

# Understanding Policy with Data: High School Personal Finance Courses

Carly Urban

Professor of Economics, Montana State University  
Research Fellow, Institute for Labor Studies (IZA)

# Financial Education in Schools

Research using RCTs consistently finds that required financial education in classrooms improve financial decisions:

- Kaiser and Menkhoff (2020, EcEdRev)
- Kaiser et al. (2022, JFE)

...but all of the randomized experiments in high schools are outside of the U.S.

# U.S. Education Policy Landscape

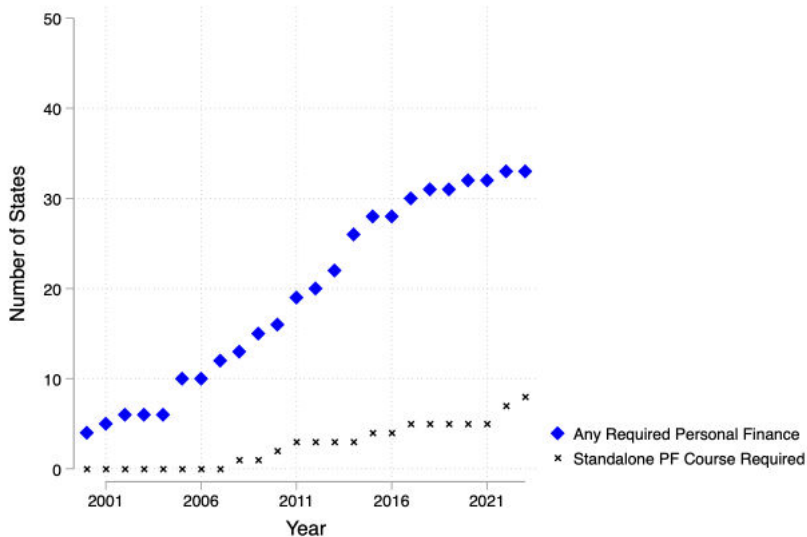
In the U.S., education policy is local:

- States decide graduation requirements and standards for K-12 education.
- Local school districts and individual schools can also require specific classes.
- Even if states have requirements, local schools are not audited to make sure state policies are implemented locally.
- Local changes, particularly in bigger schools, often include parental involvement and school boards.

# Using Local Variation as a Natural Experiment

- State variation in personal finance graduation requirements is often used as a natural experiment to determine causal effects.
- As of the graduating class of 2023:
  - ▶ 8 states require a full semester of PF (“guarantee states”),
  - ▶ 25 states require PF content flexibly.

# Financial Education Policies in U.S. High Schools



# Financial Education in U.S. High Schools

- Studies lump the two policy levers together when considering causal effects of required personal finance education.
- In the U.S., education remains locally controlled and not all state-level education policies are enforced.
- Which state policies translate to near universal access?
- If access is not universal with a policy, who is left behind?
- Even without a policy, schools can locally implement requirements. How often does this happen? And for whom?

# Financial Education in U.S. High Schools

Research using state mandates as natural experiments finds:

- Reduces delinquencies and increases credit scores (Brown et al. 2016; Urban et al. 2020)
- Reduces payday borrowing (Harvey 2019)
- Shifts student loan borrowers from high-interest to low-interest financing (Stoddard & Urban 2020)
- Improves student loan repayment among students from low-income families (Mangrum 2022)

# Financial Education in U.S. High Schools

Research uses state mandates as natural experiments finds:

- Does not change retirement savings (Harvey & Urban 2023)
- Does not change high school graduation rates (Urban 2022)
- Reduces subjective financial well-being for those who end their education with a high school diploma (Burke et al. 2023)



# New Data: High Schools

I collect data from all U.S. high schools with online course catalogs.

- Start with list of all U.S. high schools from the US Dept of Education NCES
- Go to each website of every public high school, find an online course catalog, and code up:
  - ▶ each course that contains personal finance,
  - ▶ the duration of the course,
  - ▶ whether or not it's required or an elective,
  - ▶ the course description,
  - ▶ record if the school has no personal finance content in any class.

# New Data: High Schools

I use the course-level data to create school-level measures.

- For each school, I create a policy measure that represents the maximum school-level policy:
  - ▶ standalone required,
  - ▶ embedded required,
  - ▶ standalone elective offered,
  - ▶ embedded elective offered,
  - ▶ no personal finance content in any class.
- I merge these data with school-level characteristics from NCES, such as enrollment, enrollment by race/ethnicity, and students receiving free or reduced-lunch.

