



The State Education Contextual Data Resource (S-ECDR)

KATRINA WALSEMANN

September 7, 2025

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Alzheimer's Association (AARG-NTF-20-684252)

National Institute on Aging (R01AG067536; K02AG075237)

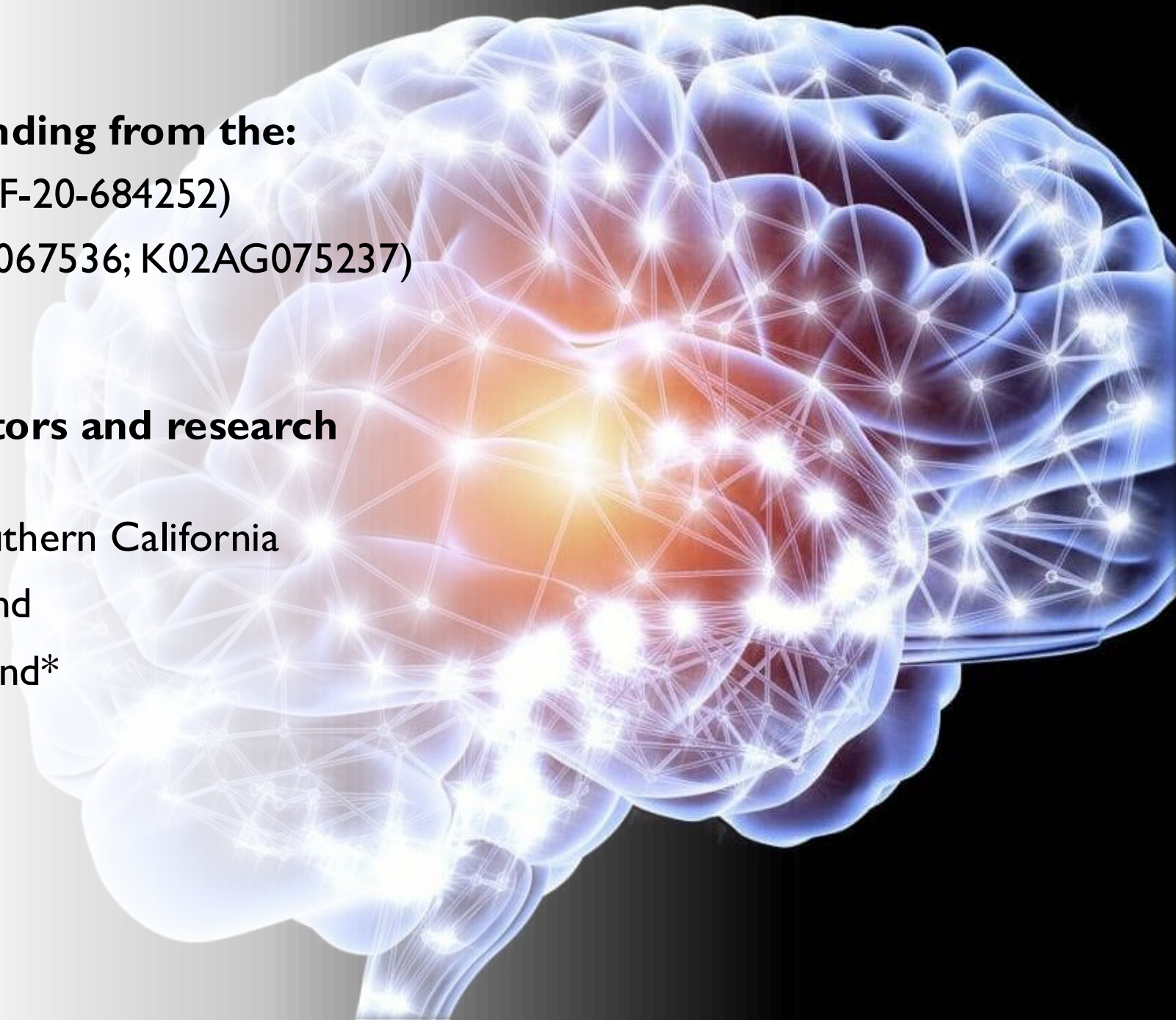
Special thanks to my collaborators and research assistants*:

Jennifer A. Ailshire, University of Southern California

Heide Jackson, University of Maryland

Emily Abbruzzi, University of Maryland*

Pallavi Tyagi, University of Maryland*



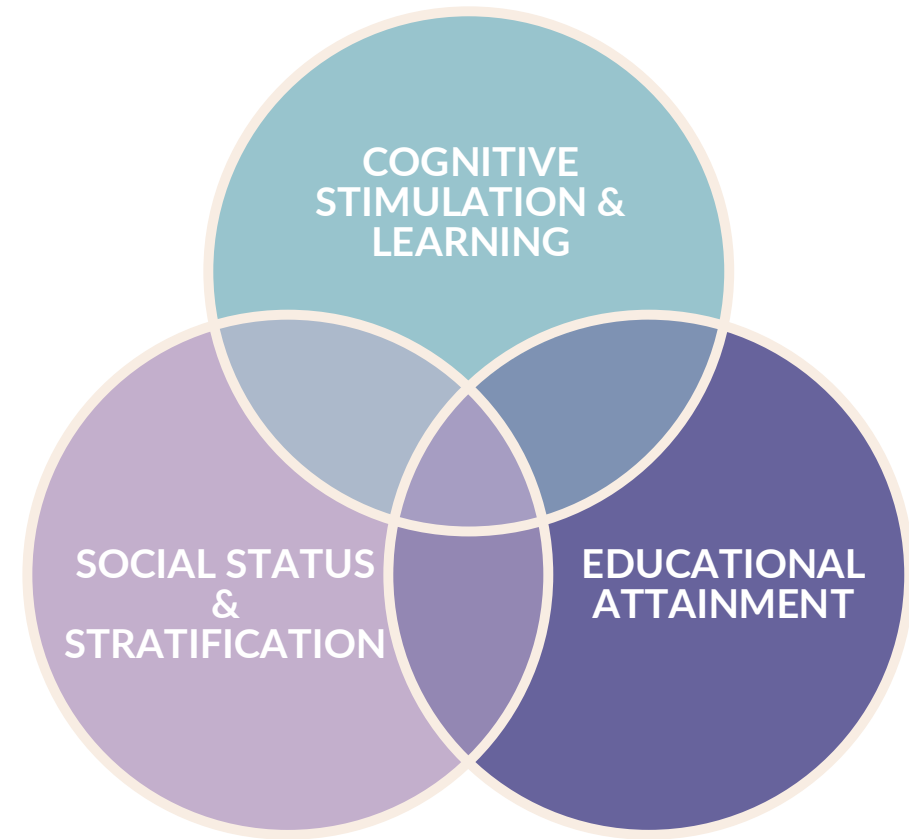
Motivation underlying creation of S-ECDR

- Education is a key determinant of life course health and healthy aging.
- But how education is measured – and what that measurement reflects – varies widely across **people, places,** and **time**.
- This matters for how we understand disparities in population aging.



