

K-3 Quality
Initiative
Strategic Plan





This initiative helps kids struggling with issues during early childhood and is making sure that more Arizona children have the ability to read by third grade. We know that early literacy is critical for achievement in the classroom early on, just as it's also a strong predictor of high school graduation and college attendance."

Governor Ducey, September 27, 2017



Education
Commission of
the States
Public-Private
Partnership



First
Things
First

Helios
Education
Foundation

Office of the
Arizona
Governor

Arizona
Department
of Education

Arizona
Grantmakers
Forum

Read
On AZ

Expect
More AZ



Arizona K-3 Quality Initiative Strategic Plan



Objective 1:

Create a framework that responsibly allows Arizona to increase 3rd grade reading cut scores to actual proficiency level.

Objective 2:

Provide the quality systems, funding and public engagement and branding needed to focus the public's attention on the necessity of increasing early literacy outcomes.

Objective 3:

Align 3rd grade literacy directly as a strategy to achieve Arizona's postsecondary attainment goal - **Achieve60AZ**. - 60% of working adults will have degree, certificate or credential by 2030.



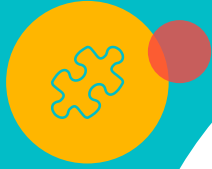
ECS Partnership

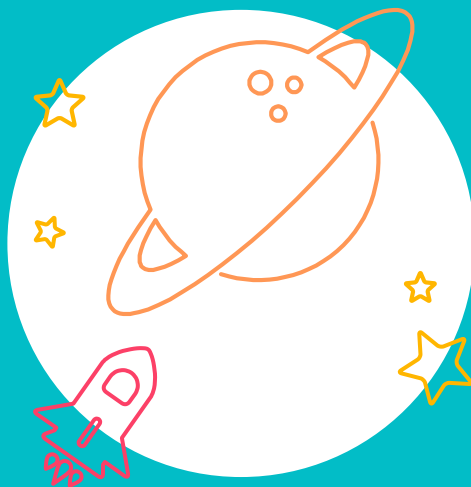
Why AZ?

- 3rd grade reading requirement
- Common goals (Progress Meter/ESSA)
- Established K-8 accountability metrics
- Solid business support



Short Term Priorities





#1

Create more aligned and consistent
early childhood policy documents

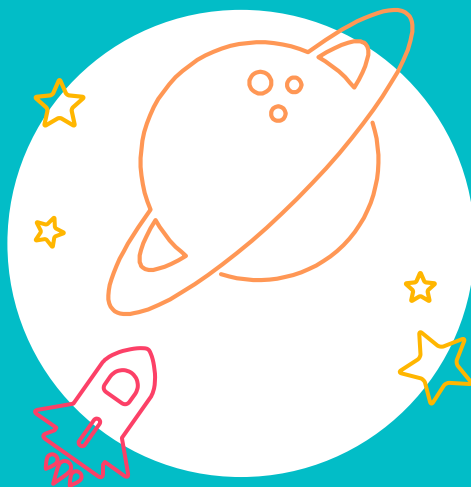


Strategies

Alignment of Documents

8

- Review each document over the next three to six months.
- Determine each document's purpose and whether documents can be consolidated.
- Recruit the State Board of Education and Arizona Early Childhood Alliance as key partners in this effort.
- Utilize all early childhood education partners to communicate



#2

Develop a plan to phase-in increased proficiency cut scores in state 3rd grade reading assessments

Strategies

Increase Cut Scores

- The State Board of Education will take action on increasing 3rd grade reading cut scores in a phased-in approach.
- K-3 Ad Hoc Committee will make recommendations to the State Board of Education.
- Gather stakeholder/practitioner input through public comment.
- Create plan to target policies/resources to close achievement gap (SPED/ELL)
- Develop a plan to target policies/resources on students who score below proficient (retained or not retained to Grade 4)



#3

Increase early learning opportunities
(existing Preschool Dev Grant & PDG 2.0)

Strategies

Quality Early Learning

12

- Support the collaboration of Preschool Development Grant 2.0
- Direct the focus of the Preschool Development Grant 2.0 on:
 - Early Literacy
 - Coordination and alignment
 - Effective mixed delivery system
- Increase access to quality early learning systems (Quality First, Head Start, PDG)



#4

Increase resources & opportunity for the Kindergarten Developmental Inventory & formative assessment tool

Strategies



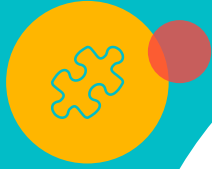
Kindergarten Developmental Inventory

14

- ADE continues 2nd year of voluntary pilot program that includes 3,700 students (funded through ADE and First Things First)
- Evaluate the success of the pilot program to determine whether to expand statewide or expand grade levels.
- Seek legislative authority, if necessary.



Long-Term Priorities





#5

Ensure that KDI Assessments are used for instructional improvement



Strategies

KDI for instructional improvement

- Create a communications strategy for how formative assessments are to be used for a broader audience.
- Significant focus needs to be directed on professional development.



#6

Alleviate the quality disparity between Move
on When Reading Plans



Strategies



Ensure quality in MOWR plans

- Implement new legislation that created a new format of MOWR plans for at least a year before re-evaluating whether there are still reporting changes needed.
- ADE to continue to work with school districts on their plans and provide intentional support/guidance around areas of need.





#7

Support continued dissemination
of Move On When Reading
guidance documents



Strategies



MOWR guidance documents

21

- ❑ ADE updates the MOWR guidance documents to align with recently passed legislation - allow time for implementation and then reevaluate.
- ❑ Continue to focus on early grade supports in MOWR plans.
- ❑ Develop a communications strategy to ensure foundational knowledge of the five domains.





#8

Strengthen quality professional development opportunities



Strategies

Increase professional development opportunities

23

- Continue the work of the ADE Language and Literacy Professional Development Action Team to address quality and accessibility.
- Evaluate any policy recommendations received.
- Check in six months on the First Things First working group on professional development.



#9

Codify the results of literacy analytical
information and data for
children birth to age 8

Codify analytical information and data

25

Strategies

- Explore more formal and official avenues to codify results and adata





#10

Develop a handbook, policies and guidance on chronic absenteeism



Chronic Absenteeism Handbook

- Define chronic absenteeism.
- Collaborate with the State Board of Education to integrate this item into the A-F school accountability system.
- Utilize Attendance Works national expertise through Read on Arizona partnership.
- Communicate this information to local communities (early learning partners.

Strategies

A white line-art icon of a lit lightbulb is centered within a large, semi-transparent red circle in the top-left corner of the slide. Other smaller circles in shades of orange, teal, and pink are scattered around it.

Thanks!

Any questions?

You can find me at dwallace@az.gov



Early Literacy Policy - State Spotlights

Cari Miller, Early Literacy Director



Assessment/Parent Notification

- Universal statewide early literacy screening/progress monitoring
- Parent notification

Instruction/Intervention

Individual reading plans for students identified with a reading deficiency, including:

- Evidence-based interventions during school, and/or before/after school
- Summer Reading Camps
- Home reading strategies or programs for parents
- Regularly monitor student progress

Supports

- Statewide training on science of reading, and job-embedded training via reading coaches
- Preparing teacher candidates to have the knowledge and skill to teach all kids to read
- Funding and reprioritization of existing local, state and federal funds for early literacy

Retention/Intervention

- Retention for students severely below grade level (Level 2 & above for promotion; 19%)
- Ensure one test on one day is NOT the sole determining factor (state test, alt test, portfolio)
- Good cause exemptions for “some” students (ELLs w/ less than two yrs of English instruction, SWDs already retained once, any student already retained twice K-3)
- Retention means more intensive interventions from a highly effective teacher



For Students

A highly effective teacher

Summer Reading Camps

More time with evidence-based reading instruction and intervention

Daily small group explicit and systemic intervention targeted at student reading needs

More frequent progress monitoring

Before/after school supports

For Parents

Regular written communication about student progress

Read at home plan

The option of a mentor and/or tutoring for their child

Parent Workshops

Implementation Matters!



Key Components for Successful Policy Implementation





Just Read, Florida! Activities

- Training of teachers, reading coaches, and principals, face-to-face and online reading courses
- Individual reading plans, portfolio and alternative assessment guidance
- Families Building Better Readers (parent training)
- Monitoring of implementation/progress (Coordinators/PMRN)

Professional Development for Teachers:

- Just Read, Florida! Leadership Conference & K-3 Reading Academies
- Florida Center for Reading Research www.fcrr.org
- Reading Coaches

For teachers in the pipeline:

- Revision of K-12 reading certification test, to include latest reading research
- Increased required reading courses in Colleges of Education to focus on the science of reading and data-based decision making

Funding:

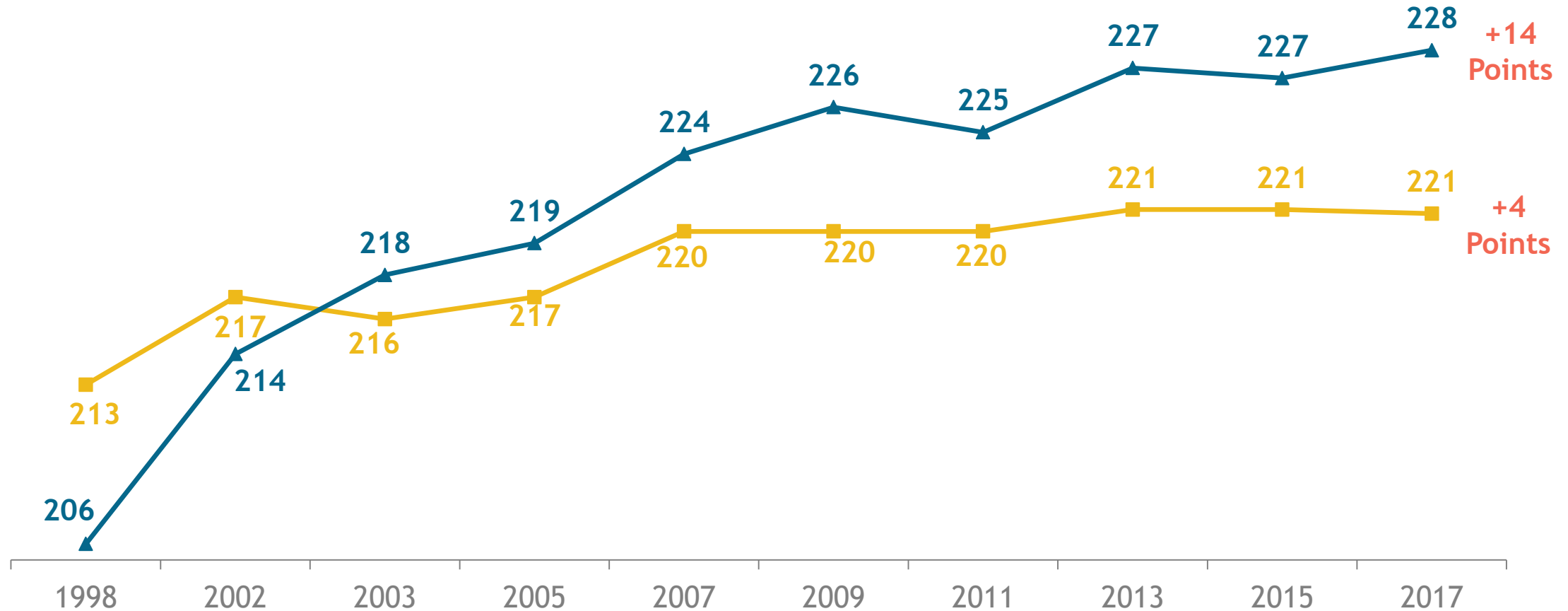
Reading First grant: \$45 million per year for 6 years; 5% supported state-level implementation support: assessment system, statewide professional development, Director and Regional Coordinators, FCRR (research center); 95% granted to districts: reading coach, SBRR curriculum, instruction and intervention



Florida is ranked 5th in the nation for 4th grade reading.

