

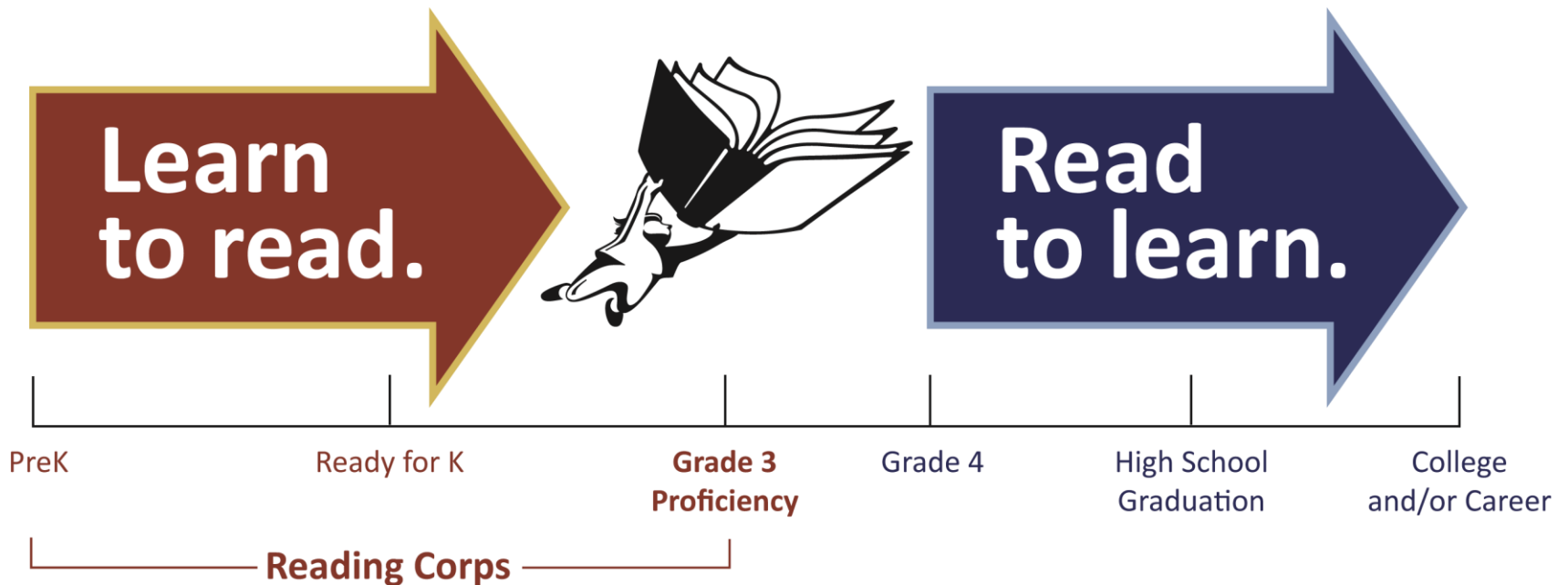


Using Data to Drive Program Improvement: Bloomington Schools' and Minnesota Reading Corps' Pre-kindergarten and Kindergarten Partnership

12.9.15



3rd Grade Reading Proficiency: A Critical Milestone to College and Career



- Almost three-quarters (74%) of children who read poorly in third grade continue to read poorly in high school, making third grade reading proficiency a key predictor of high school drop-out rates.



Supporting Age 3 to Grade 3 Students

PreK Settings:

- Tutor placed in a PreK classroom to support students throughout the day
- Literacy support provided during:
 - Whole classroom
 - Small group time
 - One-on-one tutoring
- Family Engagement

