



2019-2024 US Department of Education Jacob K.  
Javits Gifted and Talented Education Award

Dr. Carla B. Brigandi  
Associate Professor  
West Virginia University

Dr. Karen Rambo-Hernandez  
Associate Professor  
Texas A&M University



# West Virginia School Year 2021-2022 Gifted Students Grades 1-8

LEA	ENROLLMENT Grades 1-8	Number Gifted	Percentage
Barbour	1,230	•	•
Berkeley	11,371	227	2.00%
Boone	1,774	38	2.14%
Braxton	1,017	15	1.47%
Brooke	1,394	•	•
Cabell	6,626	230	3.47%
Calhoun	477	•	•
Clay	938	•	•
Doddridge	617	•	•
Fayette	3,284	81	2.47%
Gilmer	455	•	•
Grant	912	•	•
Greenbrier	2,645	41	1.55%
Hampshire	1,637	19	1.16%
Hancock	2,120	•	•
Hardy	1,148	15	1.31%
Harrison	5,591	169	3.02%
Jackson	2,410	17	0.71%
Jefferson	5,036	65	1.29%
Kanawha	13,574	437	3.22%
Lewis	1,430	17	1.19%
Lincoln	1,811	22	1.21%
Logan	2,844	55	1.93%

LEA	ENROLLMENT Grades 1-8	Number Gifted	Percentage
Marion	4,274	64	1.50%
Marshall	2,497	60	2.40%
Mason	2,142	23	1.07%
Mercer	5,017	37	0.74%
Mineral	2,257	47	2.08%
Mingo	2,220	•	•
Monongalia	6,350	741	11.67%
Monroe	585	15	2.57%
Morgan	1,265	•	•
McDowell	1,498	15	1.00%
Nicholas	1,992	10	0.50%
Ohio	2,822	30	1.06%
Pendleton	485	26	5.36%
Pleasants	599	•	•
Pocahontas	523	12	2.29%
Preston	2,463	39	1.58%
Putnam	5,168	109	2.11%
Raleigh	6,207	123	1.98%
Randolph	2,078	43	2.07%
Ritchie	673	37	5.50%
Roane	1,013	•	•
Summers	760	•	•

LEA	ENROLLMENT Grades 1-8	Number Gifted	Percentage
Taylor	1,316	17	1.29%
Tucker	533	13	2.44%
Tyler	710	19	2.68%
Upshur	2,258	32	1.42%
Wayne	3,539	44	1.24%
Webster	712	•	•
Wetzel	1,212	•	•
Wirt	531	•	•
Wood	6,758	358	5.30%
Wyoming	2,013	17	0.84%
State Totals	143,191	3,474	2.43%

\* Data has been suppressed in LEAs with less than 10 students  
State Totals include the suppressed students

Exceptional Gifted State Total Grades 9-12 = 261

# 10 Most Rural U.S. States

Source: US Department of Agriculture Economic Research Service updated June 2021

State	Percent Rural	Percent Gifted
Maine	61	4.2
Vermont	61	No Data
<b>West Virginia</b>	<b>51</b>	<b>2.43</b>
Mississippi	51	5.58
Montana	44	4.44
Arkansas	44	9.17
South Dakota	43	No Data
Kentucky	42	14.63
Alabama	41	8.35
North Dakota	40	No Data

# U.S. States with the highest Nonmetro population change

Source: USDA ERS using data from the US Dept. of Commerce,  
Bureau of the Census, PL\_94 decennial census files, 2010-2020.