Average NAEP 4th Grade Reading Scores, 2002-2017

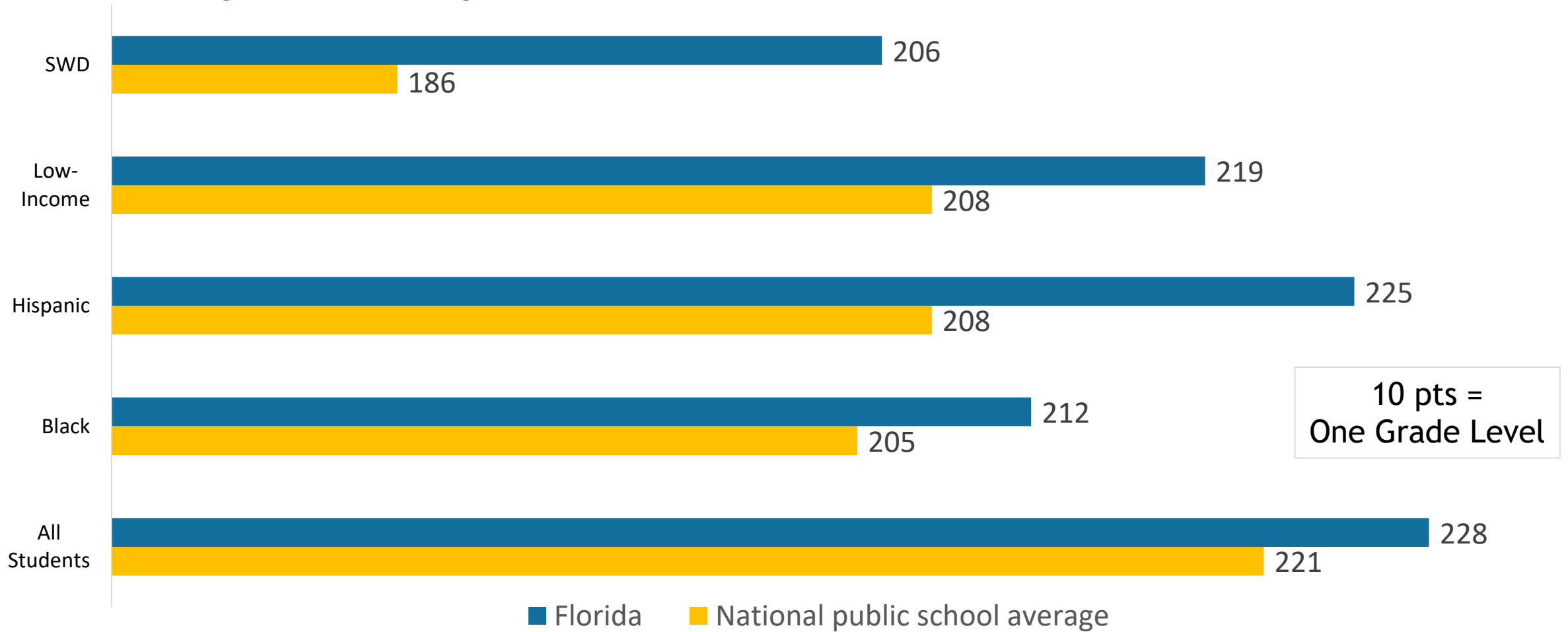
■ National Public ▲ Florida



Florida 4th Grade Reading Performance on 2017 NAEP



Florida students outperformed the national average in EVERY subgroup for fourth grade reading





Assessment/Parent Notification

- Statewide early literacy assessment system, Prek - Grade 3
- Parent notification

Instruction/Intervention

Individual reading plans for students identified with a reading deficiency, including:

- Evidence-based interventions during school, and/or before/after school
- Home reading strategies or programs for parents
- Requires schools to engage parents and communicate with them regularly

Supports

- Statewide training on the science of reading, and job-embedded training in low-performing schools via reading coaches
- Preparing teacher candidates to have the knowledge and skill to teach all kids to read through requiring passage of a reading test for certification

Retention/Intervention

- Retention for students severely below grade level (raised the bar for 2018-2019 school year: Level 3 & above for promotion; 22%)
- Ensure one test on one day is NOT the sole determining factor (state test, alt test)
- Good cause exemptions for “some” students
- Retention means more intensive interventions from a highly effective teacher



Key Components

- Created Additional Offices to Support Implementation
 - ✓ Early Childhood Director
 - ✓ State Literacy Director (K-12)
 - ✓ Student Intervention Services Director (K-12)
- Procured statewide literacy training - Language Essentials for Teachers of Reading and Spelling (LETRS) - for Early Childhood, K-3 Teachers, K-8 SPED Teachers & Elementary Principals
- Provided Regional Literacy Trainings (Pre-K-12 teachers, administrators, support staff, etc.)
- Reading coach model/supports for teachers
- Supplied literacy resources to K-3 teachers and parents
- Awarded \$3.8 million in literacy grants to 34 schools to improve literacy instruction
- Launched Statewide Literacy Campaign: Strong Readers=Strong Leaders
- Fall of 2018 - increased communications through LBPA Communications Campaign

Funding: Year 1 - \$9.5 million; Years 2-6 - \$15 million/year



State Literacy Director K-12 (1) facilitates the state's literacy efforts to ensure that all students are proficient readers by third grade, meet or exceed state standards in reading, and graduate ready for the literacy demands of career and college.

Assistant State Literacy Coordinators (3) provide oversight and training; support and monitor statewide implementation.

Regional Literacy Coordinators (15) provide coaching, training, and modeling to teachers in K-3 literacy support schools 2-3 days per week and support regional groups of literacy coaches.

Literacy Coaches (over 75) provide coaching, training, and modeling to K-3 teachers in 2 literacy support schools 2-3 days per week.



- 3rd grade reading pass rate has increased annually since test was first administered in 2015
- Passing score will be raised in 2018-19 to move closer to demonstrating proficiency

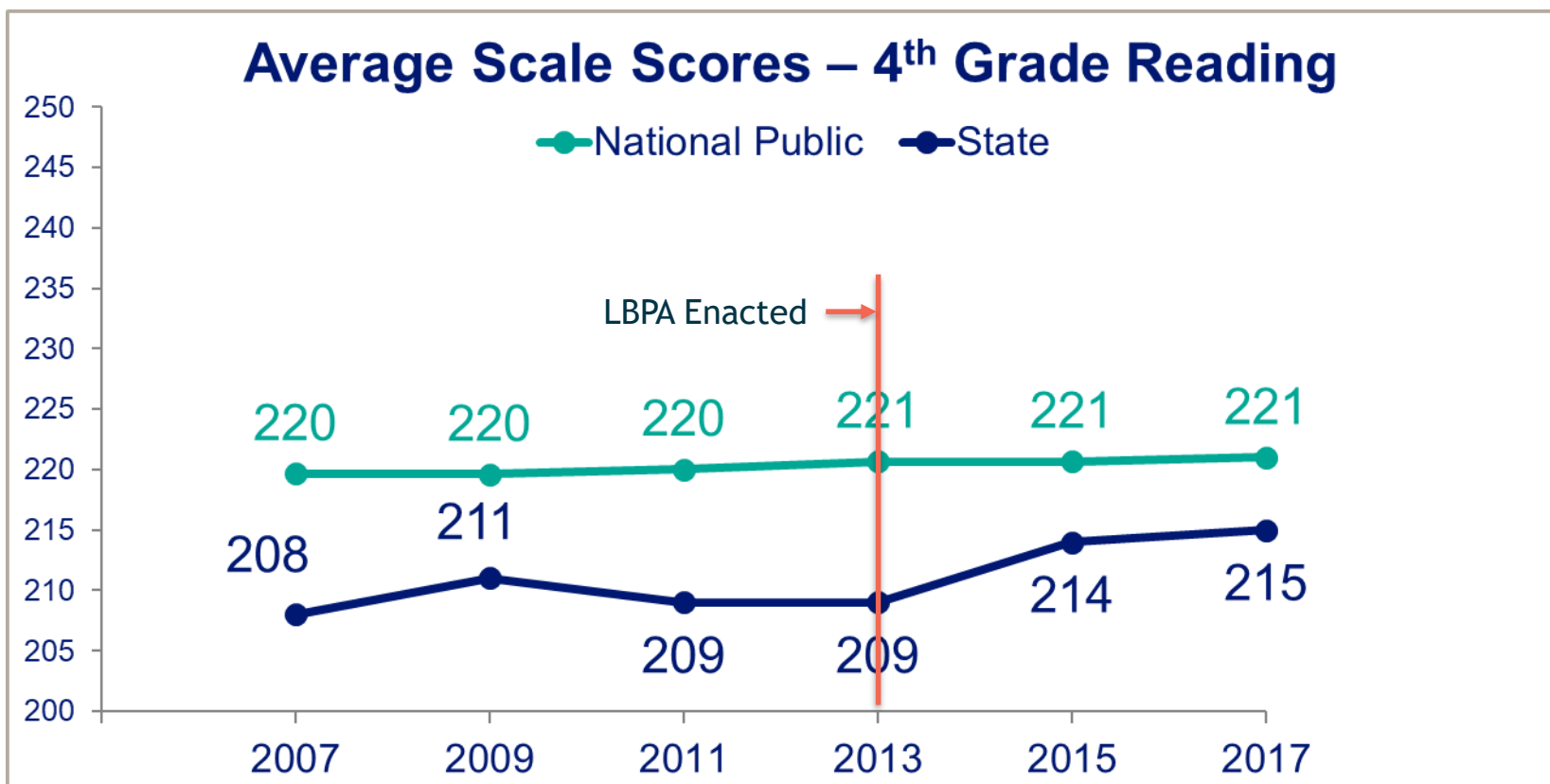
THIRD GRADERS



Mississippi 4th Grade Reading Performance on 2017 NAEP



Mississippi is **2nd** in the nation for gains in 4th grade reading!