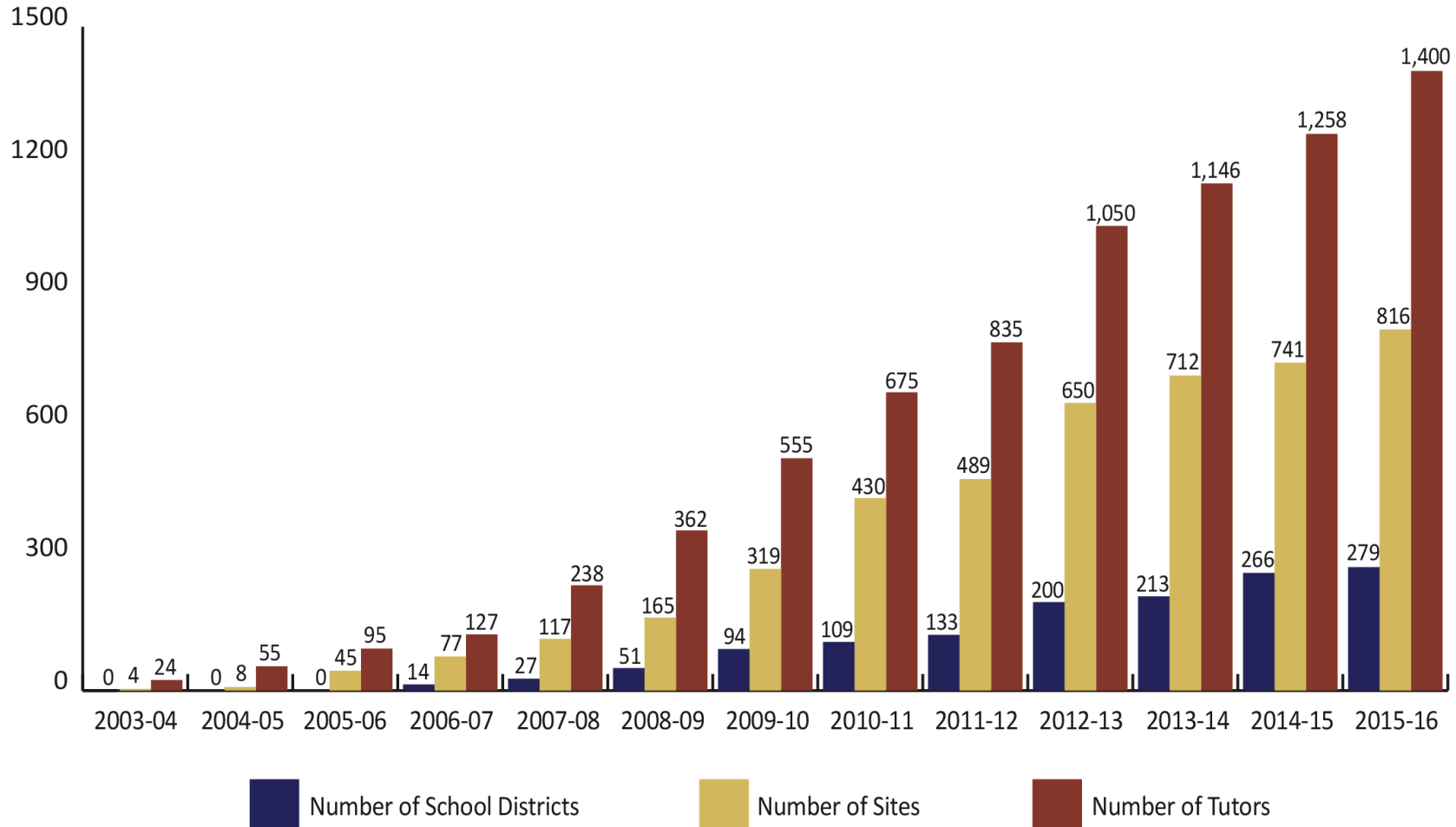
K-3 Settings:

- Tutor provides one-on-one, 20-minute tutoring sessions throughout the day
- Literacy support provided to students who need it:
 - One-on-one tutoring
- Family Engagement



Reading Corps Growth

Measurable Results Spur Demand



Children served increased from 250 in 2003 to more than 35,000 projected for 2015-2016



Reading Corps/Math Corps Master Coach

School Internal Coach



**Data-Based
Decision Making**

**Evidence-Based
Interventions**

**Implementation
Fidelity**

PreK Outcome Evaluation



Participants: ~1,700 students at 26 Reading Corps Schools (and 26 comparison schools)

Design: Quasi-Experimental with matching on 9 variables

Outcomes: Fall, Winter, and Spring data for 5 literacy outcomes

Analyses: ANCOVA on Spring results (Fall scores accounted for in analysis)