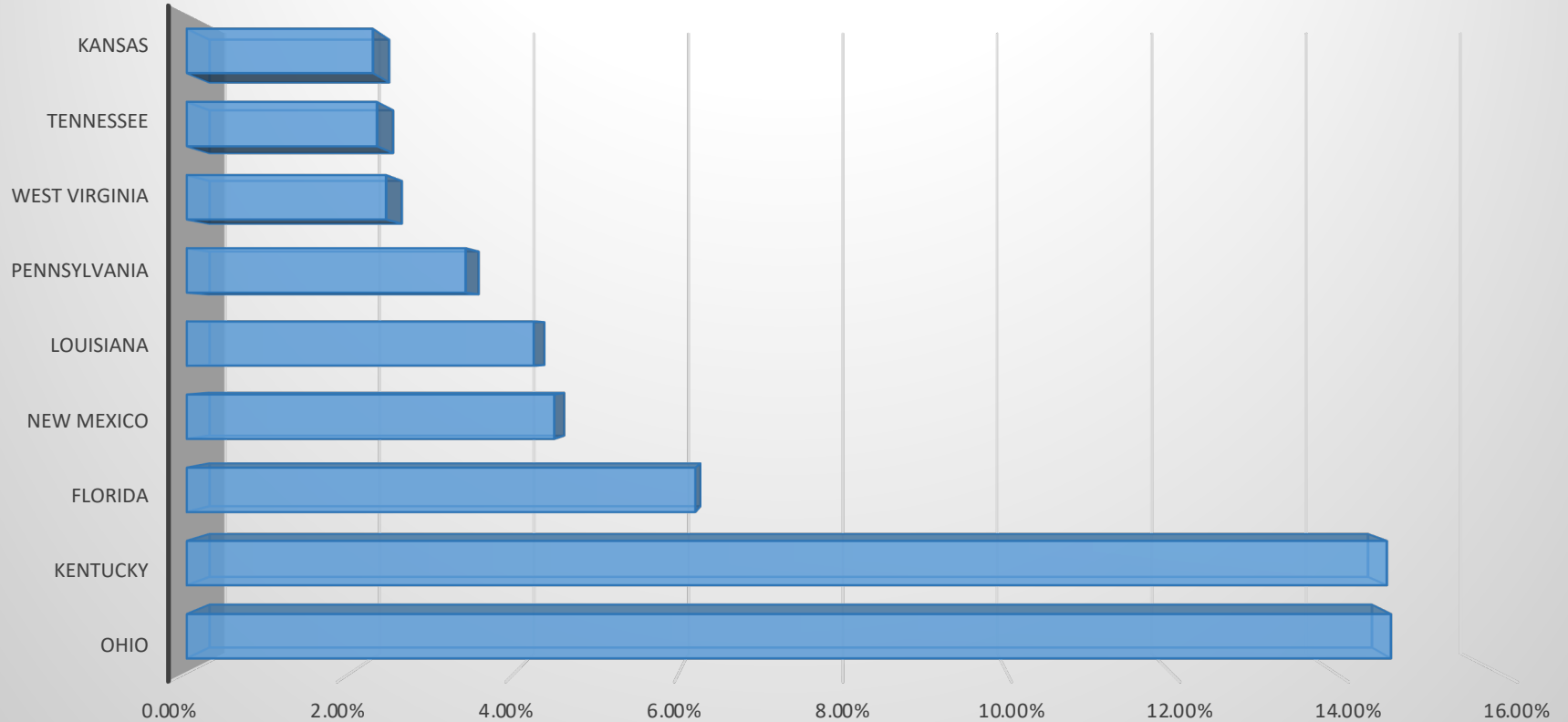
State	Non Metro Population	Change 2010-2020 Number	Change 2010-2020 Percent
<b>West Virginia</b>	<b>672,791</b>	<b>-47,701</b>	<b>-6.6%</b>
Illinois	1,439,587	-88,840	-5.8%
Louisiana	731,262	-43,954	-5.7%
Arkansas	1,103,920	-59,585	-5.1%
Pennsylvania	1,440,892	-69,323	-4.6%

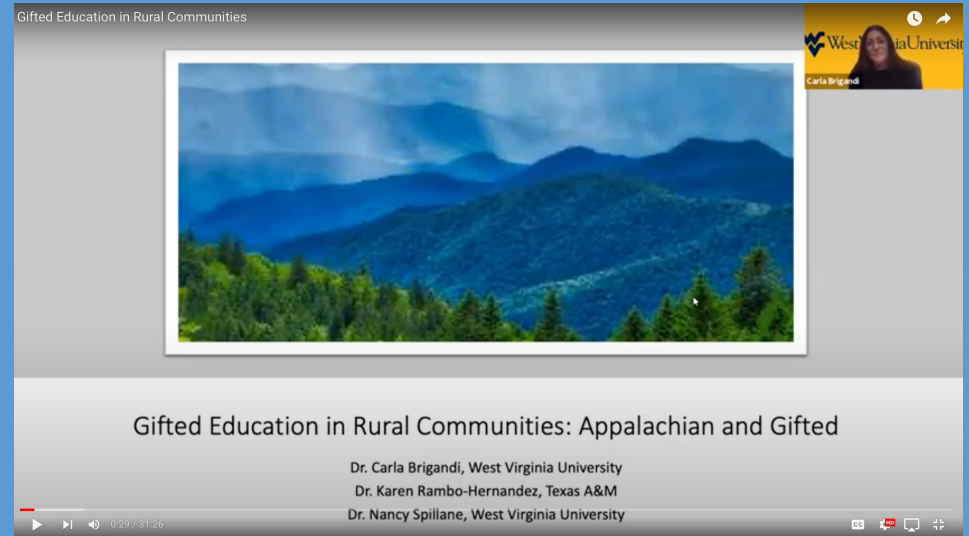
# Poverty Rates

Source: US Department of Agriculture Economic Research Service 2021 Edition

State	Poverty Rates	Gifted Percent
Mississippi	18.7	5.58
Louisiana	17.8	4.23
New Mexico	16.8	4.48
<b>West Virginia</b>	<b>15.8</b>	<b>2.43</b>
Arkansas	15.2	9.17
Alabama	14.9	8.35
Kentucky	14.9	14.63
Oklahoma	14.3	13.61
Georgia	14.0	10.29
South Carolina	13.8	17.58