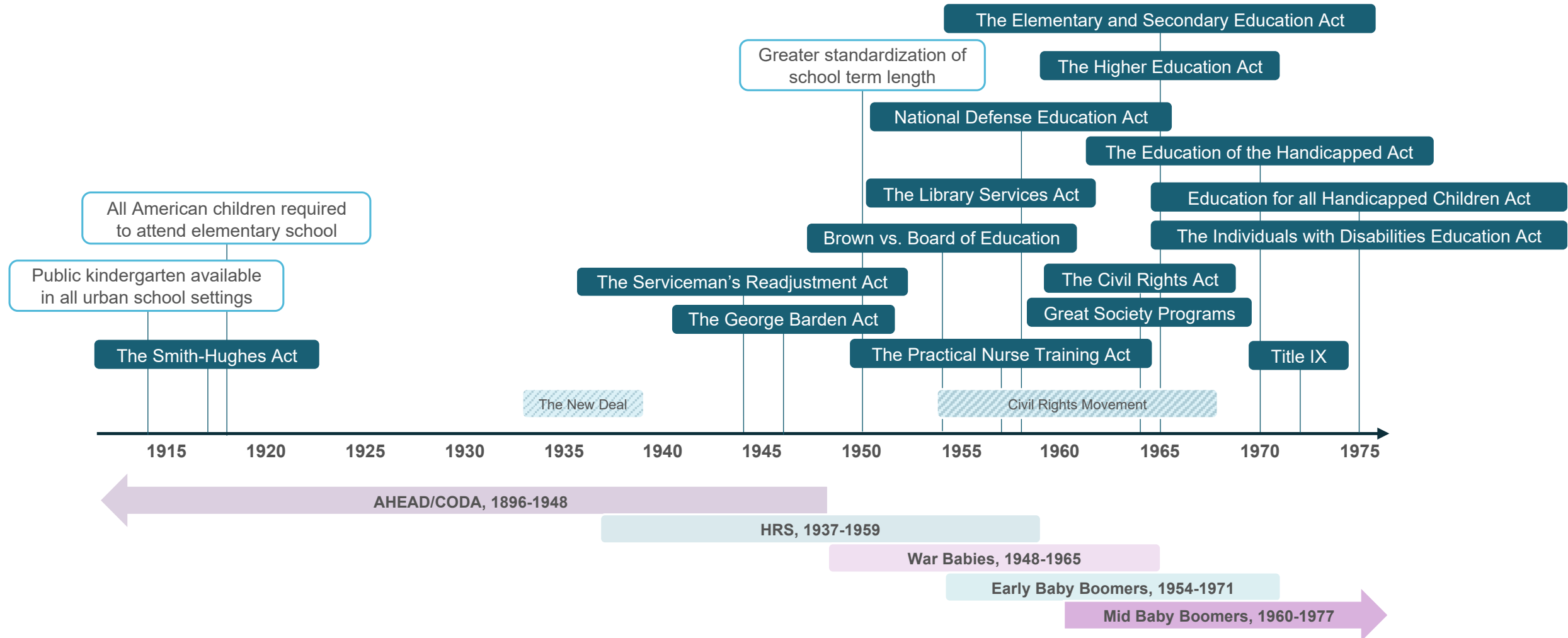
Why educational attainment measures fall short

- **Attainment** – years or degree – is most common way to assess education
- Reflects more than exposure to learning – it's shaped by **social stratification**, **policy**, and **selection**.
- Is it the **learning environment** and **resources** people were exposed to early on – or the social and economic advantages that come with higher attainment?

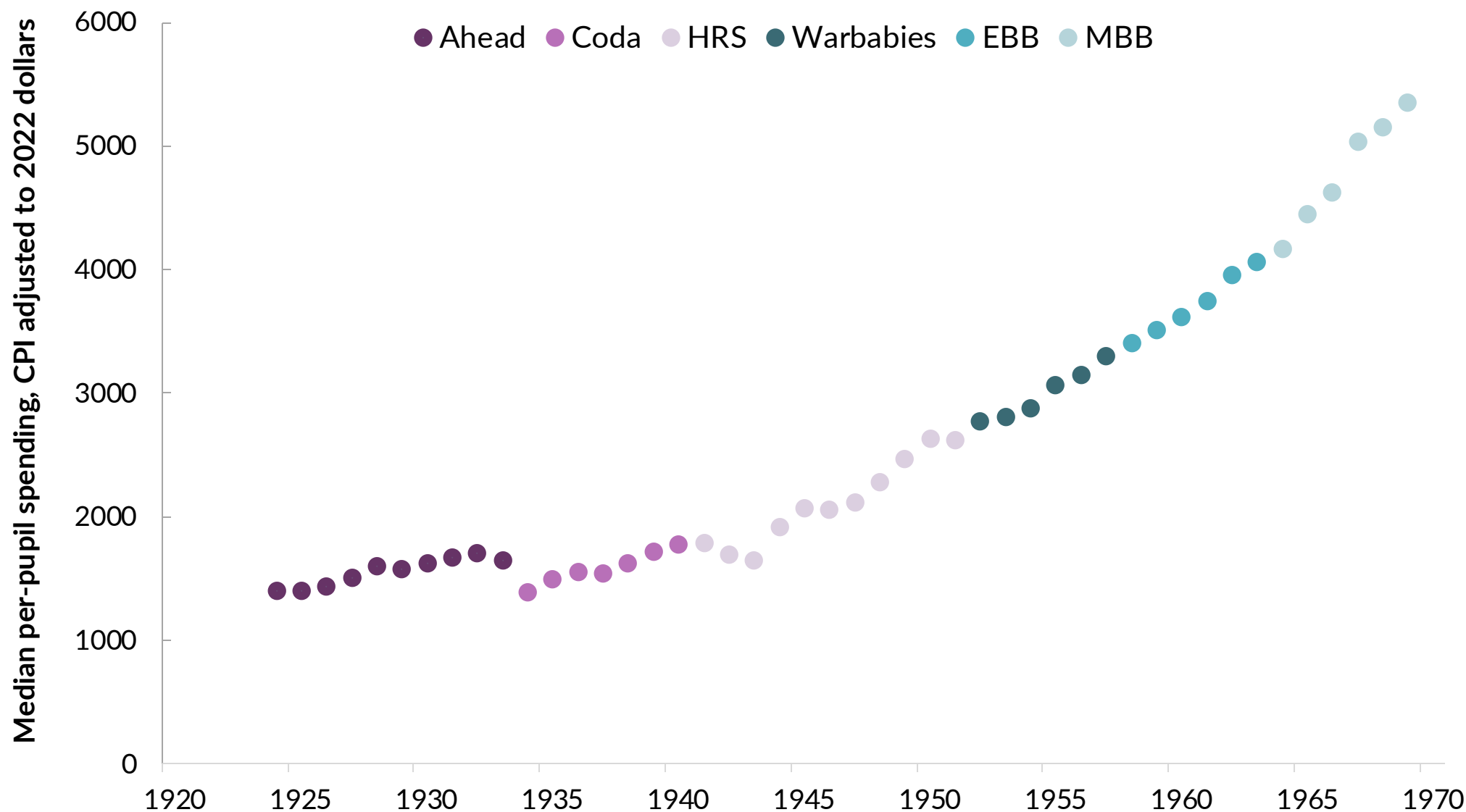


To isolate health and longevity benefits of education, we need to go back to exposure: when, where and under what conditions people learn.

