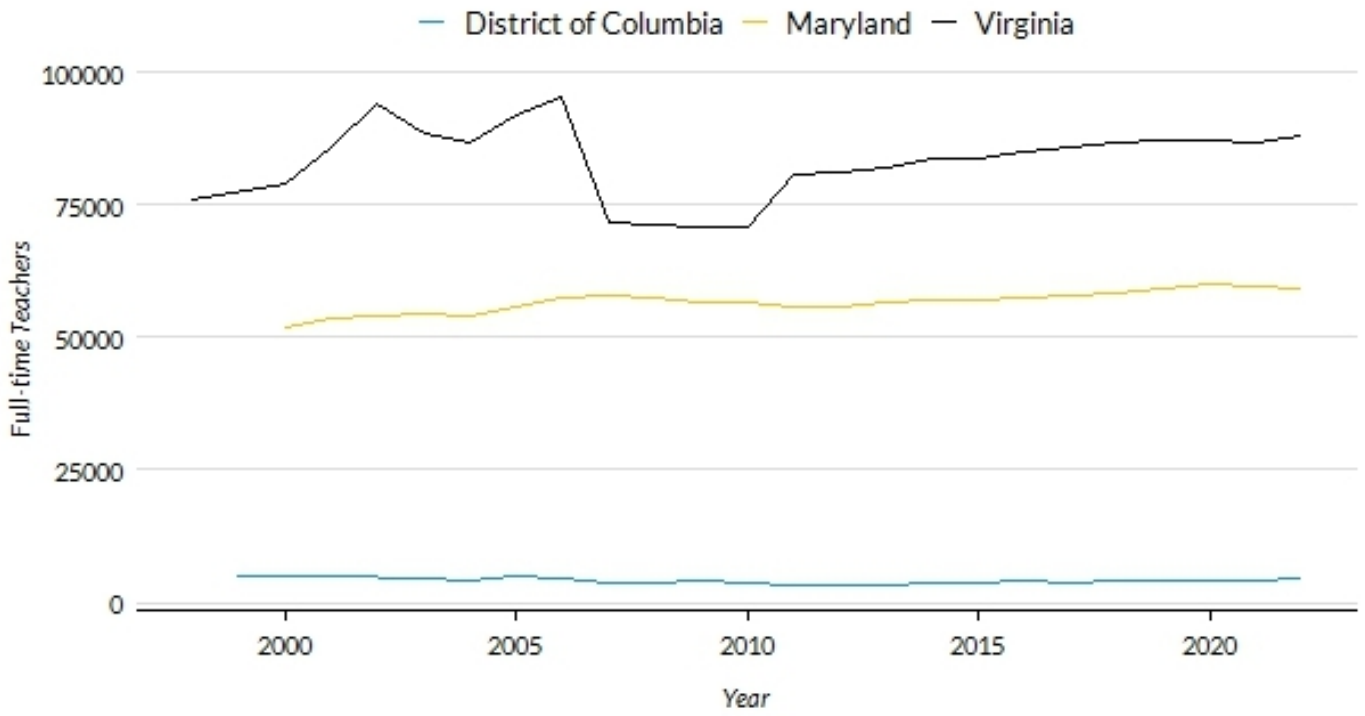


What if you love coding? Maybe it's a few more than two in R…

- How many teachers are there in DC, Virginia, and Maryland public schools?

```r
df <- get_education_data_summary(
  level = "schools",
  source = "ccd",
  topic = "directory",
  stat = "sum",
  var = "teachers_fte",
  by = "fips",
  filters = list(
    charter = 0,
    fips = c(11, 24, 51)
  )
)

# Plot
p <- ggplot(df, aes(x=year, y=teachers_fte, col = fips))
  geom_line()
p
p1 <- p + labs(x="Year", y = "Full-time Teachers")
p1
```