## States That Require IEP's for GF



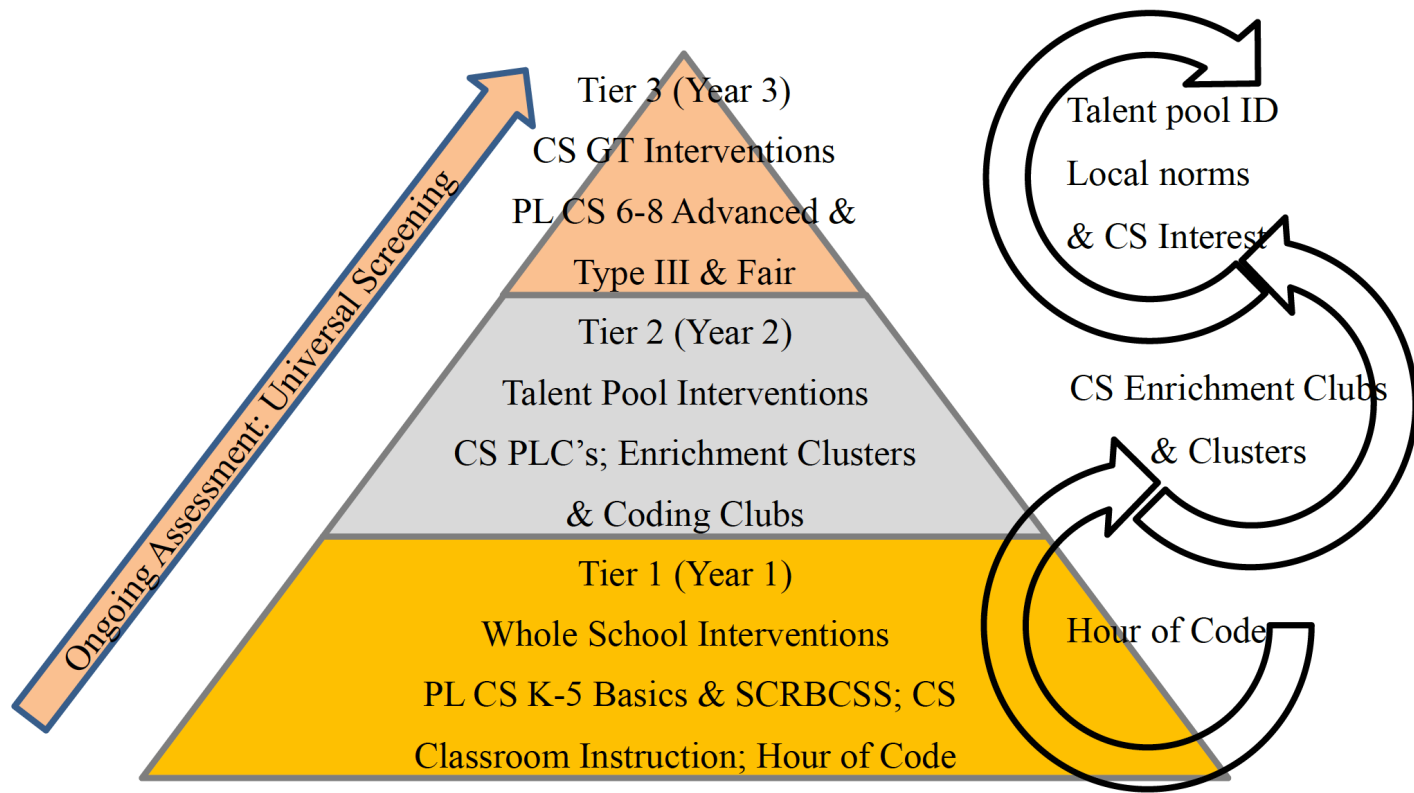


[https://youtu.be/m\\_o-omIROg](https://youtu.be/m_o-omIROg)

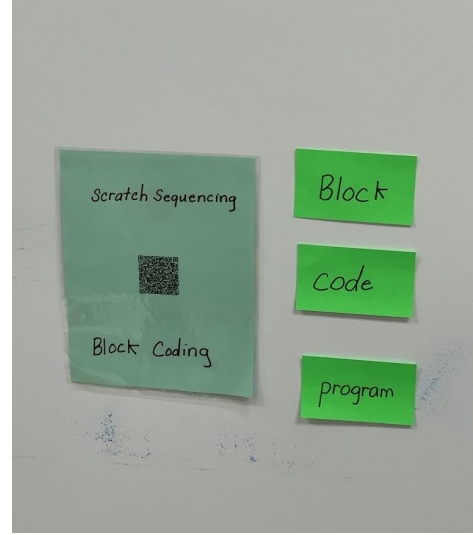
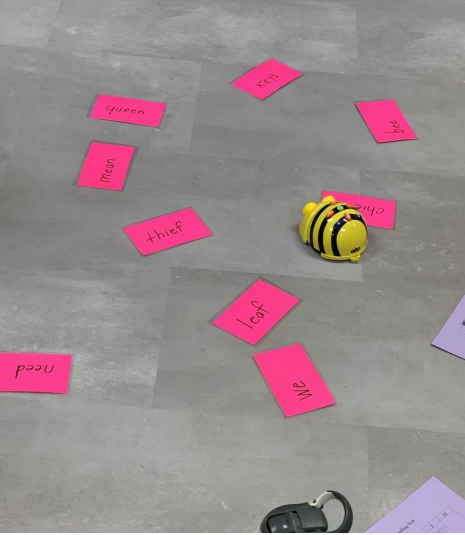
# Appalachian Coders Grant Goals