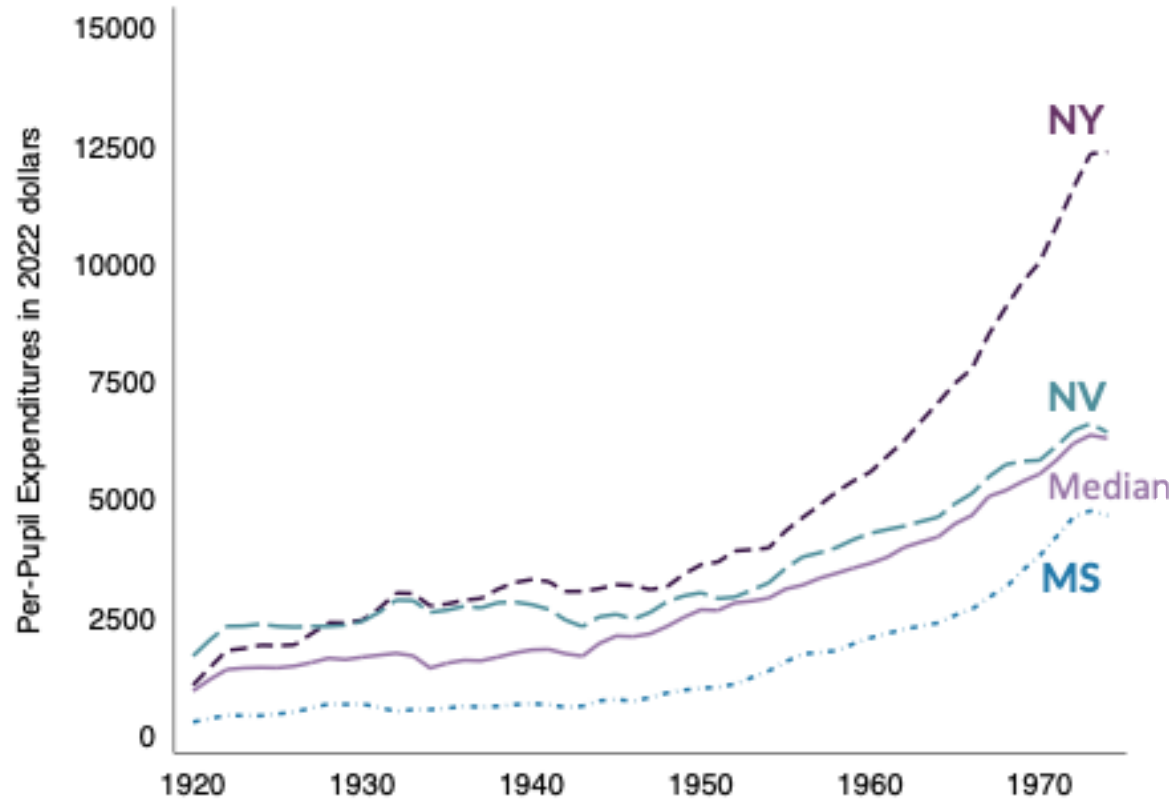
U.S. public education system changed significantly during 20th Century