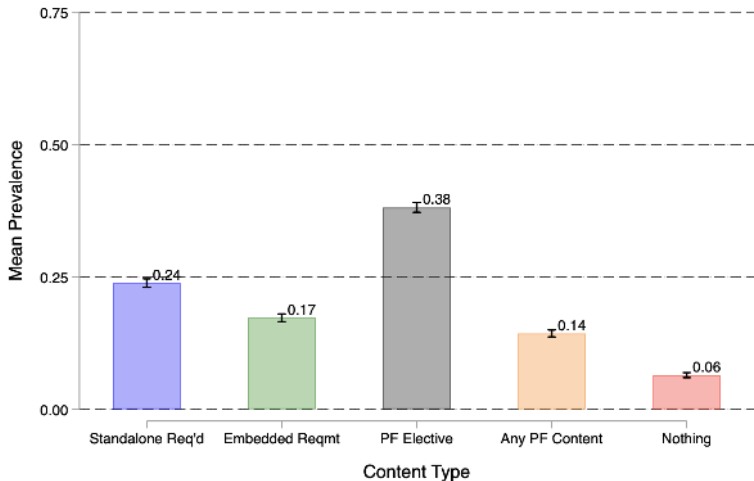
# About the Data

The data span 2019-2020 through the 2022-2023 Academic Years (AYs).

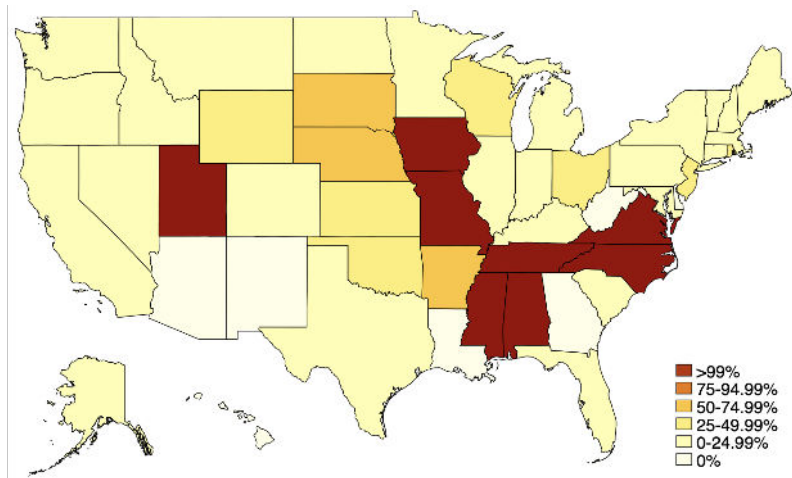
- The 2022-23 data include:
  - ▶ 19,263 courses coded,
  - ▶ 10,784 U.S. high schools.
- A full panel includes 7,446 schools with data for every year.

# 10,000 Foot View of the Data

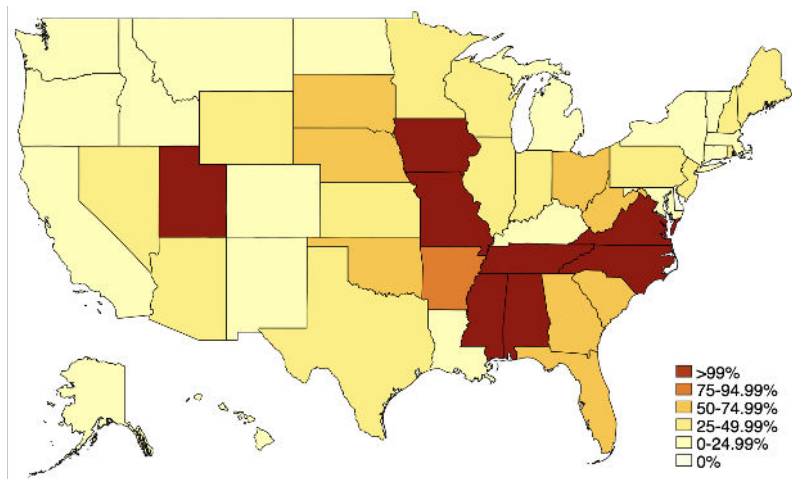
In 2022-23, 2.6 million students are in high schools where personal finance is required as a standalone course (24%).