FEATURE

Explore Your School's Changing Demographics

Matthew Chingos, Christina Baird, Alice Feng, David Hinson, Emily Peiffer

January 29, 2020

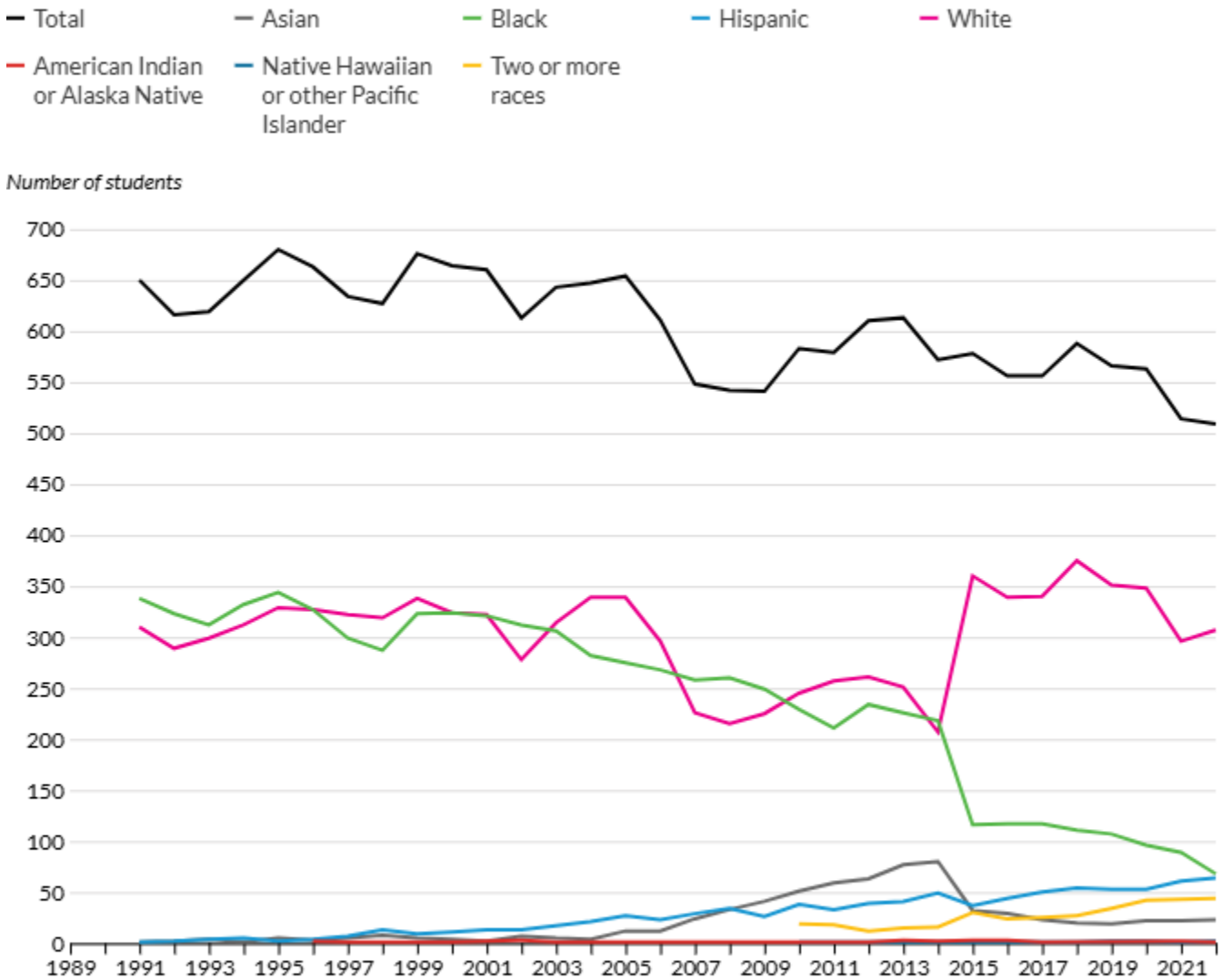
US schools have become more racially and ethnically diverse over the past few decades, but these changes have played out differently across the country. Understanding a school's demographics can inform conversations around school segregation, redistricting, funding, and equity.