More per-pupil spending in public education

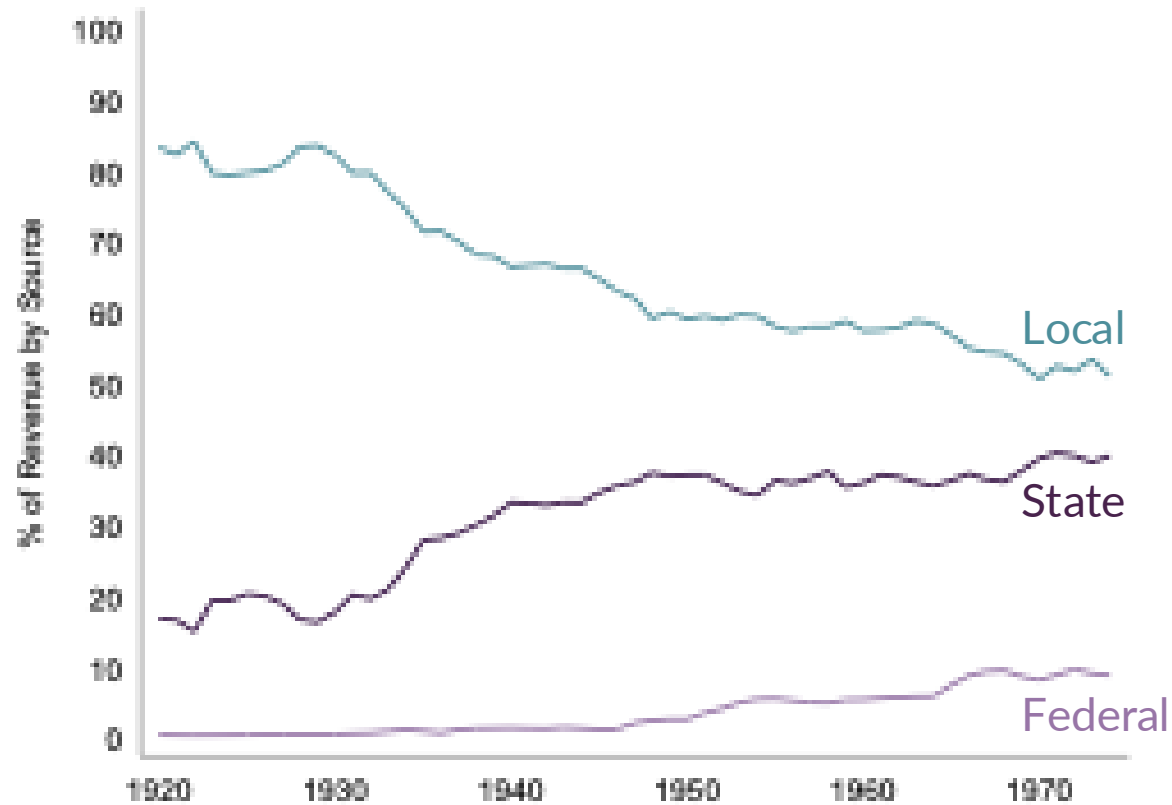


Significant **variation** in state investment in public education, 1920 – 1974



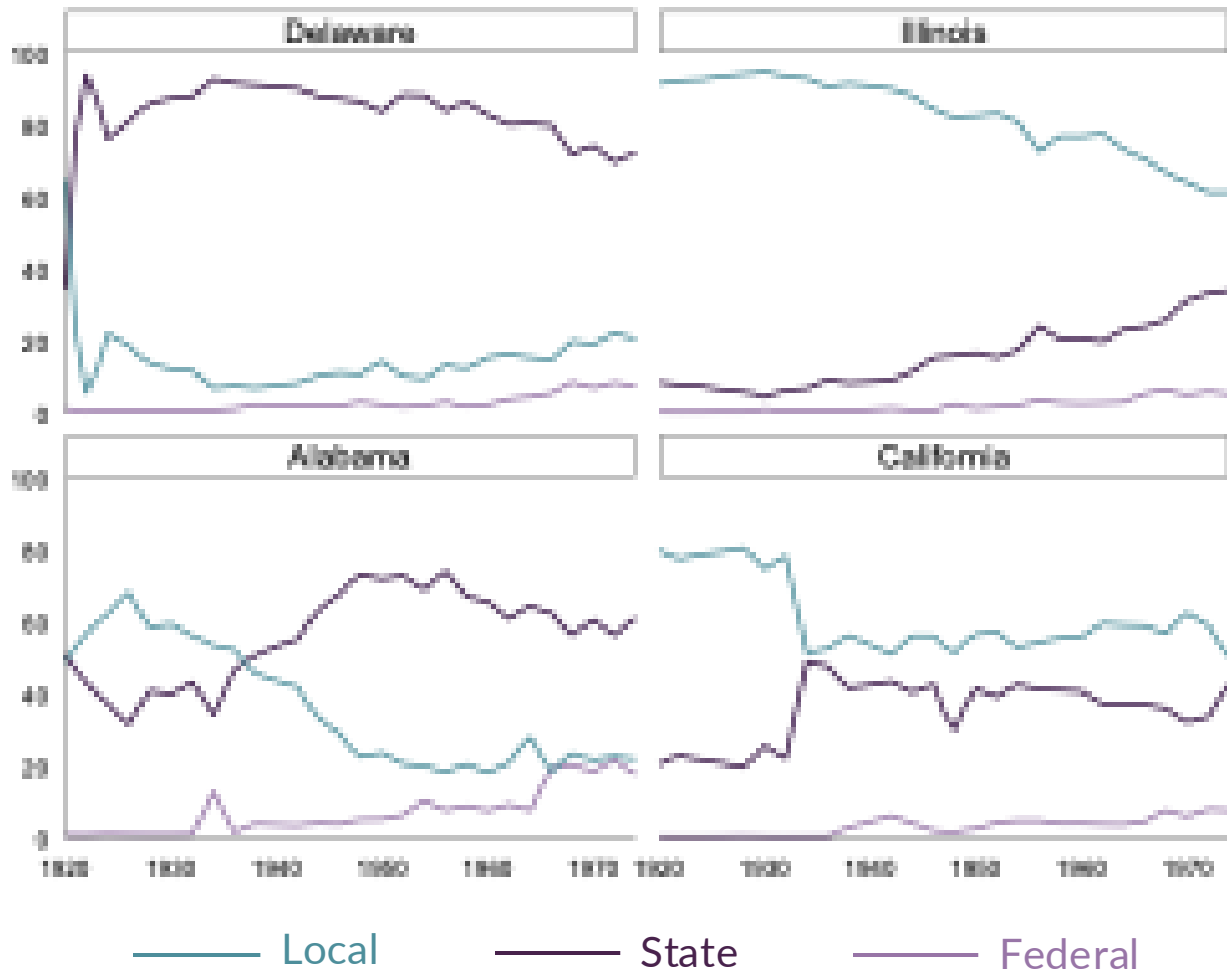
- Even among children born in the same year, school environments differed based on where they lived.
- **Mississippi** remained among the lowest-funded states throughout the period.
- **Nevada** began among the highest but declined to near median.
- **New York** started midrange and ended at the top.

Significant shifts in source of revenue receipts over time



- Early 20th century school funding largely local, tied to wealth and property taxes
- Over time, state governments assumed a larger role in school finance
- Federal investment remained minimal until the ESEA in 1965
- These changes shaped by Great Depression, postwar baby boom, and later tax revolts and equity lawsuits

Significant state **variation** in source of revenue receipts, 1920 – 1974

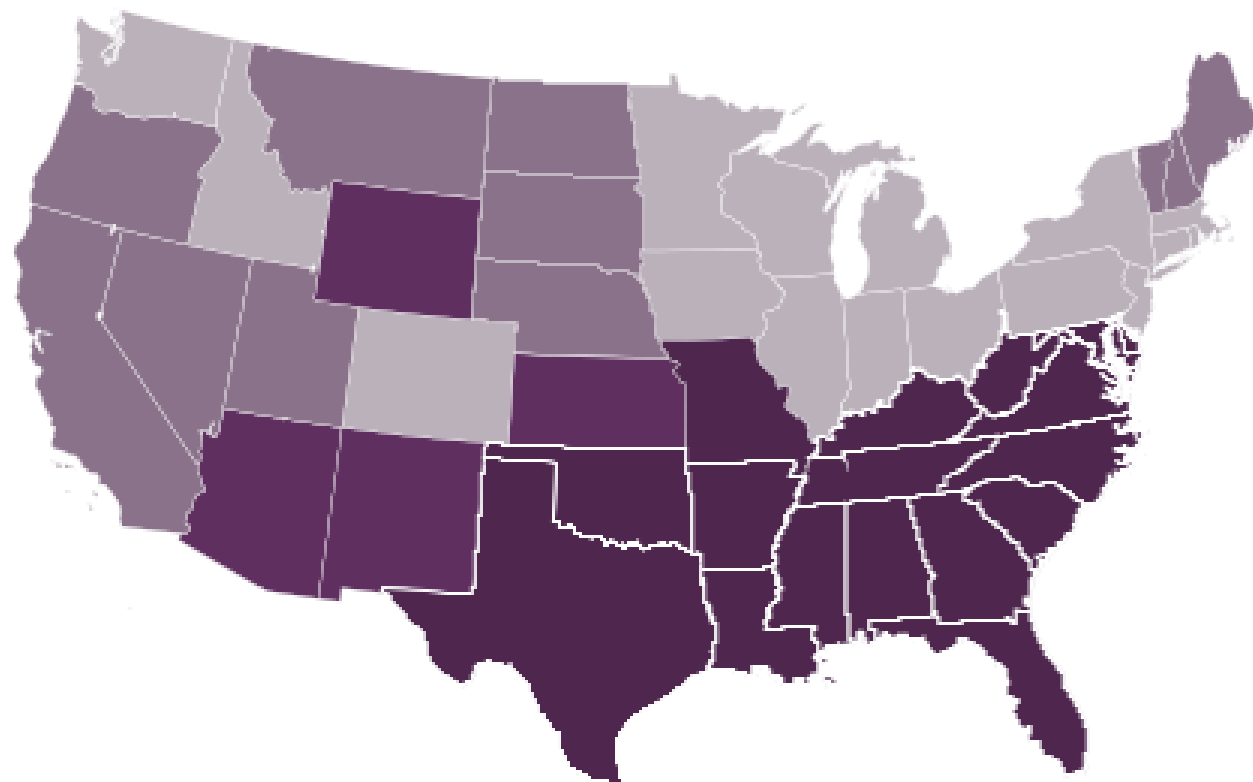


- **Delaware:** Outlier; consistently state-funded.
- **Alabama:** Southern pattern — early state reliance due to weak local tax base.
- **Illinois:** Gradual shift from heavily local to more state funding.
- **California:** Abrupt changes tied to postwar growth and tax limits.
- More state control meant more influence over curriculum, credentials, and standards.
- Funding structures shaped what education looked like, not just how much was spent.