- Increase district capacity to identify, support, and service students with high academic ability.
- Increase district capacity to support STEM education with a particular focus on computer science.
- Increase district capacity to provide effective instruction in rural and high poverty schools.





*Figure 1: A model for developing whole school, talent pool, and gifted students' CS talent*

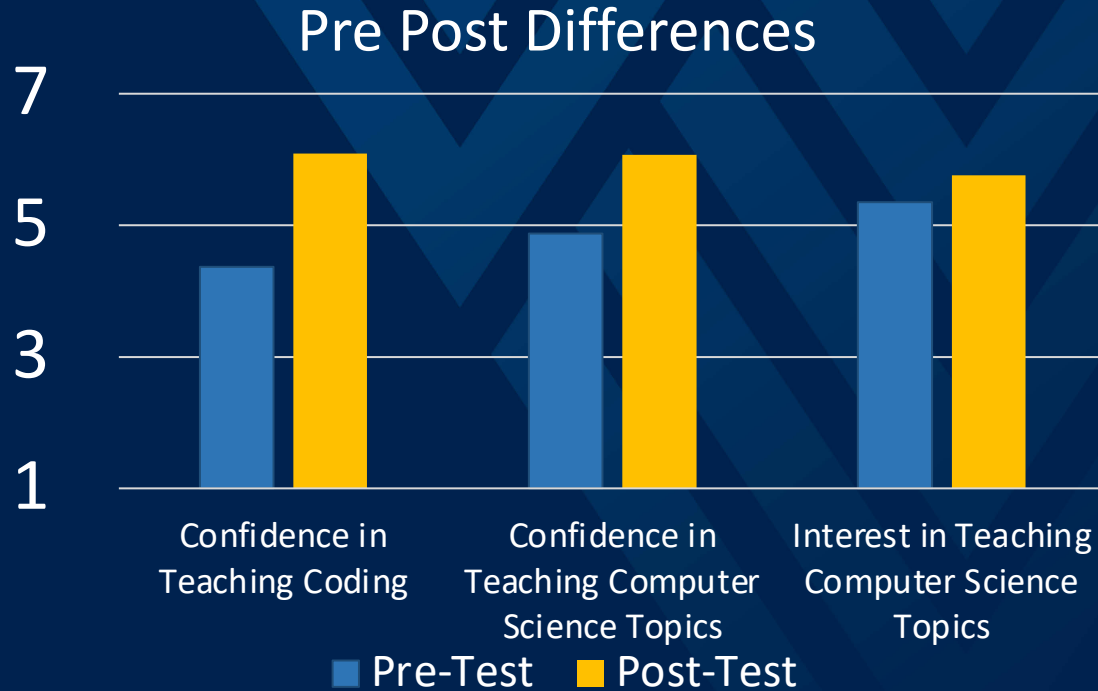


## Code.org Professional Learning

- Jan 2020: Code.org Introduction to coding
- Aug 2020: Coding Review & Recognizing giftedness in diverse populations
- Jan 2021: Review of Coding