Search for your PK–12 school (prekindergarten through 12th grade) to see how student enrollment by race or ethnicity has changed.

North Carolina

Grover C Fields Middle, New Bern, NC

Enrollment in Grover C Fields Middle



URBAN INSTITUTE

Source: Education Data Portal (Version 0.6.0), Urban Institute, Center on Education Data and Policy, https://educationdata.urban.org/documentation/, US Department of Education Common Core of Data.
Notes: This tool includes all PK–12 public schools that were open in the 2016–17 school year. Before 2008, the "Native Hawaiian or other Pacific Islander" category was included in the Asian grouping. Not all US schools were required to report these seven racial or ethnic categories until the 2010–11 school year, so the year when certain demographic groups first appear varies.

Even with the Portal, there are still some barriers for users, especially non-research users

- You still must
  - Make meaning out of Excel data to understand trends or comparisons
  - Visualize the data yourself if numbers don't immediately communicate what you need
  - Put in some work to pair educational and economic opportunity data with the system conditions that contribute to these outcomes

The E-W Framework Data Tool solves THOSE problems.

- Based on Gates/Mathematica Education to Workforce Indicator Framework
- An accessible, easily digestible resource to see data on these metrics, all using available federal data
- Allows users to explore data on both outcomes and system conditions at the state county and census tract level, offering a more complete picture of the conditions that help or hinder students' success in their journeys from early education through the workforce in their specific communities.
- Provides users and stakeholders with deidentified data that is shareable, enabling collaboration between community-based organizations and the communities they serve.

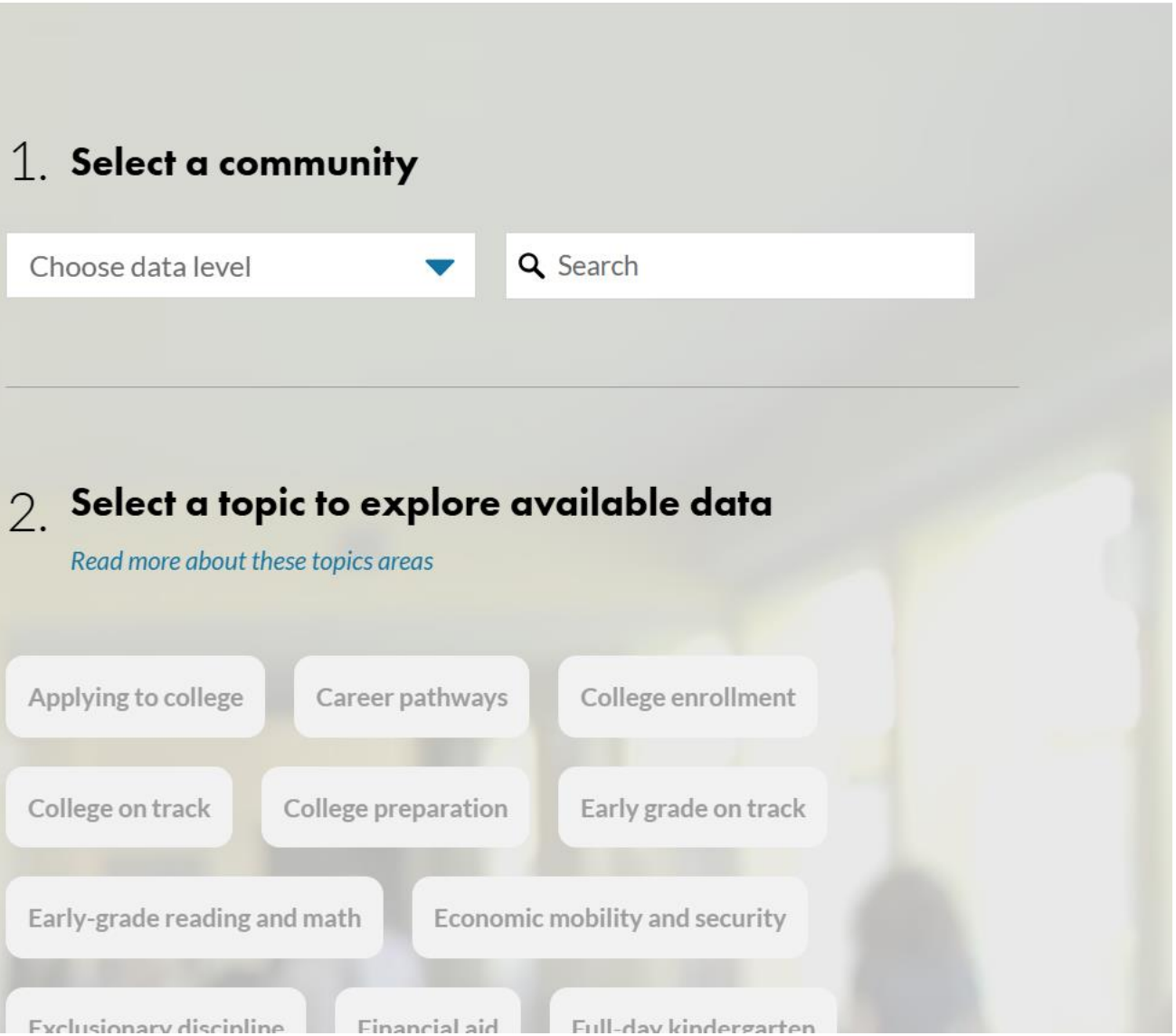
Education-to-Workforce
INDICATOR FRAMEWORK