Jim Crow-era schooling

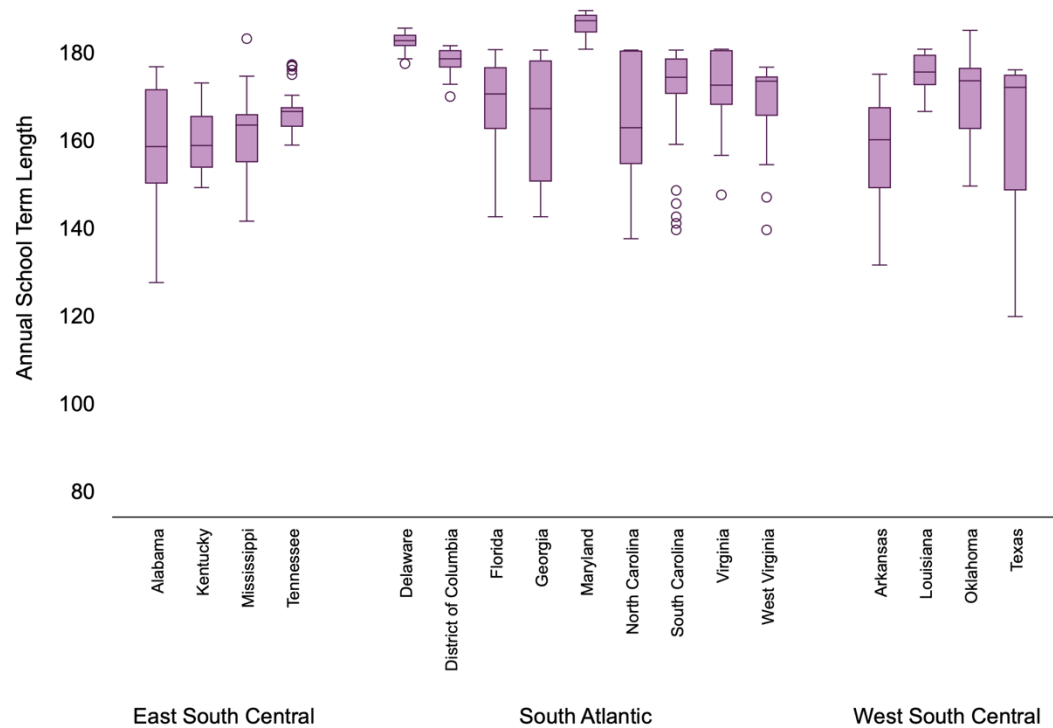
School Segregation Laws by State Prior to 1954

- Mandatory segregation
- Optional segregation
- No school segregation laws
- School segregation prohibited