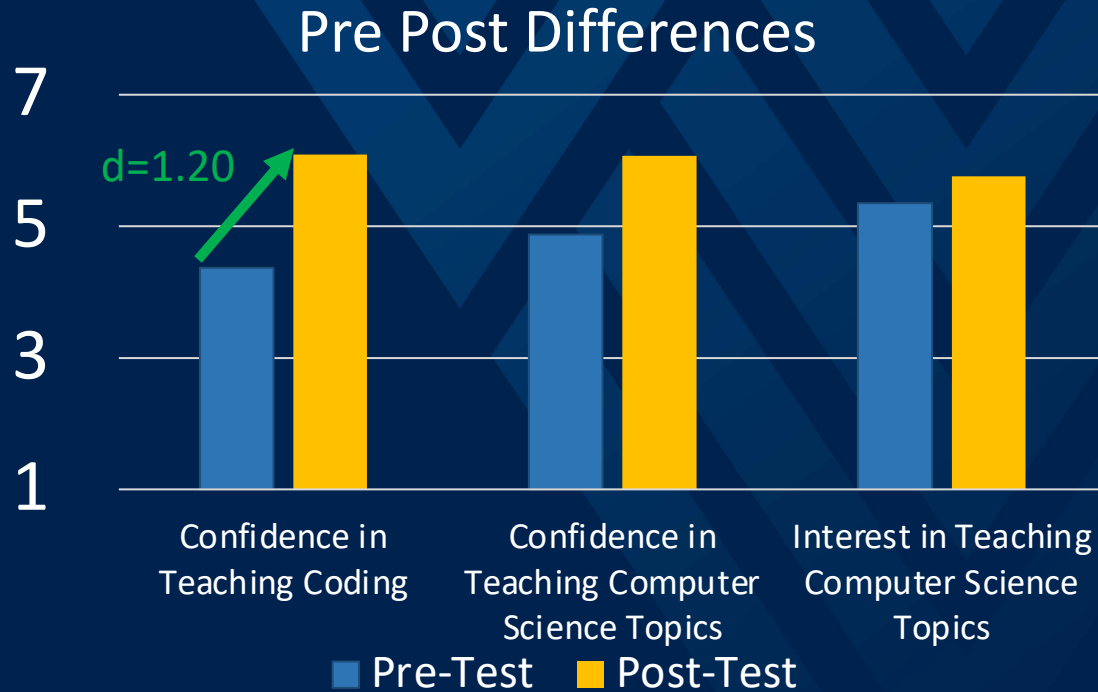
# Results of Teacher Surveys

Immediately before and after the first Code.org workshop



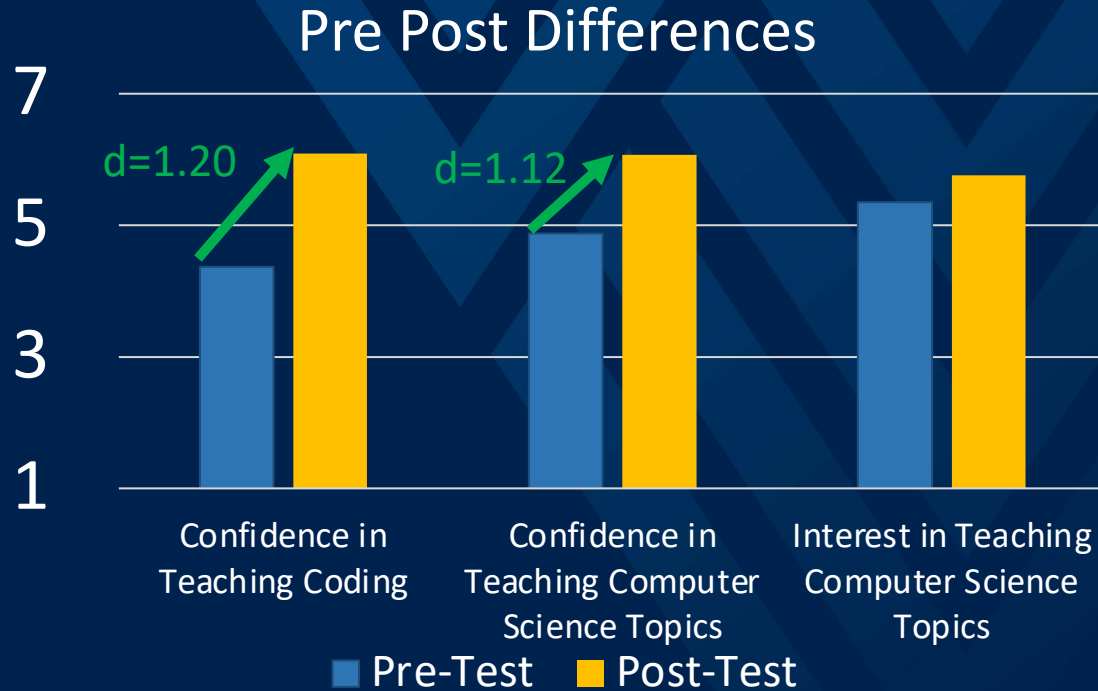