# Mapping Standalone Requirements



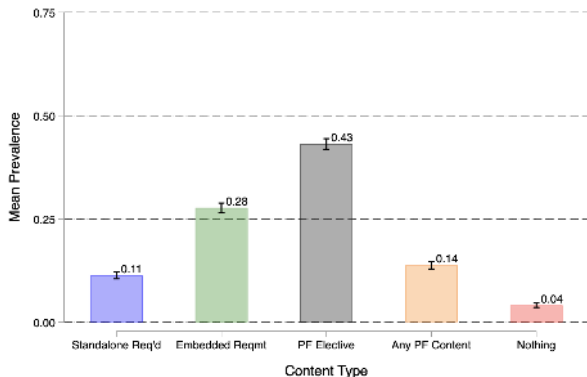
# Mapping Any Requirements



# Access by State Policy

In states with embedded requirements, 39 percent of students are in schools where personal finance is required for high school graduation.

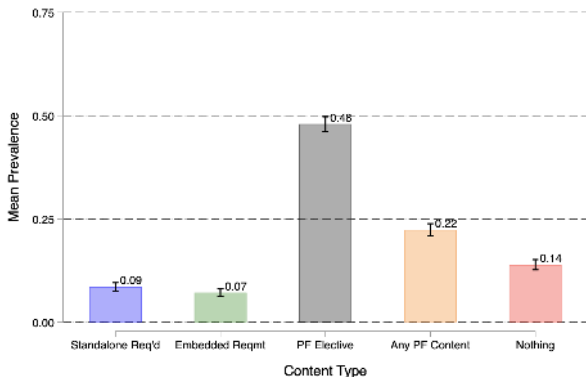
## States with Embedded Requirements



# Access by State Policy

In states with no requirements, 16 percent of students are in schools where personal finance is required for high school graduation.

## States without Policies





# Summary of State Policies

- In states where a standalone personal finance course is required for high school graduation—commonly referred to as a “guarantee”—every student is in a school with a standalone personal finance course requirement.
- In states where personal finance is required with flexibility, 40% of schools have PF in a required class.
- In states without policies, it’s even lower: 22% of school have PF in a required class.
- Is there equity in access?

## Predicting School PF: States without Policies

	PF Req'd	Req'd At All	PF Req'd	Req'd At All
> Median FRPL	0.011 (0.011)	0.011 (0.014)	0.002 (0.011)	-0.011 (0.015)
> Median Non-White	-0.130*** (0.012)	-0.144*** (0.016)	-0.041*** (0.015)	-0.075*** (0.020)
Urban	-0.005 (0.012)	0.021 (0.016)	-0.014 (0.012)	0.006 (0.015)
Rural	0.047*** (0.013)	0.069*** (0.017)	0.042*** (0.013)	0.068*** (0.017)
<i>N</i>	3064	3064	3064	3064
State FE	NO	NO	YES	YES

# Predicting School PF: States with Embedded Policies

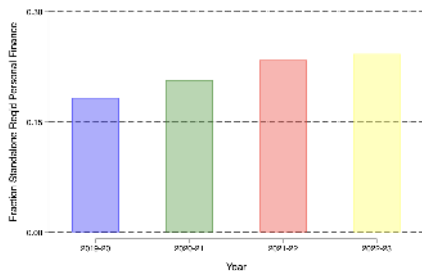
	PF Req'd	Req'd At All	PF Req'd	Req'd At All
> Median FRPL	-0.025*** (0.009)	0.023* (0.014)	0.007 (0.009)	0.006 (0.016)
> Median Non-White	-0.035*** (0.010)	0.013 (0.015)	-0.001 (0.010)	-0.007 (0.016)
Urban	-0.010 (0.011)	-0.060*** (0.016)	0.002 (0.010)	-0.041*** (0.016)
Rural	0.022** (0.010)	0.001 (0.016)	0.020** (0.009)	-0.004 (0.015)
<i>N</i>	5730	5730	5730	5730
State FE	NO	NO	YES	YES

# Summary of Equity in Access by State Policies

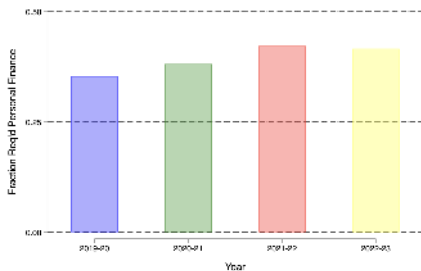
- In “guarantee” states—every student has access to a standalone personal finance course requirement.
- In states without policies, schools with more non-white students have less access to PF requirements, and students in rural schools have relatively more access than those in the suburbs or urban areas.
- In states where personal finance is required with flexibility, the inequities in access are much smaller.