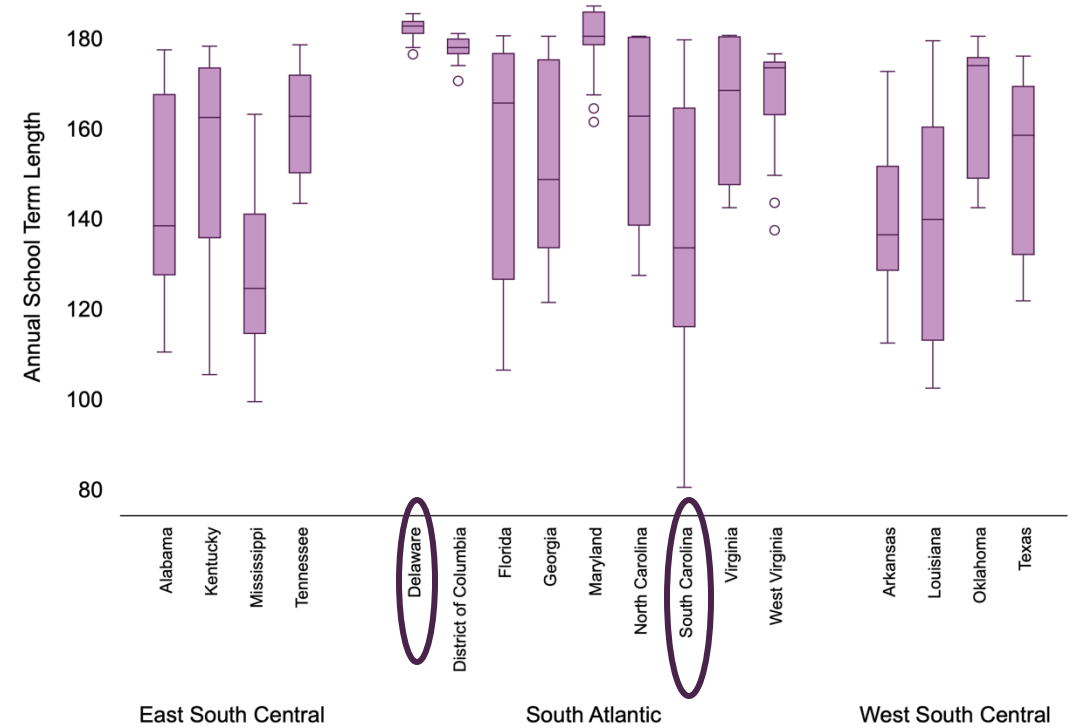


School Term Length, 1920 - 1954

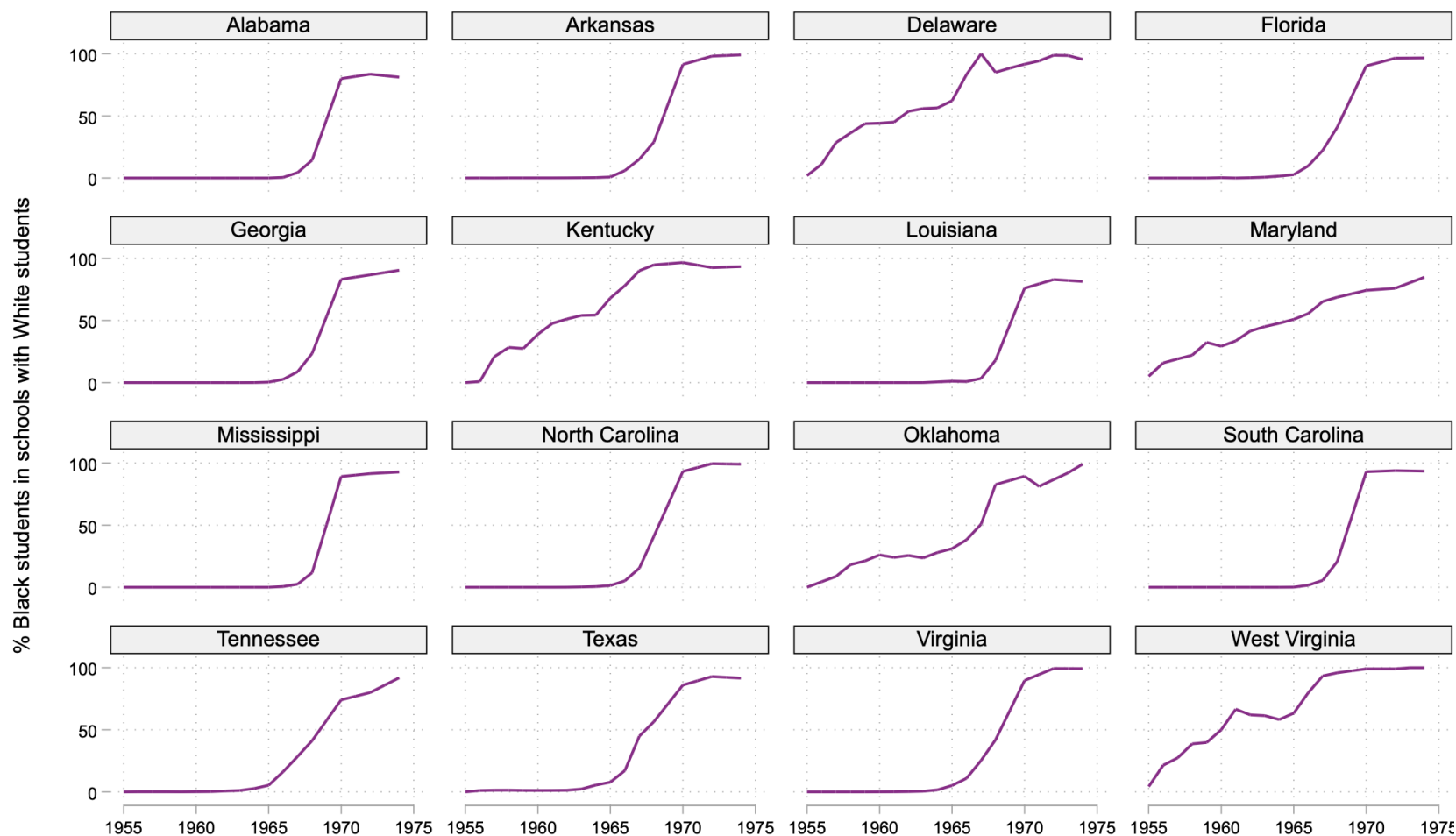
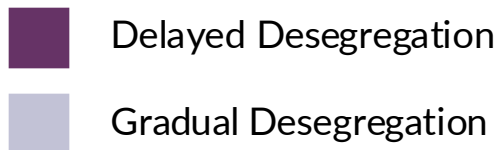
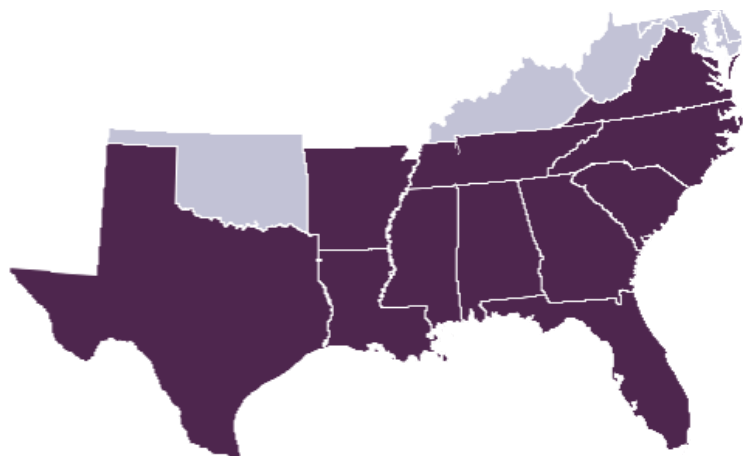
White Segregated Schools



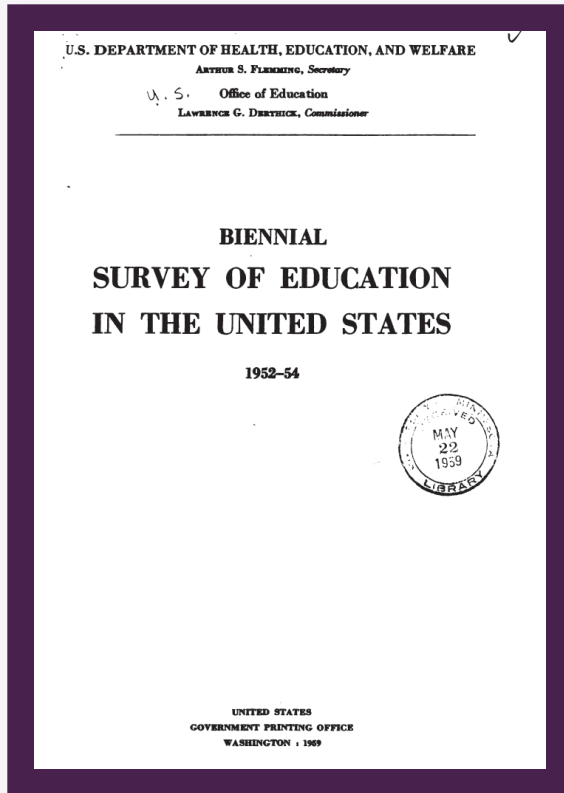
Black Segregated Schools



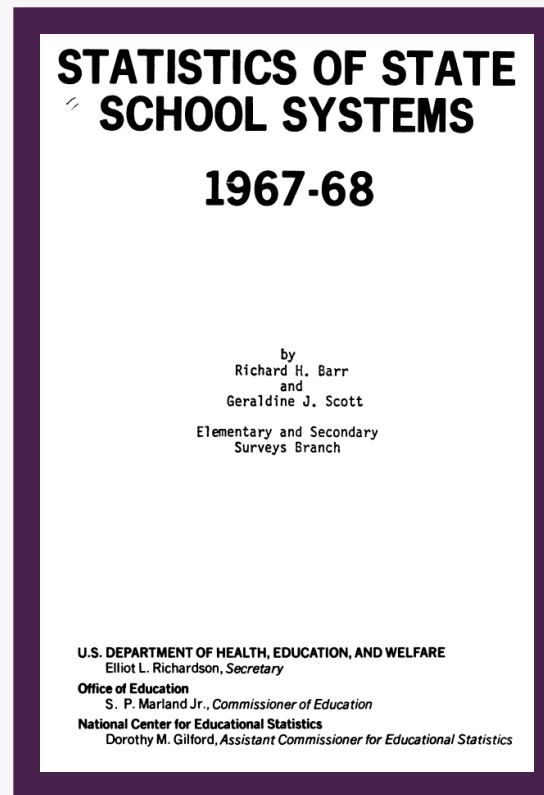
State-level school desegregation in the U.S. South post-*Brown*