# Results of Teacher Surveys

Immediately before and after the first Code.org workshop



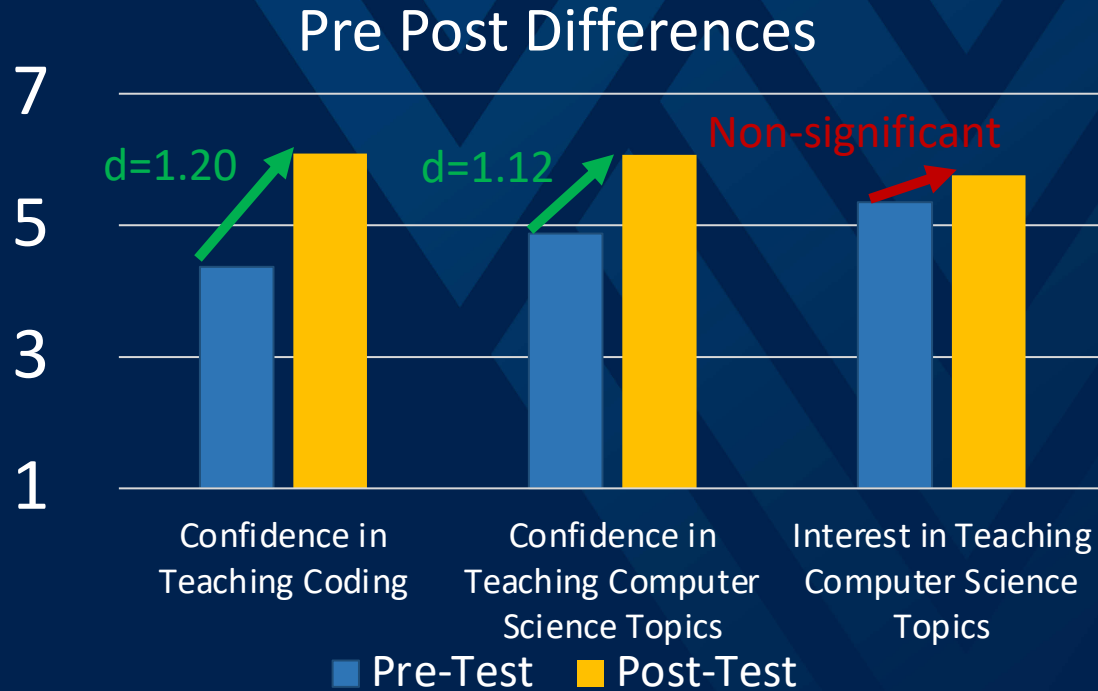
# Results of Teacher Surveys

Immediately before and after the first Code.org workshop