Assessment/Parent Notification

- Universal statewide early literacy screening/progress monitoring
- Parent notification

Instruction/Intervention

- Evidence-based interventions during school, and/or before/after school
- Summer Reading Camps for grades 1-3 struggling readers
- Home reading strategies or programs for parents
- Regularly monitor student progress

Supports

- Preparing teacher candidates to have the knowledge and skill to teach all kids to read
- Funding and reprioritization of existing local, state and federal funds for early literacy

Retention/Intervention

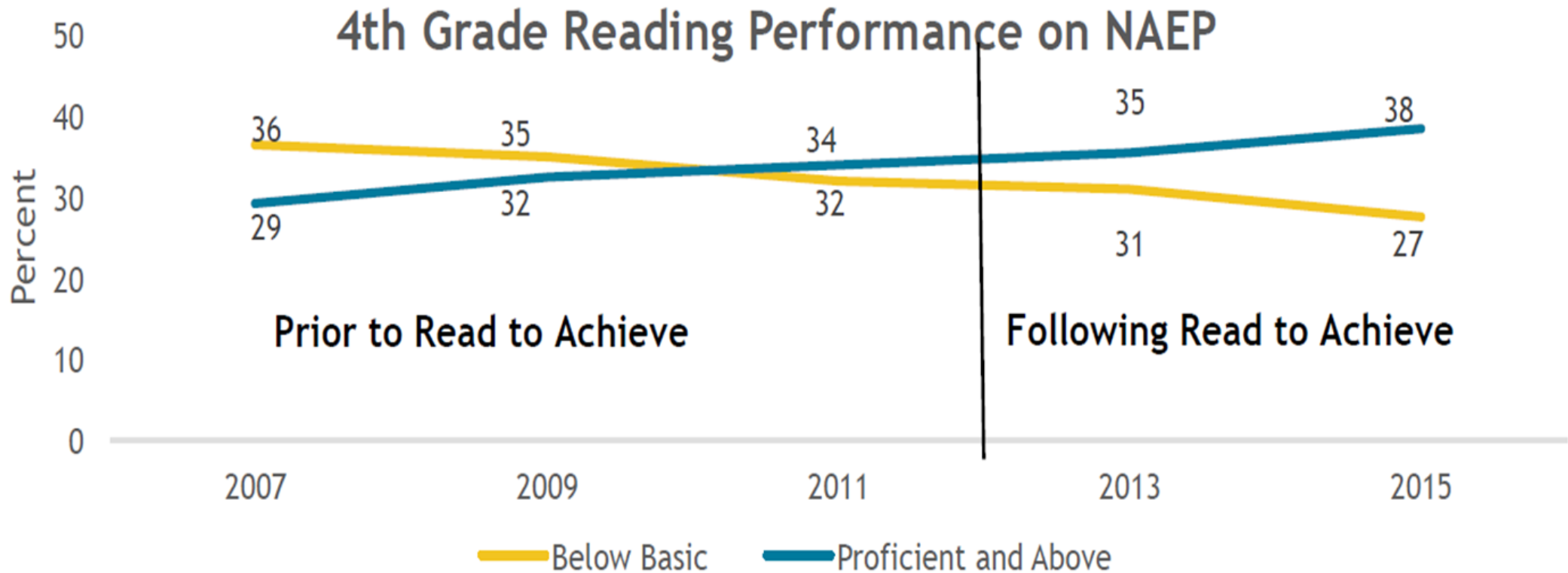
- Retention for students severely below grade level (score Level 3 or 4 for promotion; 32%)
- Ensure one test on one day is NOT the sole determining factor (state test, alt test, portfolio)
- Good cause exemptions for “some” students (ELLs w/ less than two yrs of English instruction, SWDs already retained once, any student already retained twice K-3)
- Retention means more intensive interventions from a highly effective teacher



Key Components of Implementation

- One director and 8 regional consultants and one charter school consultant
- One universal statewide assessment system K-3: mCLASS:Reading 3D™
- North Carolina Read to Achieve Guidebook - structural framework for the program and includes charts, flowcharts, narratives and common language descriptions of the law
- Provide a variety of technical support and professional development opportunities for school districts.
 - 33 professional development trainings/activities based on effective research-based instruction available online
 - Sequential technical assessment/instruction assistance each year:
 - ✓ Year 1-2: Use of assessment; train-the-trainer model/Regional Consultant support quality administration
 - ✓ Year 3-4: Using assessment to drive instruction and intervention
- RtA LiveBinders - web-based resource that also includes narrated PowerPoints, instructional videos, parent brochures, etc. (all things RtA/early literacy)
- Increased focus on summer reading camps attendance and quality

Funding: \$1.1m State Staff/Implementation, \$26m for Summer Camps (grades 1-3), \$6.3m for annual assessment subscriptions, and revolving device replacement roughly \$4m





The law required the Indiana State Board of Education (ISBOE) to develop rules regarding interventions for students with reading deficiencies in grades 1-3. The rules require:

- District selected comprehensive assessment system to screen and monitor progress of students.
- Early identification of students who have a reading deficiency.
- Schools to prioritize remediation resources toward students in grades 1-3 who are identified as deficient in reading.
- Intervention services for any student identified with a reading deficiency and specific intervention services for retained third-grade students, including a home reading program that parents can implement.
- Retention as a last resort, with good cause exemptions to recognize the needs of some students.
- Administration of IREAD-3, the assessment used to measure reading proficiency of third graders. Students have two chances to pass the test to demonstrate readiness for promotion to fourth grade (10%).



Key Components

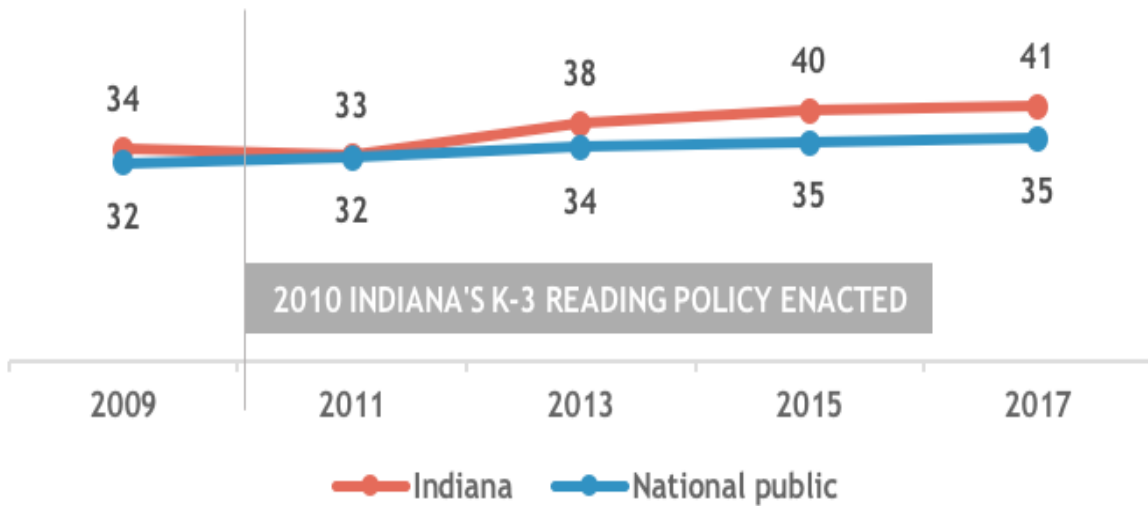
- Leadership established K-3 reading as a priority policy
- 4 staff consisting of an assistant director and three team members housed in the School Improvement and Title Programs division
- School literacy plans: assessment system, professional development, curriculum and instruction and intervention
- Face to face training on the science of reading and technical assistance; now web-based trainings are provided
- Early identification of students with reading difficulties
- Superintendent of Public Instruction disseminates weekly updates that frequently include timely information about reading plan requirements, assessments and grant opportunities

Funding: Unknown

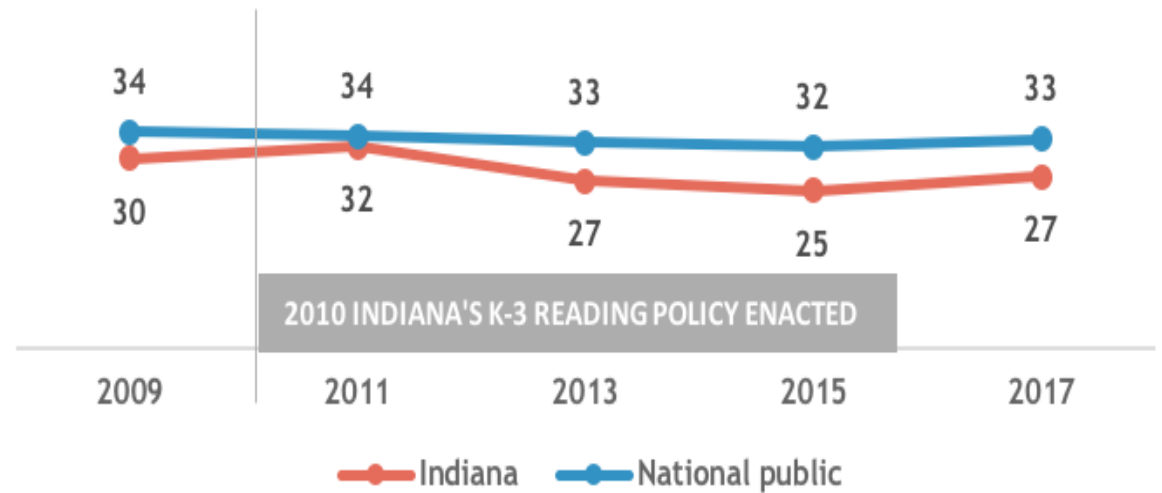
Indiana 4th Grade Reading Performance on 2017 NAEP