# Changes over Time

## Standalone Required

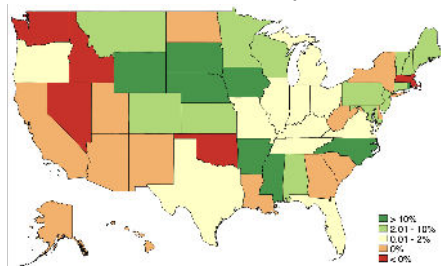


## Any Required

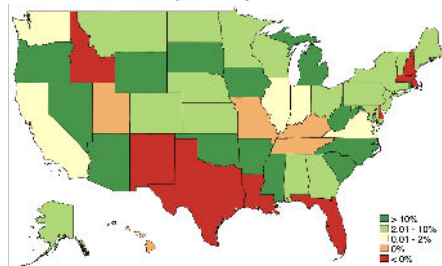


# Mapping Changes over Time

## Standalone Required

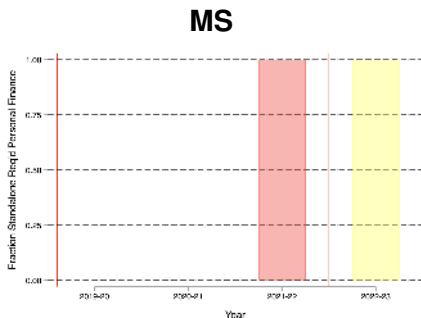
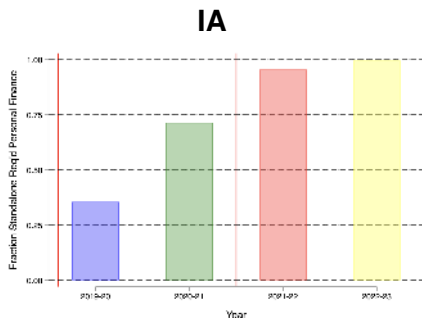


## Any Required



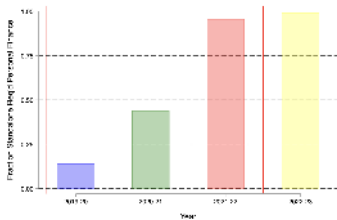
# Policy Transitions

Over the sample period, 5 states passed and began implementing guarantees.

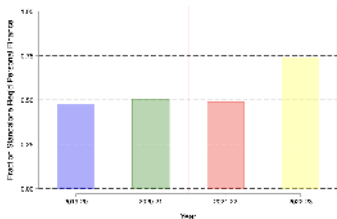


# Policy Transitions

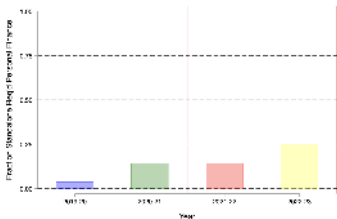
## NC



## NE



## RI





# What does this tell us for research?

- Research that considers the causal effects of required financial education needs to consider “ever takers” and “never takers.”
- Calculate treatment on treated based on these data.
- Researchers can compare guarantee and no policy states to get cleaner estimates of full compliance, remembering that 22% of students in no policy states are still required to complete some PF content.
- The implementation of state guarantees has clear rollout before the first graduating cohort is required to complete, likely understating the effect of the policy. Researchers should probably use a donut approach, omitting the year or two prior to the policy.

# What does this tell us for research?

- The effects documented in the literature are the effects of state policy, not financial education itself.
- In studies finding positive effects of financial education graduation requirements on financial behaviors, the effect of the education is likely under-stated because access is not universal.
- In studies reporting null effects, future work should consider cleaner identification strategies if the desire is to determine the specific effect of the education.
- In Burke et al. (2020), the heterogenous effect could represent even more inequality than reported...(stay tuned for the next session)...

# Continuing research

- With expanded access to state administrative data, it will be possible to compare students' high school access to personal finance to document causal effects.
- Free research idea: use school-level data to document causal effect of local financial education policies on FAFSA applications (available at the school-level!).
- The data will continue to be updated for the foreseeable future.
- I encourage you to use the data!
  - ▶ **Course-level data:** [https://papers.carlyurban.com/completed\\_school\\_data\\_2023.xlsx](https://papers.carlyurban.com/completed_school_data_2023.xlsx)
  - ▶ **School-level data:** [https://papers.carlyurban.com/standards\\_panel\\_18\\_22\\_forposting.xlsx](https://papers.carlyurban.com/standards_panel_18_22_forposting.xlsx)
- **and the state mandate data:** // [https://papers.carlyurban.com/Policies\\_Panel.xlsx](https://papers.carlyurban.com/Policies_Panel.xlsx)

Carly Urban  
Professor of Economics  
Montana State University  
Research Fellow at IZA

`carly.urban@montana.edu`

`www.carlyurban.com`

406.994.2005