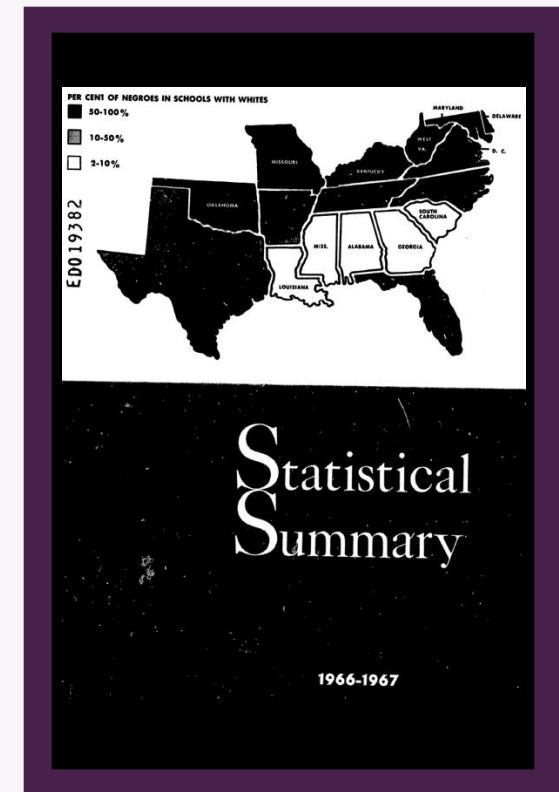
Historical Data Sources for Measuring Education Context



1919/20 – 1957/58



1959/60 – 1973/74

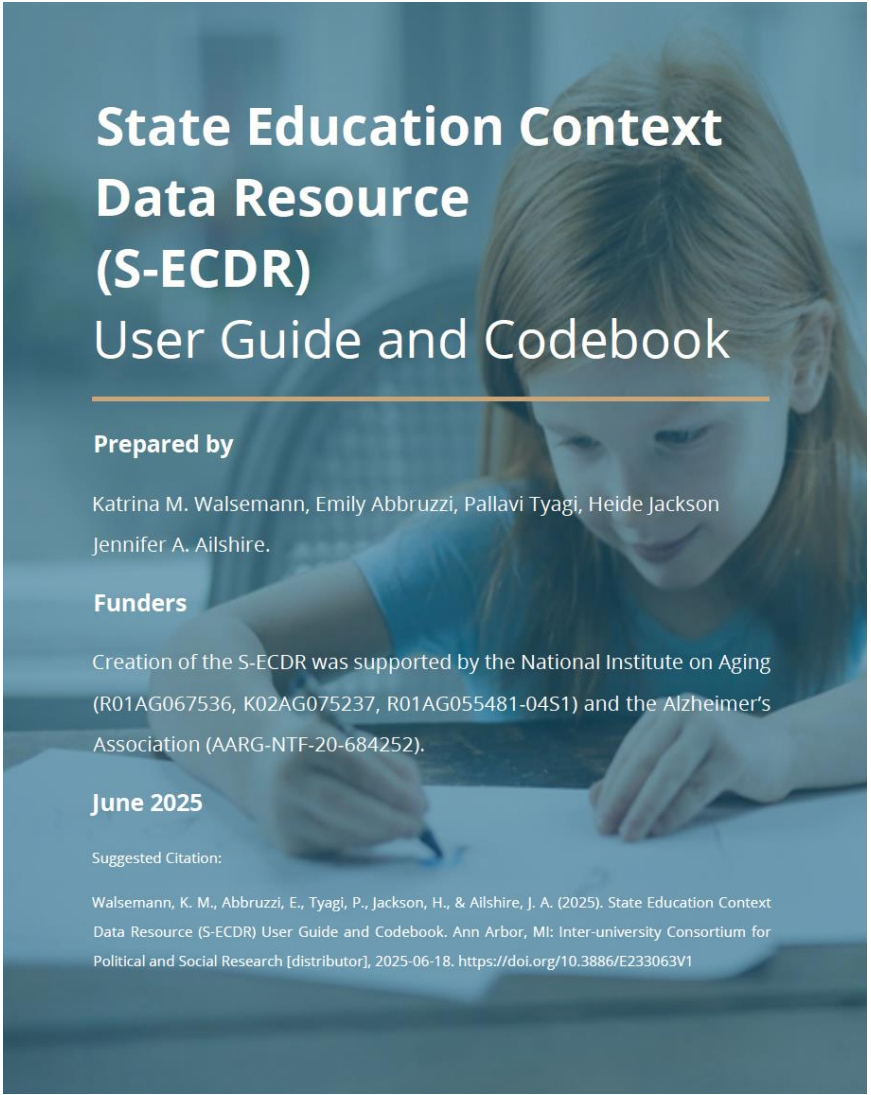


1954 – 1974

State-Level Measures Extracted from Historical Sources

- Pupil-teacher ratio*
- Teacher salary*
- Per-pupil expenditures
- Revenue composition (federal, state, local)
- Term length*
- School days attended*
- Teacher demographics*
- Student enrollment*
- School desegregation (1954-1974)

*Reported by segregated school systems in southern states (1920-1954)



State Education Context Data Resource (S-ECDR) User Guide and Codebook

Prepared by

Katrina M. Walsemann, Emily Abbruzzi, Pallavi Tyagi, Heide Jackson
Jennifer A. Ailshire.

Funders

Creation of the S-ECDR was supported by the National Institute on Aging (R01AG067536, K02AG075237, R01AG055481-04S1) and the Alzheimer's Association (AARG-NTF-20-684252).

June 2025

Suggested Citation:

Walsemann, K. M., Abbruzzi, E., Tyagi, P., Jackson, H., & Ailshire, J. A. (2025). State Education Context Data Resource (S-ECDR) User Guide and Codebook. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor], 2025-06-18. <https://doi.org/10.3886/E233063V1>

Data and Documentation

OPENICPSR

Find DataShare DataRepositories

Find Data / State Education Contextual Data Resource (S-ECDR)

State Education Contextual Data Resource (S-ECDR)

Principal Investigator(s):
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NACDAOAR

Version: V1

Name	File Type	Size	Last Modified
 SECDR_User_Guide_Codebook.pdf	application/pdf	1.8 MB	06/18/2025 06:04:AM
 SECDR_cpi.do	text/plain	2.8 KB	05/03/2025 08:10:AM
 SECDR_factor.do	text/plain	3.9 KB	06/17/2025 06:26:AM
 SECDR_impute_and_interpolate.do	text/plain	5.9 KB	06/17/2025 06:23:AM
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 days_example.dta	application/x-stata-dta	343.5 KB	05/03/2025 07:43:AM

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Walsemann, Katrina M., Abbruzzi, Emily, Tyagi, Pallavi, Jackson, Heide, and Ailshire, Jennifer A. State Education Contextual Data Resource (S-ECDR). Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor], 2025-06-18.
<https://doi.org/10.3886/E233063V1>

scientific data

OPEN
DATA DESCRIPTOR

Historical state-level data on U.S. public school systems from 1919/20 to 1973/74