The Education-to-Workforce Framework Data Tool

Download Data

The pathway through school and into the workforce requires people to navigate a complex network of opportunities and environments. Students moving through this process need to hit key milestones and have access to resources and experiences that enable them to be successful.

The Education-to-Workforce Indicator Framework makes it easy to track the outcomes and conditions most critical to students' success. Through its 99 indicators, the framework



GEOGRAPHY

St. Louis County, Missouri

ESSENTIAL QUESTION

Early-grade reading a...

TIME FRAME

Most recent year only

Select a comparison geography

Are students in St. Louis County, Missouri meeting reading and math benchmarks in grades 3 and 8?

As of 2022, St. Louis County, Missouri had **Population:** *999,703* **Median income:** *$78k* **Total households:** *257,856* **College educated:** *46%*

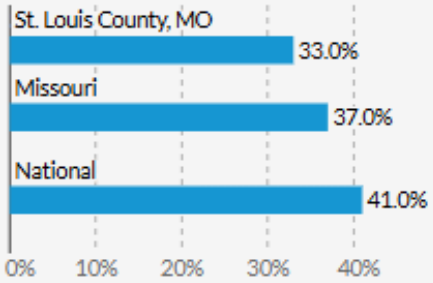
Show demographic breakdowns

12 metrics across 3 indicators of success have available data

Download all chart images

MATH AND READING PROFICIENCY IN GRADE 3

Share of students in grade 3 who meet grade-level standards in math
2020



Source

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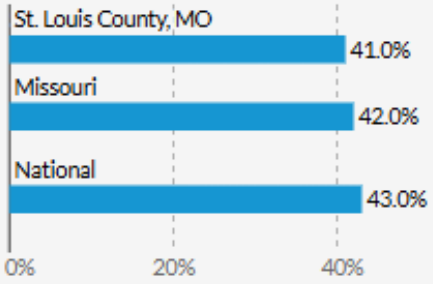
View data breakdowns

MATH AND READING PROFICIENCY IN GRADE 3

Share of students in grade 3 who meet grade-level standards in language arts
2020



Source

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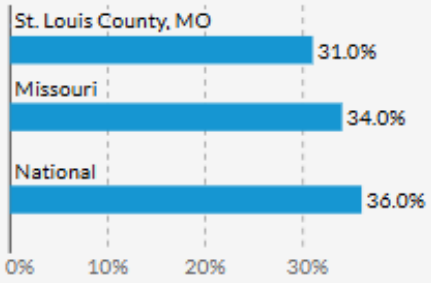
View data breakdowns

MATH AND READING PROFICIENCY IN GRADE 8

Share of students in grade 8 who meet grade-level standards in math
2020



Source

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View data breakdowns

GEOGRAPHY

St. Louis County, Missouri

ESSENTIAL QUESTION

Early-grade reading a...