NAEP FOURTH GRADE READING PERCENT PROFICIENT & ABOVE



NAEP FOURTH GRADE READING PERCENT BELOW BASIC

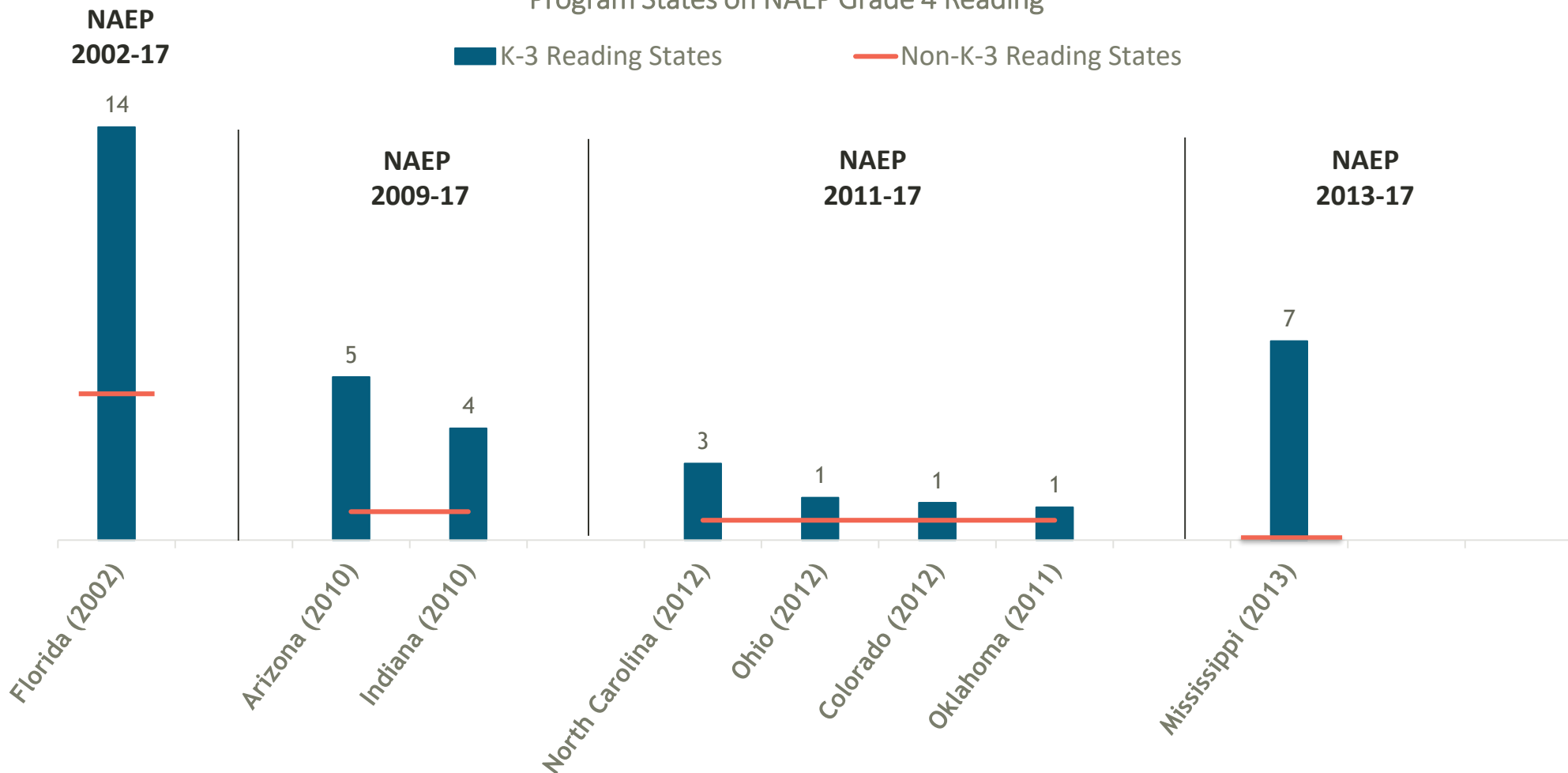


K-3 Reading Policies Help Students Advance



Eight states with comprehensive K-3 reading programs made greater improvements than the average of states without such programs.

Change in Average Scale Scores for K-3 Reading Program States vs the Average of Non-K-3 Reading Program States on NAEP Grade 4 Reading





ExcelinEd

Thank You!

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Comprehensive K-3 Reading Policy

Fundamental Principles State Analysis

ExcelinEd Policy Toolkit - 2018

The following is an analysis of states that have law or regulation in some form based on the fundamental principles of ExcelinEd's Comprehensive K-3 Reading Policy.

| STATE* Year Policy Passed | ASSESSMENT, INSTRUCTION & INTERVENTION | | | | | | RETENTION & INTENSIVE INTERVENTION | | | | | POLICY SUPPORT | |
|------------------------------------|--|---|--|---|--|--|---|---|--|--|--|---------------------------------------|---|
| | Screener/ Identify Students w/ a Reading Deficiency K-3 | Monitor Progress Students w/ a Reading Deficiency K-3 | Notify Parents Students Identified w/ a Reading Deficiency | Individual Reading Plan and/or Interventions for Students w/ a Reading Deficiency | Parent Engagement/ Home Reading Strategies/ Program | Intervention During Summer and/or After School Hours | Retention Required at 3rd Grade | Initial Determinant for Retention Based on State Assessment (Cut Score) | Multiple Options to Demonstrate Required Reading Skills for Promotion | Exemptions for Some Students (e.g. ELL, SWD, 1x, 2x) | Retention Means More Intensive Intervention | Reading Coaches & Funding | State, District or School Reading Plans |
| FL 2002 | ✓ | ✓ | ✓ | ✓ | ✓ | Summer | ✓ | State lowest of 5 levels | State test, Alt test & portfolio | SWD w/ 1x, 2x, ELL | ✓ | Coach Support & Funding | K-12 Reading Plans |
| NC 2012 | ✓ | ✓ | ✓ | ✓ | ✓ | Summer | ✓ | State lowest 2 of 5 levels | State test, Alt test & portfolio | 2x, ELL, SWD | ✓ | Coach Support & Funding | K-3 Reading Plans |
| NV 2015 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 2018-2019 | State Pending - State Board determination | State test, Alt test & portfolio | SWD w/1x, 2x, ELL | ✓ | Learning Strategist Support & Funding | K-12 State Literacy Plan & K-3 Reading Plans |
| OH 2012 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | State lowest of 5 levels (cut score for promotion increases each year) | State test 2 times & Alt test | SWD w/1x, 2x, ELL | ✓ | Grant Funding K-3 | |
| MS 2013 | ✓ | Target schools/ Retained 3rd graders | ✓ | ✓ | ✓ | District decision | ✓ | State lowest 15% (until test cut scores are established) | State test & Alt test | SWD w/1x, 2x, ELL | ✓ | Coach Support & Funding | |
| SC 2014 | ✓ | ✓ | ✓ | ✓ | ✓ | Summer | Parent may appeal to Supt. in writing with compelling evidence for promotion within 2 weeks of retention notification | State lowest of 3 levels | State test, Alt test & portfolio | 1x, SWD w/2 yr. intervention, ELL | ✓ | Coach Support & Summer Camp Funding | PreK-12 Reading Plans |



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| MI 2016 | ✓ | ✓ | ✓ | ✓ | ✓ | Summer encouraged | 2019-2020 | State More than 1 grade level behind on state test as determined by Department | State test, Alt test & portfolio | 1x, SWD, ELL, Parent request/Supt approval, Proficient in all other subjects, Not provided an improvement plan | ✓ | Coach support & funding | |
| IN 2010 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | State created test of reading Requires “passing” score | State test offered 3 times | 2x, SWD, ELL | ✓ | | ✓ |
| AZ 2010 | ✓ | ✓ | ✓ | ✓ | ✓ | Summer | ✓ | State lowest of 4 levels | State test, Alt test | SWD, ELL | ✓ | Funding K-3 (Move on When Reading) | PreK-12 Reading Plans |
| OK 2011 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | Committee makes make retention decision - must be unanimous | State lowest of 4 levels | State test, Alt test & portfolio | SWD w/1x, 2x, ELL, extenuating circumstances | ✓ | Coach support, grant funding and per-pupil funding for students with reading deficiencies | K-5 Reading Plans |
| CO 2012 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | Joint school & parent decision w/ final decision made by Supt. | State and Local Student w/ significant reading deficiency | | 1x, ELL, SWD | ✓ | Grant funding and per-pupil funding for students with reading deficiency | |
| WA 2013 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | Must receive intervention services; grade placement is joint parent & school decision | State lowest of 4 levels | | ELL, SWD | Interventions for third graders scoring below basic; retention not required | | |



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| IA 2012 | ✓ | ✓ | ✓ | ✓ | | Summer | Either attend summer school for promotion or be retained | State Board approved Local and/or State test(s) Reading deficit cut scores established by State Board | 1x, ELL, SWD | | | ✓ | |
| VA 2013 | ✓ | ✓ | ✓ For 3rd grade students deficient in reading | ✓ | | ✓ | No retention requirement; must receive intervention services prior to promotion | | | | | | |
| NE 2018 | ✓ | ✓ | ✓ | ✓ | District decision | Summer | | | | | | | |
| NM 2012 | ✓ | Grades K-1 | ✓ | ✓ | | ✓ | Not specific to reading - Grades 1-3 students not proficient; parents can refuse 1st retention, but student failing to become proficient the next year must be retained | | Retention decisions for SWD is made in accordance with the provisions of the IEP | | | K-3 Reading Plans for Reads to Lead! Grantees only | |
| MN 2010 | ✓ | | ✓ | ✓ | ✓ | ✓ | | | | | | | |
| UT 2010 | ✓ | | ✓ | ✓ | ✓ | ✓ | | | | | | ✓ | |