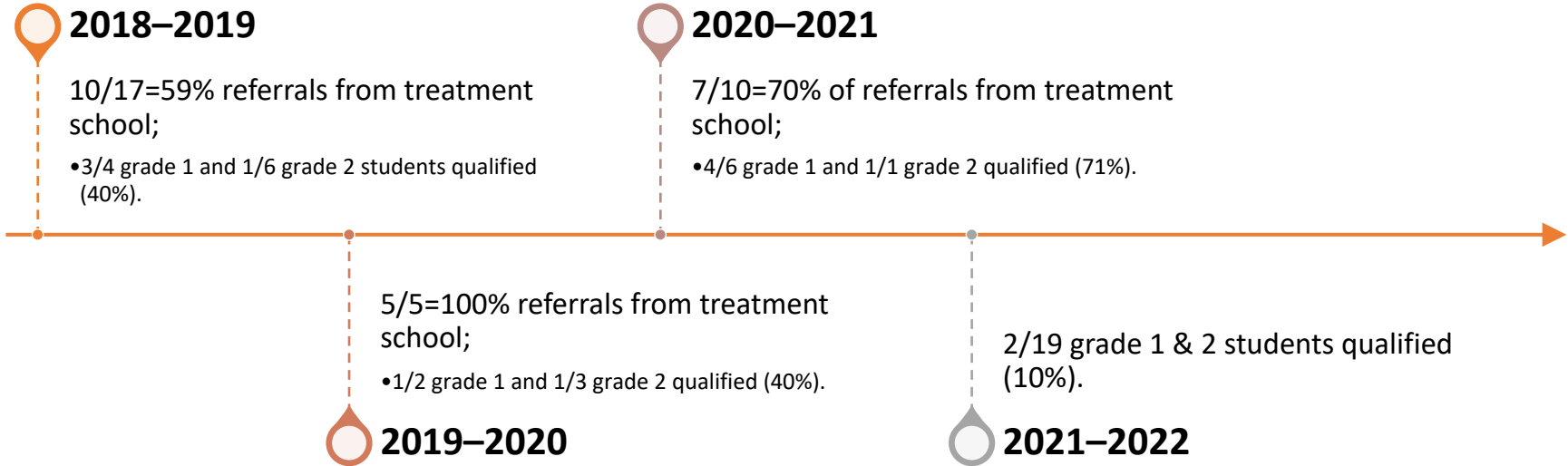
# Results of Teacher Surveys

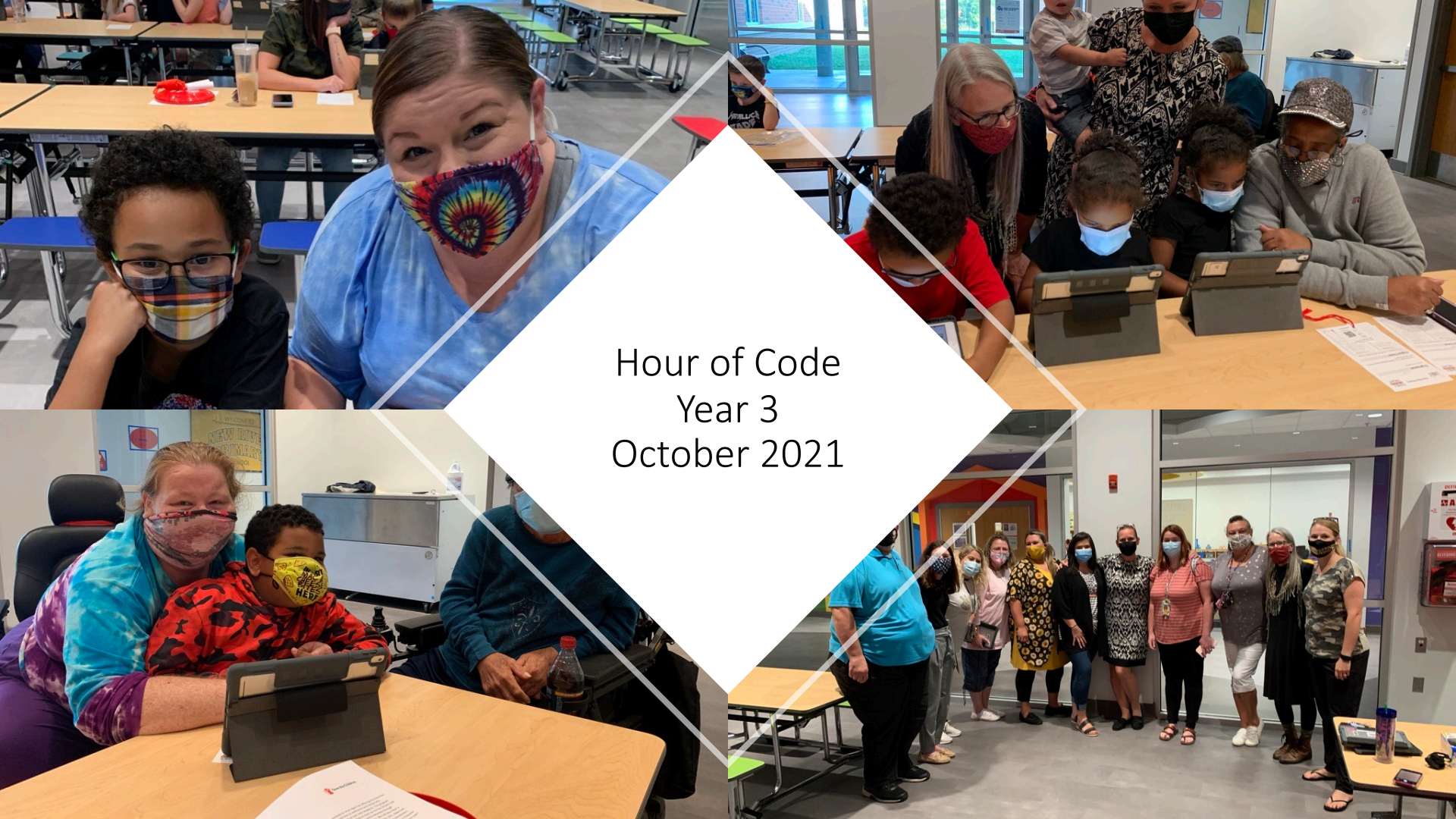
Immediately before and after the first Code.org workshop