TIME FRAME

Most recent year only

COMPARISON GEOGRAPHY

Clark County, Nevada

Clear selection

Are students in St. Louis County, Missouri and Clark County, Nevada meeting reading and math benchmarks in grades 3 and 8?

As of 2022, St. Louis County, Missouri had **Population:** *999,703* **Median income:** *$78k* **Total households:** *257,856* **College educated:** *46%*

Show demographic breakdowns

As of 2022, Clark County, Nevada had **Population:** *2,265,926* **Median income:** *$70k* **Total households:** *532,434* **College educated:** *26%*

Show demographic breakdowns

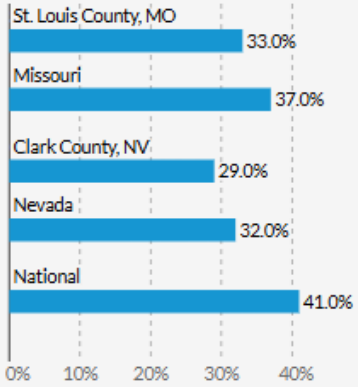
12 metrics across 3 indicators of success have available data

Download all chart images

MATH AND READING PROFICIENCY IN GRADE 3

Share of students in grade 3 who meet grade-level standards in math

2020



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Share of students in grade 3 who meet grade-level standards in language arts

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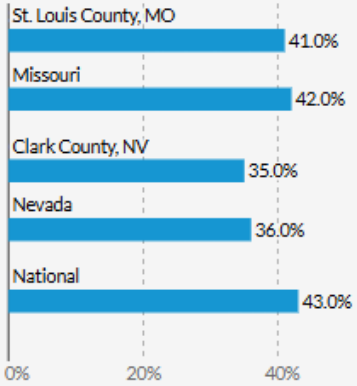

Source

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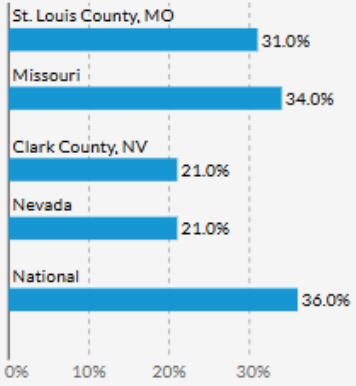
MATH AND READING PROFICIENCY IN GRADE 8

Share of students in grade 8 who meet grade-level standards in math

2020



Source

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Restart About

← Return to previous selections

Explore All Education-to-Workforce Indicators

26 metrics of success have available data

GEOGRAPHY: St. Louis County, Missouri

COMPARISON GEOGRAPHY: Clark County, Nevada

Clear selection

TIMEFRAME: Most recent year only

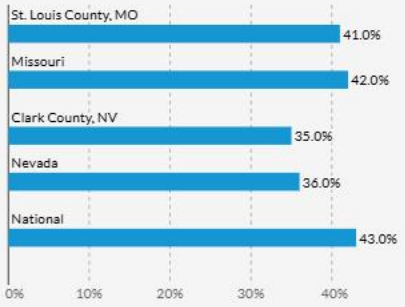
FILTER BY: Domain

- Academic Progress and Completion ×
- Career Readiness and Economic Success
- Social, Emotional, and Physical Well-being