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| ID 2016 | ✓ | | ✓ | ✓ | ✓ | ✓ | | | | | | Funding for interventions | |
| DE | ✓ | ✓ | ✓ | ✓ | | ✓ | SB255 (2014) eliminated all consequences including retention until assessment system is fully implemented | State lowest 2 of 4 levels | ✓ | 2x or if student doesn't demonstrate proficiency on test at end of summer school committee can use district assessments, EOC, grades with work products as evidence for promotion | | | |
| TX | Grades K-2 | ✓ | ✓ | ✓ | | ✓ | 3 attempts to pass assessment; parent may appeal, then placement committee decision to promote - must be unanimous | State | | ✓ | | | |
| GA 2002 | ✓ | | ✓ | ✓ | | | 2 attempts to pass assessment; parent may appeal, then placement committee or IEP team decision to promote - must be unanimous | State | | ✓ | | | |



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| MO | ✓ | | ✓ | ✓ | | Summer | Retention required at grade 4 for students below grade level in grade 3 and still below grade level at end of 4th grade summer school | Local | | | 1x, SWD, ELL | | |
| CA | End of Grades 2-3 | | ✓ | ✓ | | ✓ | Retention required for any student not proficient in reading, ELA, or Math, with emphasis on reading (not specific to grade 3) | | | | Teacher recommends retention is not appropriate; Rec. includes intervention necessary to assist student to attain acceptable achievement in next grade | | |
| DC 2012 | ✓ | ✓ | ✓ | ✓ | | Summer | ✓ | | | | | | |
| NY | ✓ | ✓ | ✓ | ✓ | | | | | | | | | |
| AR 2012 | ✓ | | ✓ | ✓ | | | Retention for 3-8 graders not passing benchmark test and who fails to participate in the subsequent AIP (not specific to reading) | | | | SWD | | ✓ |



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| WY | ✓ | ✓ | | ✓ | | | | | | | | | |
| CT 2012 | ✓ | ✓ | Pilot only | Pilot only | Pilot only | Pilot only Summer | K-3 reading pilot for priority school districts only (intervention for promotion unless supt. exempts student from "intervention for promotion" based on student's progress with personal reading plan. | | | | | Pilot only (Reading Specialist) | Schools not meeting the 85% proficiency goal for K-3 students must develop a school improvement plan |
| WI 2012 | ✓ | | ✓ | ✓ | | | | | | | | | ✓ |
| KY 2012 | ✓ | ✓ | | ✓ | | | | | | | | | |
| MD | | | | ✓ | | | Either enroll in an intervention program or be retained | Local and State | | | 1x, SWD | | |
| TN 2012 | RtI2 Regulation | RtI2 Regulation | RtI2 Regulation | RtI2 Regulation | | Summer Camp Grants for economically disadvantaged struggling readers in 1-3 grades | No set criteria w/ intervention for promotion | | | ✓ | SWD | Coaching Network & funding | |



| STATE* Year Policy Passed | ASSESSMENT, INSTRUCTION & INTERVENTION | | | | | | RETENTION & INTENSIVE INTERVENTION | | | | | POLICY SUPPORT | |
|------------------------------------|--|---|--|---|--|--|--|---|--|--|--|---------------------------------|---|
| | Screener/ Identify Students w/ a Reading Deficiency K-3 | Monitor Progress Students w/ a Reading Deficiency K-3 | Notify Parents Students Identified w/ a Reading Deficiency | Individual Reading Plan and/or Interventions for Students w/ a Reading Deficiency | Parent Engagement/ Home Reading Strategies/ Program | Intervention During Summer and/or After School Hours | Retention Required at 3rd Grade | Initial Determinant for Retention Based on State Assessment (Cut Score) | Multiple Options to Demonstrate Required Reading Skills for Promotion | Exemptions for Some Students (e.g. ELL, SWD, 1x, 2x) | Retention Means More Intensive Intervention | Reading Coaches & Funding | State, District or School Reading Plans |
| WV | | | | ✓ | ✓ | 3rd grade students only | Student may be required to attend summer school for promotion - teacher decision | | SWD | | | | |
| LA | ✓ | | | ✓ | | | | | | | | | |
| RI | ✓ | | | ✓ | | | | | | | | | |
| ND | Kindergarten & grades 2-3 | | | | | Summer | | | | | | Tutor/Coach Support | |

*States are listed in order of how closely they are aligned with ExcelinEd’s comprehensive K-3 Reading policy.

Glossary

- ELL - English Language Learners with less than two years of English instruction receive an exemption
- SWD - all students with disabilities receive an exemption
- 1x - retained once and received interventions for 2 years
- 2x - retained twice and received interventions for 2 years

Decoding What Works: Sharing the Stories of Successful Schools

Sean Ross

Director of English Language Arts and Move On When Reading
Arizona Department of Education

Decoding What Works: Partnership



When Arizona Reads, Arizona Thrives



Decoding What Works: Objectives

1. **Identify** the schools in Arizona who have the largest growth in 3rd grade AzMERIT ELA scores between 2015-2018
2. **Interview** educators and parents at select schools to identify practices that have most contributed to student growth
3. **Share** these case studies with schools across the state
4. **Build** networks of schools to support greater student growth

Decoding What Works: Percent Growth

Table 1.0. Top 10 Schools Ranked by Most Improvement in Percentage of 3rd Grade Students Passing ELA AzMERIT from 2015 to 2018, Broken-down by District/Charter

| LEA | School | CTDS Number | County | % of Students Passing | | | | Δ Percent Points 2015 to 2018 | 3Yr. Avg. School FRL Rate | 3Yr. Avg. 3rd Grade Class Size | Locale |
|----------|--|-------------|------------|-----------------------|--------|--------|--------|-------------------------------|---------------------------|--------------------------------|--------|
| | | | | 14-'15 | 15-'16 | 16-'17 | 17-'18 | | | | |
| District | Roosevelt School | 140401109 | Yuma | 9 | 30 | 33 | 52 | 43 | 90% | 56 | City |
| | Aguila Elementary School | 70363101 | Maricopa | 5 | 75 | 82 | 45 | 40 | 87% | 20 | Rural |
| | Mohawk Valley School | 140417101 | Yuma | 11 | 41 | 52 | 50 | 39 | 77% | 19 | Rural |
| | MacArthur Elementary School | 70204129 | Maricopa | 34 | 72 | 84 | 71 | 37 | 35% | 74 | City |
| | Navajo Elementary School | 70248113 | Maricopa | 31 | 33 | 48 | 68 | 37 | 60% | 61 | City |
| | Kyrene del Norte School | 70428143 | Maricopa | 28 | 30 | 66 | 65 | 37 | 51% | 88 | City |
| | David Crockett Elementary School | 70431102 | Maricopa | 13 | 13 | 9 | 46 | 33 | 97% | 74 | City |
| | Aguilar School | 70403128 | Maricopa | 15 | 24 | 31 | 47 | 32 | 78% | 90 | City |
| | Beaver Creek School | 130326101 | Yavapai | 14 | 24 | 15 | 46 | 32 | 74% | 30 | Rural |
| | Tsaile Elementary School | 10224165 | Apache | 5 | 25 | 27 | 36 | 31 | 87% | 46 | Rural |
| Charter | Sage Academy | 78688101 | Maricopa | 7 | 10 | 50 | 53 | 46 | 59% | 19 | City |
| | Mexicayotl Charter School | 128703001 | Santa Cruz | 19 | 26 | 83 | 56 | 37 | 96% | 19 | Town |
| | American Heritage Academy - Camp Verde | 138754003 | Yavapai | 26 | 36 | 35 | 63 | 37 | 67% | 18 | Town |
| | Imagine Bell Canyon | 78972101 | Maricopa | 22 | 50 | 35 | 57 | 35 | 67% | 40 | City |
| | Avalon Elementary | 78901003 | Pinal | 21 | 27 | 32 | 55 | 34 | 85% | 40 | Suburb |
| | Heritage Elementary School | 78985101 | Maricopa | 28 | 35 | 27 | 59 | 31 | 73% | 95 | Rural |
| | Carden of Tucson | 108777101 | Pima | 44 | 29 | 25 | 75 | 31 | 0% | 16 | Suburb |
| | The Paideia Academy of South Phoenix | 78206001 | Maricopa | 27 | 28 | 33 | 56 | 29 | 79% | 86 | City |
| | All Aboard Charter School | 78967101 | Maricopa | 53 | 95 | 73 | 82 | 29 | 84% | 18 | City |
| | Leading Edge Academy at East Mesa | 78968103 | Maricopa | 53 | 73 | 70 | 81 | 28 | 55% | 18 | Suburb |

Decoding What Works: Reduction in Percentage of Minimally Proficient

Table 3.0. Top 10 Schools Ranked by Most Improvement in Percentage of 3rd Grade Students Scoring "Minimally Proficient" on the ELA AzMERIT from 2015 to 2018, Broken-down by District/Charter

| LEA | School | CTDS Number | County | % of Students scoring MP | | | | Δ Percent Points 2015 to 2018 | 3Yr. Avg. School FRL Rate | 3Yr. Avg. 3rd Grade Class Size | Locale |
|----------|---|-------------|------------|--------------------------|--------|--------|--------|-------------------------------|---------------------------|--------------------------------|--------|
| | | | | 14-'15 | 15-'16 | 16-'17 | 17-'18 | | | | |
| District | Roosevelt School | 140401109 | Yuma | 77 | 54 | 58 | 35 | -42 | 90% | 56 | City |
| | Navajo Elementary School | 70248113 | Maricopa | 54 | 61 | 38 | 15 | -39 | 60% | 61 | City |
| | Tsaile Elementary School | 10224165 | Apache | 85 | 55 | 55 | 48 | -37 | 87% | 46 | Rural |
| | David Crockett Elementary School | 70431102 | Maricopa | 80 | 77 | 82 | 46 | -34 | 97% | 74 | City |
| | John R Davis School | 70466018 | Maricopa | 90 | 78 | 77 | 59 | -31 | 82% | 52 | City |
| | Mohawk Valley School | 140417101 | Yuma | 72 | 27 | 29 | 43 | -29 | 77% | 19 | Rural |
| | Mountain Meadows Primary | 90206101 | Navajo | 63 | 64 | 52 | 35 | -28 | 62% | 39 | Rural |
| | John F Kennedy School | 110215101 | Pinal | 78 | 71 | 74 | 50 | -28 | 87% | 30 | Town |
| | Wildflower School | 70444106 | Maricopa | 52 | 46 | 31 | 25 | -27 | 60% | 50 | Suburb |
| | Tres Rios Elementary School | 70465108 | Maricopa | 81 | 73 | 70 | 54 | -27 | 81% | 101 | City |
| Charter | Mexicayotl Charter School | 128703001 | Santa Cruz | 63 | 53 | 11 | 13 | -50 | 96% | 19 | Town |
| | American Leadership Academy Anthem South Campus | 78725006 | Pinal | 64 | 46 | 65 | 29 | -35 | 0% | 46 | Rural |
| | Sage Academy | 78688101 | Maricopa | 73 | 57 | 50 | 40 | -33 | 59% | 19 | City |
| | Leading Edge Academy at East Mesa | 78968103 | Maricopa | 35 | 20 | 20 | 6 | -29 | 55% | 18 | Suburb |
| | AmeriSchools Academy - Camelback | 108722001 | Maricopa | 59 | 63 | 37 | 30 | -29 | 77% | 23 | City |
| | The Paideia Academy of South Phoenix | 78206001 | Maricopa | 58 | 57 | 53 | 30 | -28 | 79% | 86 | City |
| | Imagine Bell Canyon | 78972101 | Maricopa | 58 | 31 | 45 | 30 | -28 | 67% | 40 | City |
| | Heritage Elementary School | 78985101 | Maricopa | 52 | 50 | 62 | 24 | -28 | 73% | 95 | Rural |
| | Avalon Elementary | 78901003 | Pinal | 60 | 58 | 63 | 35 | -25 | 85% | 40 | Suburb |
| | The Odyssey Preparatory Academy - Sienna Hills | 78561006 | Pinal | 56 | 57 | 47 | 33 | -23 | 0% | 52 | Suburb |