# Gifted Referrals

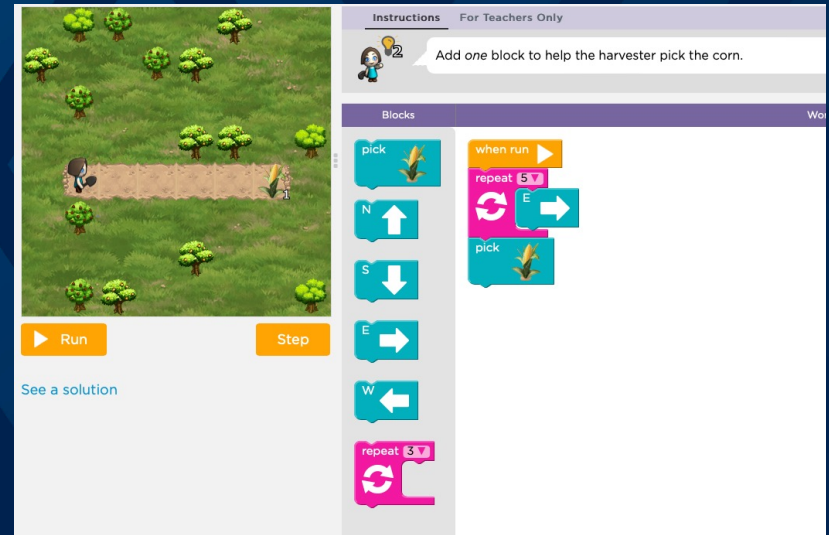


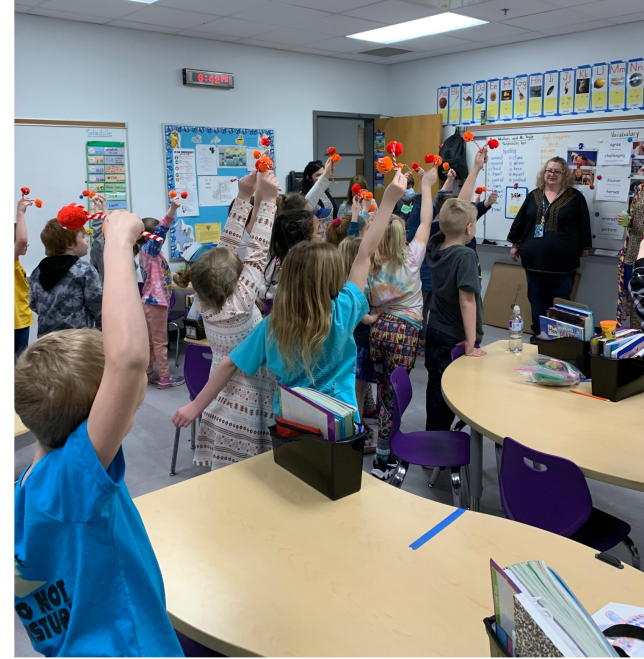


Hour of Code  
Year 3  
October 2021



# Jan 2022: Code.org Deep Dive






# Dr. Suess Night March 2, 2022





## PLC's

- Reviewed important concepts
- Demonstrated how to navigate the site
- Provided time for hands on engagement with the content
- Modeled teaching strategies to promote higher order thinking
- Provided standards-based extensions



**Instructions** For Teachers Only

2 Add one block to help the harvester pick the corn.

Workspace: 7 / 7 blocks

pick

N ↑

S ↓

E →

W ←

repeat 3

when run ▶

E →

E →

E →

E →


E →

pick

▶ Run

Step

[See a solution](#)



**Instructions** For Teachers Only

2 Add one block to help the harvester pick the corn.

Workspace: 7 / 7 blocks

pick

N ↑

S ↓

E →

W ←

repeat 3

when run ▶

repeat 5

E →

pick

▶ Run

Step

[See a solution](#)

- How many blocks did you use when not using the repeat?
- Reveal the code. How many lines of code did you use when not using repeat?
- How many blocks did you use when using the repeat?
- How many more lines of code did you use when NOT using repeat than when using the repeat?
- What are the advantages of using a fewer lines of code?

# Data Collection

## Phonological Awareness Literacy Screening (PALS) data

- 2018/2019 (~**900** Students K-2–BOY; MOY; EOY)
- 2019/2020 (~**610** Students K-2–BOY; MOY)
- 2020/2021 (~**512** Students K-2–BOY; MOY; EOY)

## WVGSA

- 2020/2021 (**563** students 3-5)

## Researcher developed Instruments (Screener)

- 2019/2020 (**592** students 189K, 205 g1, & 198 g2)
- 2020/2021 (**340** students 99K, 105 g1, & 136 g2)
- 2021/2022 (**278** students 140 g1, 138 g2; 960 datapoints)

## Renzulli Scales

- 2020/2021 (**287** students 139 g1 & 148 g2)
- 2021/2022 ( **148** students g2)


## Gifted Referral and Identification Data (WISC)

- 2018/2019, 2019/2020, 2020/2021

## Ongoing Survey Data

## Imagine Math [Pending]



The background features several light blue paper cutouts of human heads in profile, some facing left and some right. Many of these cutouts have a large black question mark on their forehead. In the center, there is a white circular overlay. Inside this circle, the text 'What did we learn?' is written in a black, sans-serif font. Below the text is a short horizontal line. To the right of the text, there is a blue line-art icon of a lit lightbulb with rays emanating from it. Below the lightbulb icon, there is a bulleted list of three items: 'Support', 'Time', and 'Relevance'.

## What did we learn?

---

- Support
- Time
- Relevance

## Summary

---

Barriers to gifted identification exist at all levels—state, community, and home.

---

Teachers' self-efficacy and confidence increased with training.

---

Students were afforded increased opportunities to engage in STEM activities.

---

Gifted referrals increased in the treatment school.

## Questions to ponder

---

Is there a relationship between rurality, poverty, and high population decline and gifted identification rates?

---

Is there a relationship between states where Gifted Education is represented under the special education umbrella and gifted identification?

---

How do we create systems of support for students with high academic ability in rural communities?



# Published Research

Teaching in the time of COVID-19: A Biological Systems Theory Approach. *Frontiers in Education*.

<https://doi.org/10.3389/feduc.2022.964492>

SCAN ME