Hide controls

Share of students in grade 3 who meet grade-level standards in language arts

2020



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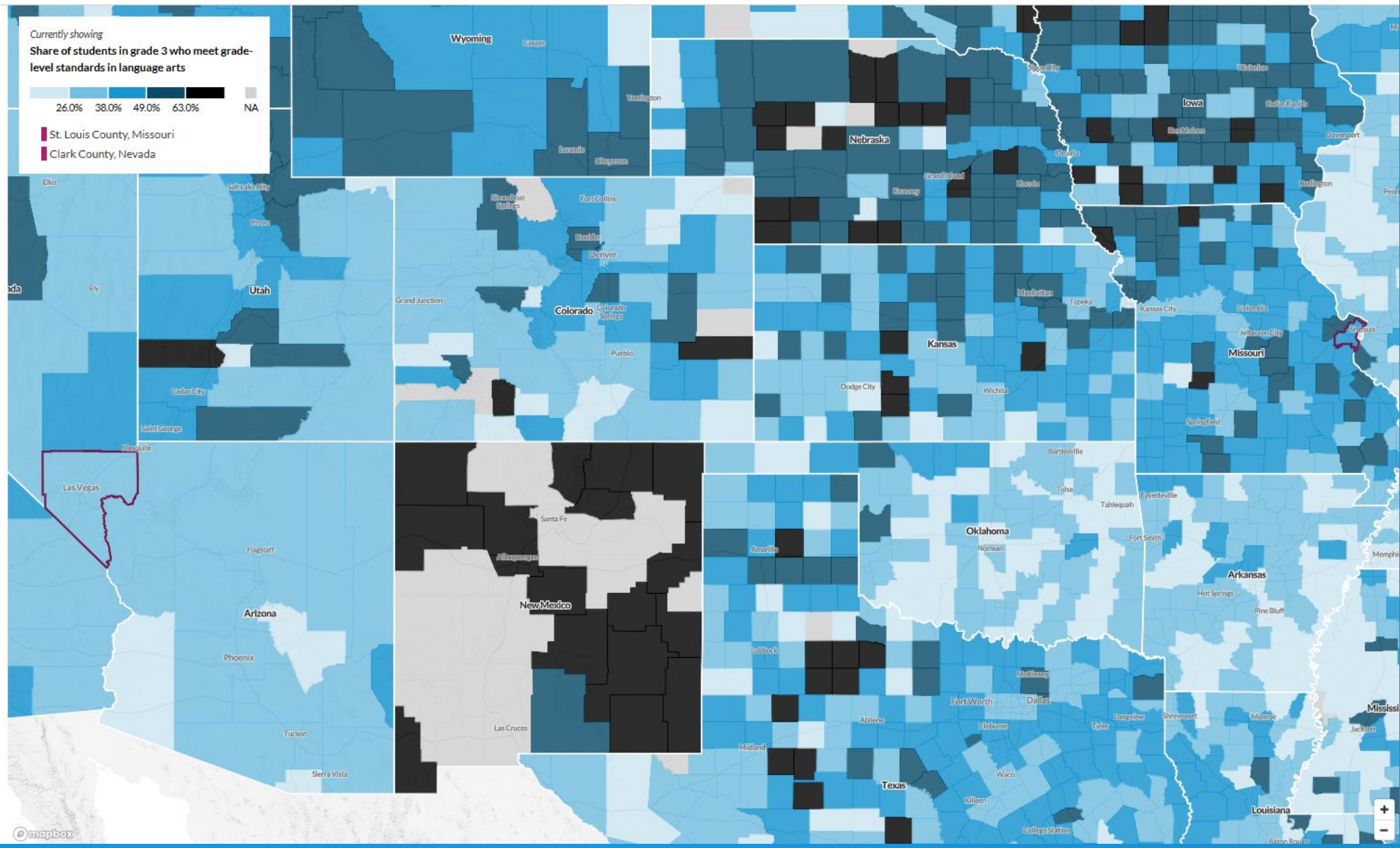

The Education-to-Workforce Framework Data Tool

Download Data

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https://apps.urban.org/features/education-workforce-framework-data/

https://www.urban.org/data-tools/explore-your-schools-changing-demographics

educationdata@urban.org

Thanks!