Decoding What Works: Criteria for School Selection

- Percent Growth
- Percent Reduction in Minimally Proficient
- Locale
 - City, Rural, Suburban, Town
- County
- District/Charter
- Percent Free and Reduced Lunch



Decoding What Works: Initial Selected Schools*

| School | % Growth | % Reduction in MP | Locale | County | District/Charter | % FRL |
|-------------------|------------------|-------------------|----------|----------|--------------------------------------|-------|
| Sage Academy | 46% (7%-53%) | 33% (73%-40%) | City | Maricopa | Charter | 59% |
| Wildflower School | 27% (33%-60%) | 27% (52%-25%) | Suburban | Maricopa | District (Avondale Elementary) | 60% |

*There is an initial list of 8 schools, which come from 6 counties. The schools above are the first two to be contacted.

Decoding What Works: School Interviews

1. Superintendent
2. Principal
3. K-3 Teacher(s)
4. K-3 Reading
Coach/Interventionist
5. Parent(s)



Decoding What Works: Sharing Each School's Story

The Decoding What Works Project will

- Identify and highlight effective K-3 literacy practices in Arizona
- Tell the stories of how schools are building a generation of successful readers
- Build networks of schools to support K-3 reading





Exploratory Analysis
Move On When Reading



OCTOBER 2018

How School Literacy Plans Connect to Third-Grade Reading Achievement

By Robert Vagi, PhD



When Arizona Reads, Arizona Thrives





Introduction

To ensure all children are reading by third grade, the Arizona legislature passed a series of laws collectively known as “Move On When Reading.” Arizona’s Move On When Reading policy is designed to provide kindergarten through third grade students high-quality, evidence-based reading instruction. As part of this effort, schools are required to report literacy plans to the Arizona Department of Education. School literacy plans include a variety of information including a school’s core literacy programs, programs used to identify struggling readers, benchmark assessment data, and programs used to support students who have been retained.

Read On Arizona and the Arizona Department of Education have partnered to better understand how the programs and interventions reported in the school literacy plans are related to third grade reading achievement. This study is meant to take an initial look at the data that focuses on schools’ core reading programs and universal screeners. Future studies, dependent on available quality data, will examine additional aspects of the school-level literacy plans including professional development, time spent on reading instruction, and support programs for retained students. With that in mind, through this study, we sought to answer the following questions:

1. Are specific core literacy programs associated with higher rates of third grade reading achievement?
2. Are specific universal screening tools associated with higher rates of third grade reading achievement?
3. To what extent are school and district characteristics (i.e. poverty, enrollment, etc.) associated with different rates of third grade reading achievement?

The following sections briefly summarize the data and methods used in this study, the findings, and potential implications for policy and practice.

About the Author

Robert Vagi is a research associate at the Center for Applied Research and Educational Improvement at the University of Minnesota. Prior to that, he was a senior policy analyst at Morrison Institute for Public Policy at Arizona State University. Robert has a PhD in Educational Policy and Evaluation from the Mary Lou Fulton Teachers College at Arizona State University. His research has been featured in several academic and media outlets including PBS’s Horizon, *The Arizona Republic* and the Brookings Institution’s Brown Center Chalkboard. Before beginning a career in education research, he was a public school teacher in Phoenix, Arizona for six years.

Data

The data used in these analyses came from several sources. The primary sources of data were the school-level third-grade literacy plans submitted to the Arizona Department of Education during the 2015-2016 school year.¹ Specifically, the analyses focused on two aspects of these plans: schools' core reading programs and their universal screening tools.

A core reading program is the primary tool used for reading instruction at the elementary level. Core reading programs integrate all of the key components of literacy for each grade level in a strategic sequence of increasing complexity. Core reading programs are intended to be used in multiple grade levels to take advantage of the incorporation of various skills into one coherent program that builds on student knowledge and previously taught skills from year to year. These programs provide an organized scope and sequence which emphasizes mastery of component reading skills necessary for later reading success. Effective core reading programs share four important features: a clearly articulated statement of strong evidence of effectiveness, explicit instructional strategies, consistent organizational and instructional routines, and a focus on key pillars of early literacy.

Universal screener assessments consist of brief tests focused on targeted skills that are highly predictive of the likelihood of success on meeting or exceeding curricular benchmarks. These assessments are used to identify students who may be at risk, monitor student progress, and/or screen for special program placement or intervention.

In addition to the literacy plan data, we drew from data made publicly available by the Arizona Department of Education and the U.S. Department of Education. These data included information about a variety of school and district characteristics including school- and district-level poverty, school and district size, the percentage of minority students (i.e. students who did not identify as "white") at the school- and

district-levels, charter school status, and whether a school was in a rural area.

The main outcome in these analyses was school-level achievement on the third grade AzMERIT English Language Arts (ELA) test. AzMERIT is Arizona's statewide learning assessment. AzMERIT replaced the Arizona Instrument to Measure Standards (AIMS) in 2015 and measures student learning based on Arizona's English Language Arts Standards. Students' scores on AzMERIT place them into one of four performance levels with performance level 1 indicating minimal proficiency and performance level 4 indicating a high level of proficiency. Students at performance levels 3 and 4 are considered "passing." In our analyses, we focused specifically on the percentages of students passing and at the lowest achievement level (performance level 1) at the school-level.

In each analysis, schools were only included if complete data were provided for all the variables of interest. This resulted in a final sample of 953 schools. Compared to the state, smaller percentages of these schools were charter schools (18% vs. 24%) and rural schools (11% vs. 15%). Additionally, schools in the final sample, on average, enrolled more students (586 vs. 533), were in larger districts (10,366 vs. 8,986), and enrolled greater percentages of minority students (64% vs. 61%).



Effective core reading programs share four important features: a clearly articulated statement of strong evidence of effectiveness, explicit instructional strategies, consistent organizational and instructional routines, and a focus on key pillars of early literacy.

TABLE 1. Descriptive statistics for complete and final samples

| Variable | All Schools | | Schools in Final Sample | |
|--|-------------|--------------------|-------------------------|--------------------|
| | Mean | Standard Deviation | Mean | Standard Deviation |
| SCHOOL CHARACTERISTICS | | | | |
| Charter School (Percent) | 24%*** | | 18%*** | |
| School Enrollment | 533*** | 294 | 586*** | 278 |
| School Percent Poverty (FRL) | 58% | 32% | 57% | 32% |
| School Percent Minority | 61%* | 28% | 64%* | 27% |
| Rural (Percent) | 15%** | | 11%** | |
| Percent Passing third Grade AzMERIT ELA | 41% | 20% | 39% | 18% |
| Percent at Performance Level 1 third Grade AzMERIT ELA | 45% | 19% | 46% | 19% |
| DISTRICT CHARACTERISTICS | | | | |
| District Total | 8,986** | 10,311 | 10,366** | 10,640 |
| District Percent Poverty (FRL) | 55% | 30% | 56% | 28% |
| District Percent Minority | 61%** | 25% | 64%** | 24% |
| | n = 1,196 | | n = 953 | |

* indicates $p < .05$, ** indicates $p < .01$, and *** indicates $p < .001$.

Note: The final sample reflects cases where complete data were available for all predictors. The number of observations in some analyses differ slightly due to missing values on the outcome variables.



We conducted a series of analyses that examined differences in AzMERIT achievement between schools that used each of several core reading programs and those that did not.

Methods and Findings

Question 1: *Are specific core literacy programs associated with higher rates of third-grade literacy?*

To answer this question, we conducted a series of analyses that examined differences in AzMERIT achievement between schools that used each of several core reading programs and those that did not. Because schools can choose any program so long as it is “evidence-based” there were more programs reported than could be meaningfully analyzed. Therefore, we chose to limit our analyses to programs that were used by more than 5% of schools. These programs included Houghton Mifflin Reading, Journeys, MacMillian/McGraw-Hill Reading, Reading Street, Storytown, Treasures, and Trophies.

While differences in achievement based on schools’ core reading programs may be informative, a variety of factors can influence student achievement. Further, these factors might also be related to the core programs that schools use. For instance, rural schools may choose curricula that emphasize different skills and knowledge than schools in urban areas. The same might be true for schools that serve large numbers of students affected by poverty. To address this, we ran an additional set of analyses examining differences in achievement while controlling for several school and district characteristics. These included whether a school was a charter school, school and district enrollment, the percentage of students who qualified for free- and reduced-price lunch (FRL) at the school- and district-levels, the percentage of minority students at the school- and district-levels, and whether a school was located in a rural area.

In addition to differences based on specific core reading programs, the number of core reading programs used by a school may also be of interest. For example, some schools may use multiple core reading programs to address the diverse needs and learning styles of their students. If this is the case, then we would expect more students to perform well in schools with

multiple programs. Conversely, using multiple programs may result in a lack of instructional focus and could potentially lead to lower average achievement. To shed light on this issue, we examined the relationship between the number of core programs used by a school and third-grade AzMERIT achievement. Again, we conducted two sets of analyses: one that controlled for an array of school and district characteristics and one that did not.