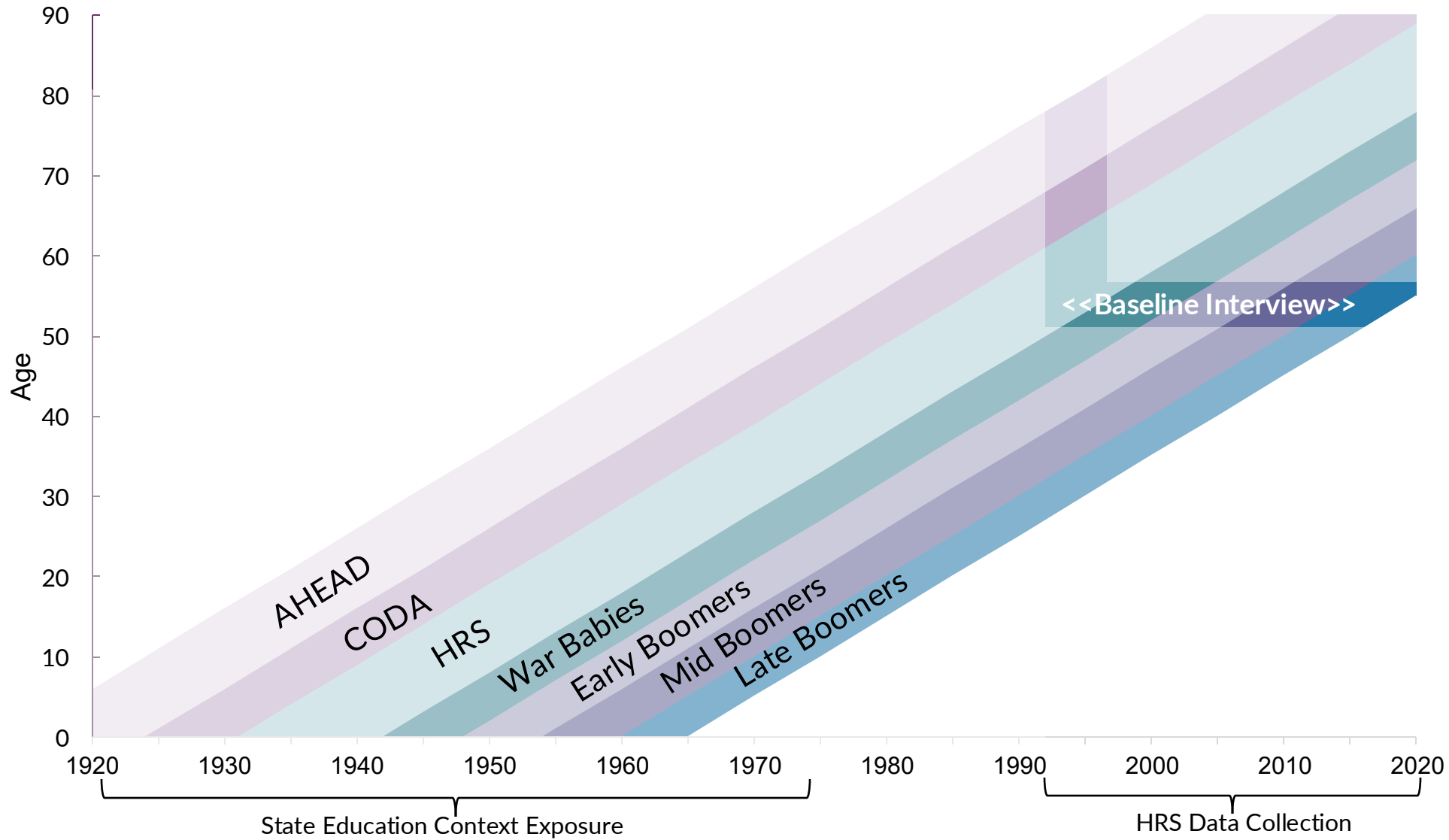
Katrina M. Walsemann^{1,2}, Emily Abbruzzi^{1,2}, Heide M. Jackson², Pallavi Tyagi³ & Jennifer A. Ailshire⁴

There is growing interest in understanding how exposure to education contexts and quality shapes wellbeing, particularly in later life. Although public investment in education expanded significantly during much of the 20th century, electronic data on U.S. public education systems before 1975 remain limited. In this paper, we introduce the *State Education Contextual Data Resource (S-ECDR)*, a publicly available dataset that provides state-level education context measures from 1920–1974. We describe the procedures used to construct S-ECDR from historical reports, outline the available measures of state-level education context, and discuss key considerations for linking the dataset with other population-based surveys. Data from the S-ECDR indicate substantial improvements in public education systems over the 20th century but also persistent disparities across states, with southern states investing less in their education systems. The S-ECDR can be linked to population-representative survey data to examine how education contexts shape well-being in midlife and older adulthood.

Citation: Walsemann, K. M., Abbruzzi, E., Jackson, H. M., Tyagi, P., & Ailshire, J. A. (2025). Historical state-level data on US public school systems from 1919/20 to 1973/74. *Scientific Data*, 12(1), 1218.

Health and Retirement Study

HRS Cohorts born 1914-1965, entering study at age 50+



- Covers cohorts born 1914-1965
- School exposure across major policy shifts
- Linked to state education context data using state of residence at age 10
- Available through MiCDA's Geographic Linkages Repository

Applications of the S-ECDR

- Moves beyond attainment to capture conditions of schooling
- Documents state and racial disparities across the 20th century
- Publicly available, transparent, and linkable to major studies of aging and health

The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences, 2025, **80**(8), gbaf110
<https://doi.org/10.1093/geronb/gbaf110>
Advance access publication 20 June 2025
Research Article



APOE genotype and cognitive decline: educational context as a moderator of genetic risk

Katrina M. Walsemann, PhD^{1,2,*}, Heide M. Jackson, PhD², Jason D. Boardman, PhD³, Pamela Herd, PhD⁴

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Original Scholarship

State-Level Education Quality and Trajectories of Cognitive Function by Race and Educational Attainment

KATRINA M. WALSEMANN^{ID,*†} HEIDE JACKSON[†]
EMILY ABBRUZZI^{*,†} and JENNIFER A. AILSHIRE[‡]

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Advance Access publication February 9, 2022

Research Article

Race Inequity in School Attendance Across the Jim Crow South and Its Implications for Black–White Disparities in Trajectories of Cognitive Function Among Older Adults

Katrina M. Walsemann, PhD^{1,*}, Stephanie Ureña, PhD^{1,2}, Mateo P. Farina, PhD^{2,3}, and Jennifer A. Ailshire, PhD²

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journal homepage: www.elsevier.com/locate/socscimed



State-level desegregation in the U.S. South and mid-life cognitive function among Black and White adults

Katrina M. Walsemann^{a,*}, Nicole L. Hair^b, Mateo P. Farina^c, Pallavi Tyagi^a, Heide Jackson^a, Jennifer A. Ailshire^d