With regard to the core reading programs, our analyses did not show any statistically significant differences (i.e. $p < .05$) in the percentage of students passing the third grade AzMERIT English language arts test. Similarly, differences in the percentage of students at performance level 1 based on core reading programs were not statistically significant. This was true in models that accounted for school and district characteristics and those that did not. Finally, none of our analyses showed statistically significant relationships between the number of core reading programs at a school and the percentage of students passing or at performance level 1.



With regard to the core reading programs, our analyses did not show any statistically significant differences (i.e. $p < .05$) in the percentage of students passing the third-grade AzMERIT English language arts test.

TABLE 2. Percentage of schools with the most commonly used reading programs

| Program | Percentage |
|--------------------------------|------------|
| Trophies | 22% |
| Houghton Mifflin Reading | 12% |
| Journeys | 10% |
| Storytown | 10% |
| Reading Street | 8% |
| Treasures | 6% |
| MacMillian/McGraw-Hill Reading | 6% |

n = 953

Note: Schools can use multiple core programs.

TABLE 3. Number of core reading programs used in third grade

| Number of Core Reading Programs Used | Number of Schools | Percentage of Schools |
|--------------------------------------|-------------------|-----------------------|
| 1 Core Program | 1,002 | 86.7% |
| 2 Core Programs | 130 | 11.3% |
| 3 Core Programs | 18 | 1.6% |
| 4 Core Programs | 2 | .2% |
| 5 Core Programs | 1 | .1% |
| More Than 5 Core Programs | 3 | .2% |

n = 953



Question 2: Are specific universal screening tools associated with higher rates of third-grade literacy?

As with the previous analyses, we chose to examine differences in AzMERIT achievement based on whether a school used a specific universal screening tool. Again, we limited our analyses to screening tools that were used by more than five percent of schools. These included AIMS Web, DIBELS, DIBELS Next, and Galileo. Our analyses focused on differences between schools that used each of these screening tools and those that did not. In these analyses, we only examined differences in the percentage of students at performance level 1. This was done because universal screening tools are meant to identify students who are struggling readers. Therefore, we would expect effective screening tools to have the strongest relationship with the number of students at the lowest level of achievement. As with the previous analyses, we conducted two sets of analyses: one that

accounted for school and district characteristics and one that did not.

In addition to differences based on specific universal screening tools, we also examined differences in student achievement based on the number of universal screening tools used by a school. Similar to core reading programs, it may be that schools with multiple screening tools are committed to identifying students with a variety of needs. Therefore, we would expect these schools to have higher levels of student achievement. Conversely, schools that use multiple screening tools may lack a focused intervention strategy. If this is the case, then these schools may have lower levels of achievement.

Our analyses did not show any statistically significant differences (i.e. $p < .05$) in the percentage of students at performance level 1 based on each of the universal screening tools described above. This was true in models that accounted for school and district characteristics and those that did not. Finally, none of our analyses showed statistically significant relationships between the number of universal screening programs used by a school and student achievement.

Finally, none of our analyses showed statistically significant relationships between the number of universal screening programs used by a school and student achievement.

TABLE 5. Percentage of schools using universal screeners

| Screener | Percentage |
|-------------|------------|
| DIBELS Next | 63.9% |
| Galileo | 18.3% |
| AIMS Web | 7.6% |
| DIBELS | 6.4% |

n = 955

Note: Two schools reported data for their universal screening programs but did not report data for their core reading programs. Additionally, schools can use more than one universal screener.

Question 3: To what extent are school and district characteristics (i.e. poverty, enrollment, etc.) associated with different rates of third-grade literacy?

A large body of research shows that factors beyond the classroom can impact student achievement. To better understand how these factors may be affecting literacy in Arizona, we ran a series of analyses that examined relationships between several school and district characteristics and student achievement. These included whether a school was a charter school, school and district enrollment, the percentage of students who qualified for free-and reduced-price lunch at the school- and district-levels, the percentage of minority students at the school- and district-levels, and whether a school was located in a rural area.

In our analyses, we examined relationships between each of these characteristics and the percentages of students passing and at performance level 1 of AzMERIT. Because many of these characteristics occur together, it can be difficult to disentangle their unique relationships with student achievement. For instance, schools with large numbers of minority students are often more likely to enroll large numbers of students living in poverty. Therefore, if a relationship exists between student achievement and both characteristics, it is unclear which is related to student achievement independent of the other. To address this, our analyses examined relationships between third-grade reading achievement and each characteristic independent of the others. In other words, we sought to identify unique relationships between each characteristic and third-grade reading achievement after accounting for all other school and district characteristics included in the analysis.

Our analyses identified several statistically significant relationships. First, the school-level percentage of students who qualified for free- and reduced-price lunch was associated with

both the percentage of students passing AzMERIT and at performance level 1. Specifically, a ten-percentage point increase in school-level poverty was associated with a two-percentage point decrease in the number of students passing AzMERIT and a two-percentage point increase in the number of students at performance level 1. Similarly, the percentage of minority students at a school was significantly related to both the percentages of students passing and at performance level 1. A ten-percentage point increase in the number of minority students at a school was associated with a four-percentage point decrease in the number of students passing AzMERIT and a four-percentage point increase of students at performance level 1. Interestingly, a ten-percentage point increase in the number of minority students at the district-level was associated with a two-percentage point increase in the number of students passing AzMERIT at the school-level. Finally, rural schools, on average, had three percent fewer students passing AzMERIT when compared with non-rural schools.



In other words, we sought to identify unique relationships between each characteristic and third grade reading achievement after accounting for all other school and district characteristics included in the analysis.

TABLE 8. Results from regression models with school and district characteristics as predictors

| School/District Characteristic | Percent Passing as the Outcome | Percent at Performance Level 1 as the Outcome |
|--------------------------------|--------------------------------|---|
| Charter School | 1.35 (1.59) | -2.90 (1.67) |
| Rural School | -3.28* (1.47) | 2.02 (1.48) |
| Enrollment (School) | .00 (.00) | .00 (.00) |
| Percent FRL (School) | -.21*** (.03) | .23*** (.03) |
| Percent Minority (School) | -.43*** (.04) | -.39*** (.04) |
| Enrollment (District) | .00 (.00) | .00 (.00) |
| Percent FRL (District) | .02 (.05) | -.06 (.05) |
| Percent Minority (District) | .16*** (.05) | -.10 (.05) |
| | <i>n</i> = 971 | <i>n</i> = 956 |

* indicates $p < .05$, ** indicates $p < .01$, *** indicates $p < .001$; These are coefficient estimates from multilevel models with schools nested in districts.

Discussion

These analyses provide initial insight into factors related to third grade literacy in Arizona. However, it is important to note that this study does not allow us to definitively say that any program or factor is or is not causing differences in student achievement. In other words, these relationships are correlational, not causal. That said, identifying these relationships is an important first step towards improving childhood literacy in Arizona.

Our analyses of schools' core reading programs and universal screening tools did not show any significant differences based on specific programs or the number of programs used. However, this does not mean that these programs are not helping students. Rather, our analyses suggest that third grade reading achievement at schools with the most frequently-used programs is not significantly different from schools that do not use these programs.

Our analyses of school and district characteristics, on the other hand, showed that several characteristics are significantly related to third grade literacy. Previous research has shown that poverty is a significant predictor of student achievement.² In our analyses, this amounted to a two-percentage point decrease of students passing the third grade AzMERIT test for a ten-percentage point increase in school-level poverty.

Similarly, a ten-percentage point increase in school-level poverty was associated with a two-percentage point increase in the number of students in the lowest achievement category. It is important to note that these relationships are independent of several other factors that may be related to student achievement like minority enrollment, charter status, and geographic location. While it is difficult to determine the exact mechanism through which poverty may be affecting literacy in Arizona, these results suggest that policymakers may do well to focus efforts on assisting students and families who live in poverty.

In addition to poverty, the percentage of minority students at a school was significantly related to both the number of students passing and at the lowest achievement level of AzMERIT. Again, this relationship was independent of several other related factors. Given the diversity of Arizona's student population, it may be that this relationship is being driven by the unique cultural needs of our state's many racial/ethnic groups. Whatever the case, this relationship suggests that schools serving large numbers of minority students may benefit from specialized support.

Interestingly, our analyses also suggest that higher district-level minority enrollment is associated with slightly higher rates of school-level student achievement. It should be noted that this relationship was significant after accounting for things that are highly correlated with both district minority enrollment and student achievement (i.e. school-level minority enrollment, district-level poverty, etc.). Interpreting this relationship is difficult since it is in the opposite direction of what would be expected. That said, this relationship may be a promising area for future research.

Finally, our analyses suggest that rural schools, on average, have lower levels of third grade reading achievement when compared to non-rural schools. Again, this is significant because this difference is independent from several related factors (i.e. poverty, minority enrollment, etc.). While this study does not provide definitive evidence as to the cause of these differences, previous research has shown that rural communities face many unique challenges.³ Whatever the cause, these results suggest that targeted support may be needed to help increase literacy rates in rural communities.

The goal of this study was to provide insight into factors that may be influencing third grade literacy in Arizona. While our findings identified several school and district characteristics that are associated with third grade literacy, further research is needed to fully understand the complex systems that affect our students. However, our hope is that this study will be a starting point for conversations about improving childhood literacy in Arizona.

1. This was the most recent year in which all schools reported data.
2. Lacour, M., & Tissington, L. (2011). The effects of poverty on academic achievement. *Educational Research and Reviews* 6(7), 522-527.
3. Parsley, D., & Barton, R. (2015). The myth of the little red school house: Challenges and opportunities for rural school improvement. *Peabody Journal of Education*, 90,191-193.



The goal of this study was to provide insight into factors that may be influencing third grade literacy in Arizona.

Appendix

TABLE 4A. Results from regression models with core reading programs as predictors and percent passing as the outcome

| Core Program | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 | Model 6 | Model 7 |
|-----------------------------------|-----------------|-----------------|-----------------|----------------|-----------------|----------------|-----------------|
| Houghton Mifflin Reading Journeys | -0.89 (2.20) | | | | | | |
| Journeys | | -4.53 (3.29) | | | | | |
| MacMillian/McGraw Hill Reading | | | -2.87 (2.90) | | | | |
| Reading Street | | | | 2.89 (3.18) | | | |
| Storytown | | | | | -4.24 (3.26) | | |
| Treasures | | | | | | 4.97 (3.32) | |
| Trophies | | | | | | | -1.91 (2.45) |

n = 953

* indicates $p < .05$, ** indicates $p < .01$, *** indicates $p < .001$; These are coefficient estimates from multilevel models with schools nested in districts.

TABLE 4B. Results from regression models with core reading programs and school/district characteristics as predictors and percent passing as the outcome

| Core Program | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 | Model 6 | Model 7 |
|--------------------------------|----------------|-----------------|----------------|---------------|-----------------|---------------|----------------|
| Houghton Mifflin Reading | 2.12 (1.61) | | | | | | |
| Journeys | | -1.68 (2.38) | | | | | |
| MacMillian/McGraw Hill Reading | | | -.88 (2.10) | | | | |
| Reading Street | | | | .50 (2.29) | | | |
| Storytown | | | | | -1.11 (2.36) | | |
| Treasures | | | | | | .25 (2.41) | |
| Trophies | | | | | | | -.89 (1.80) |

SCHOOL/DISTRICT CHARACTERISTICS

| | | | | | | | |
|-----------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Charter School | 1.97 (1.62) | 1.67 (1.62) | 1.59 (1.59) | 1.57 (1.60) | 1.55 (1.59) | 1.60 (1.60) | 1.48 (1.61) |
| Rural School | -3.52* (1.46) | -3.52* (1.60) | -3.57* (1.47) | -3.54* (1.47) | -3.58* (1.47) | -3.54* (1.47) | -3.52* (1.47) |
| Enrollment (School) | .00 (.00) | .00 (.00) | .00 (.00) | .00 (.00) | .00 (.00) | .00 (.00) | .00 (.00) |
| Percent FRL (School) | -.21*** (.03) | -.21*** (.03) | -.21*** (.03) | -.21*** (.03) | -.21*** (.03) | -.21*** (.03) | -.21*** (.03) |
| Percent Minority (School) | -.44*** (.04) | -.43*** (.04) | -.44*** (.04) | -.44*** (.04) | -.44*** (.04) | -.44*** (.04) | -.44*** (.04) |
| Enrollment (District) | .00 (.00) | .00 (.00) | .01 (.00) | .00 (.00) | .00 (.00) | .00 (.00) | .00 (.00) |
| Percent FRL (District) | .01 (.05) | .01 (.05) | .01 (.05) | .01 (.05) | .01 (.05) | .01 (.05) | .01 (.05) |
| Percent Minority (District) | .19*** (.05) | .20*** (.05) | .20*** (.05) | .19*** (.05) | .19*** (.05) | .20*** (.05) | .20*** (.05) |

n = 953

* indicates $p < .05$, ** indicates $p < .01$, *** indicates $p < .001$; These are coefficient estimates from multilevel models with schools nested in districts.

TABLE 4C. Results from regression models with core reading programs as predictors and percent at performance level 1 as the outcome

| Core Program | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 | Model 6 | Model 7 |
|--------------------------------|---------------|----------------|----------------|-----------------|----------------|-----------------|----------------|
| Houghton Mifflin Reading | .16 (2.24) | | | | | | |
| Journeys | | 6.03 (3.35) | | | | | |
| MacMillian/McGraw Hill Reading | | | 1.52 (2.90) | | | | |
| Reading Street | | | | -2.60 (3.28) | | | |
| Storytown | | | | | 3.69 (3.36) | | |
| Treasures | | | | | | -3.91 (3.33) | |
| Trophies | | | | | | | 3.51 (2.50) |

n =939

* indicates p < .05, **indicates p < .01, *** indicates p < .001; These are coefficient estimates from multilevel models with schools nested in districts.

TABLE 4D. Results from regression models with core reading programs and school/district characteristics as predictors and percent at performance level 1 as the outcome

| Core Program | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 | Model 6 | Model 7 |
|--------------------------------|-----------------|----------------|----------------|----------------|----------------|---------------|----------------|
| Houghton Mifflin Reading | -2.78 (1.66) | | | | | | |
| Journeys | | 3.26 (2.46) | | | | | |
| MacMillian/McGraw Hill Reading | | | -.70 (2.13) | | | | |
| Reading Street | | | | -.14 (2.40) | | | |
| Storytown | | | | | -.24 (2.36) | | |
| Treasures | | | | | | .62 (2.45) | |
| Trophies | | | | | | | 1.94 (1.86) |

SCHOOL/DISTRICT CHARACTERISTICS

| | | | | | | | |
|--------------------------------|------------------|------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Charter School | -3.37* (1.69) | -3.06* (1.68) | -2.90 (1.68) | -2.90 (1.68) | -2.92 (1.68) | -2.87 (1.68) | -2.64 (1.69) |
| Rural School | 2.31 (1.49) | 2.23 (1.49) | 2.32 (1.49) | 2.34 (1.49) | 2.34 (1.49) | 2.36 (1.49) | 2.30 (1.49) |
| Enrollment (School) | .00 (.00) | .00 (.00) | .00 (.00) | .00 (.00) | .00 (.00) | .00 (.00) | .00 (.00) |
| Percent FRL (School) | .22*** (.03) | .22*** (.03) | .22*** (.03) | .22*** (.03) | .22*** (.03) | .22*** (.03) | .22*** (.03) |
| Percent Minority (School) | .41*** (.04) | .41*** (.04) | .41*** (.04) | .41*** (.04) | .41*** (.04) | .41*** (.04) | .41*** (.04) |
| Enrollment (District) | .00 (.00) | .00 (.00) | .00 (.00) | .00 (.00) | .00 (.00) | .00 (.00) | .00 (.00) |
| Percent FRL (District) | .05 (.05) | .06 (.05) | .05 (.05) | .05 (.05) | .05 (.05) | .05 (.05) | .05 (.05) |
| Percent Minority (District) | -.13* (.05) | -.13* (.06) | -.13* (.06) | -.13* (.06) | -.13* (.06) | -.13* (.06) | -.13* (.06) |

n =939

* indicates p < .05, **indicates p < .01, *** indicates p < .001; These are coefficient estimates from multilevel models with schools nested in districts.

TABLE 6A. Results from regression models with universal screening programs as predictors and percent at performance level 1 as the outcome

| Universal Screening Program | Model 1 | Model 2 | Model 3 | Model 4 |
|-----------------------------|----------------|----------------|----------------|----------------|
| AIMS Web | 5.22 (3.93) | | | |
| DIBELS | | -.93 (2.81) | | |
| DIBELS Next | | | -.22 (1.78) | |
| Galileo | | | | 3.12 (1.86) |

n = 941

* indicates p < .05, ** indicates p < .01, *** indicates p < .001; These are coefficient estimates from multilevel models with schools nested in districts.

TABLE 6B. Results from regression models with universal screening programs and school/district characteristics as predictors and percent at performance level 1 as the outcome

| Core Program | Model 1 | Model 2 | Model 3 | Model 4 |
|--------------|---------------|-----------------|---------------|----------------|
| AIMS Web | .96 (2.84) | | | |
| DIBELS | | -1.03 (2.07) | | |
| DIBELS Next | | | .13 (1.35) | |
| Galileo | | | | 1.01 (1.40) |

SCHOOL/DISTRICT CHARACTERISTICS

| | | | | |
|-----------------------------|-----------------|-----------------|-----------------|-----------------|
| Charter School | -3.01 (1.69) | -3.00 (1.68) | -3.02 (1.71) | -3.26 (1.70) |
| Rural School | 2.65 (1.49) | 2.71 (1.49) | 2.65 (1.49) | 2.68 (1.49) |
| Enrollment (School) | .00 (.00) | .00 (.00) | .00 (.00) | .00 (.00) |
| Percent FRL (School) | .22*** (.03) | .22*** (.03) | .22*** (.03) | .22*** (.03) |
| Percent Minority (School) | .41*** (.04) | .41*** (.04) | .41*** (.04) | .41*** (.04) |
| Enrollment (District) | .00 (.00) | .00 (.00) | .00 (.00) | .00 (.00) |
| Percent FRL (District) | .05 (.05) | .05 (.05) | .05 (.05) | .05 (.05) |
| Percent Minority (District) | -.13* (.05) | -.13* (.05) | -.13* (.06) | -.13* (.06) |

n = 941

* indicates p < .05, ** indicates p < .01, *** indicates p < .001; These are estimates from multilevel models with schools nested in districts.

TABLE 7A. Results from regression models with number of core reading programs and school/district characteristics as predictors and percent passing as the outcome

| | Model 1 | Model 2 |
|--|---------------|------------------|
| Number of Core Programs | .36 (1.26) | -.72 (.92) |
| SCHOOL/DISTRICT CHARACTERISTICS | | |
| Charter School | | 1.58 (1.59) |
| Rural School | | -3.57* (1.46) |
| Enrollment (School) | | .00 (.00) |
| Percent FRL (School) | | -.21*** (.03) |
| Percent Minority (School) | | -.43*** (.04) |
| Enrollment (District) | | .00 (.00) |
| Percent FRL (District) | | .01 (.05) |
| Percent Minority (District) | .19*** | (.05) |

n = 953

* indicates p < .05, ** indicates p < .01, *** indicates p < .001; These are coefficient estimates from multilevel models with schools nested in districts.

TABLE 7B. Results from regression models with universal screening programs and school/district characteristics as predictors and percent at performance level 1 as the outcome

| | Model 1 | Model 2 | Model 3 | Model 4 |
|--|----------------|-----------------|----------------|-----------------|
| Number of Core Programs | -.64 (1.26) | .62 (.94) | | |
| Number of Universal Screeners | | | -.99 (1.00) | -1.34 (.74) |
| SCHOOL/DISTRICT CHARACTERISTICS | | | | |
| Charter School | | -2.89 (1.67) | | -3.07 (1.66) |
| Rural School | | 2.37 (1.49) | | 2.69 (1.48) |
| Enrollment (School) | | .00 (.00) | | .00 (.00) |
| Percent FRL (School) | | .22*** (.03) | | .22*** (.03) |
| Percent Minority (School) | | .41*** (.04) | | .41*** (.04) |
| Enrollment (District) | | .00 (.00) | | .00 (.00) |
| Percent FRL (District) | | -.05 (.05) | | -.05 (.05) |
| Percent Minority (District) | | .13* (.06) | | -.13* (.06) |
| | n = 939 | n = 939 | n = 941 | n = 941 |

* indicates p < .05, ** indicates p < .01, *** indicates p < .001; These are coefficient estimates from multilevel models with schools nested in districts. Differences in n are due to missing values on the outcome.



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