PreK Outcome Evaluation: 4- & 5- Year Old Findings

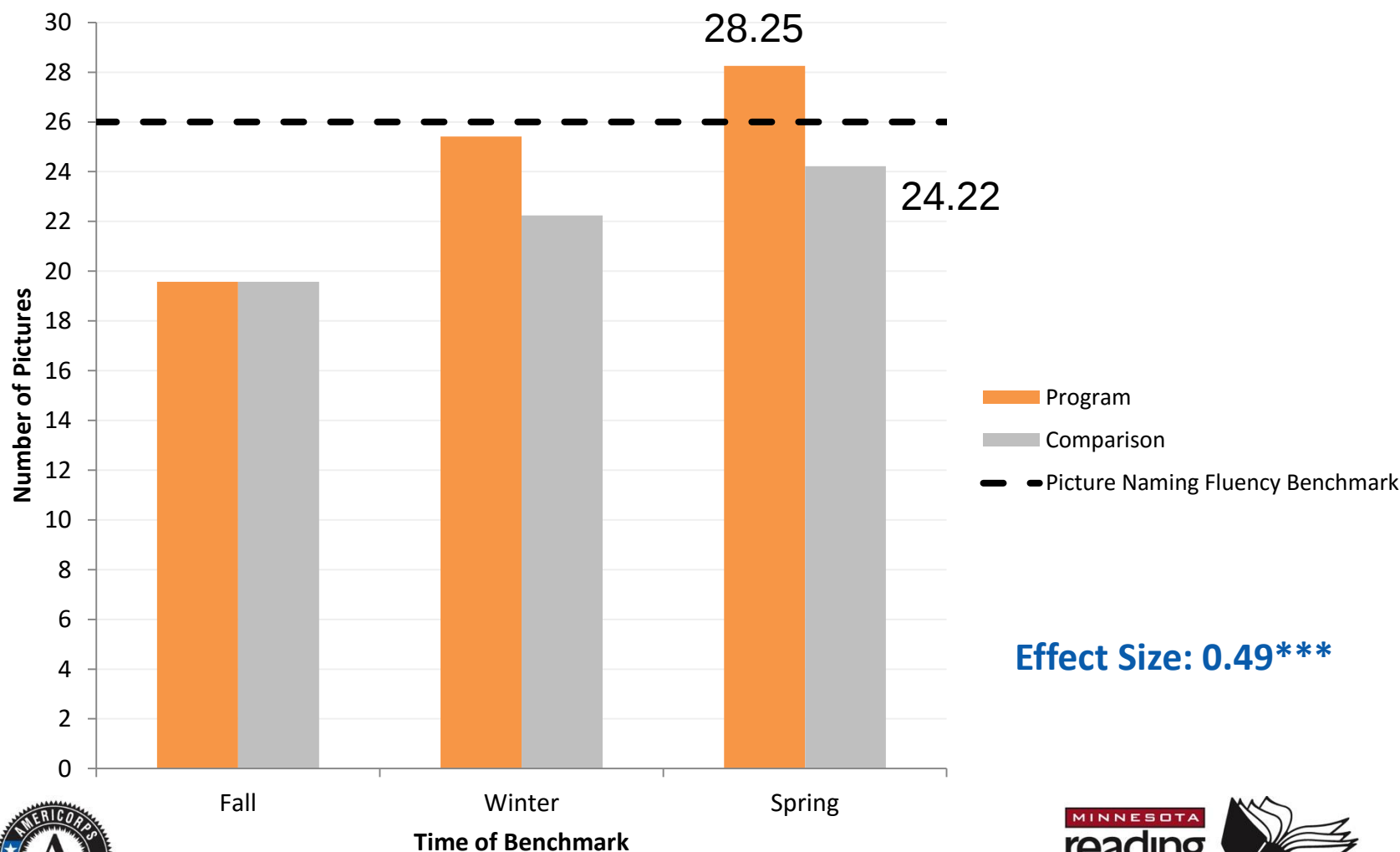
IGDI Fluency Assessment	N	Average Growth (Treat-Comp)	SE	Effect Size
Picture Name	1343	4.03***	0.66	0.49
Rhyming	1342	3.51***	0.52	0.66
Alliteration	1278	2.68***	0.44	0.72
Letter Sounds	1267	3.80***	0.90	0.71
Letter Names	1354	4.15**	1.17	0.40

***p<.001; **p<.01



PreK Outcome Evaluation:

Sample Findings: *Picture Name Fluency*



PreK Outcome Evaluation: Subgroup Analysis Findings

- For the most part, the program was equally **effective for all students regardless** of gender, race/ethnicity, DLL status or school type
- In instances **where differences were found, they favored at-risk students** (i.e., enrolled at Head Start centers, DLLs, non-White students)
 - Greater effects in picture name fluency (vocabulary) for DLLs



PreK Outcome Evaluation: Summary

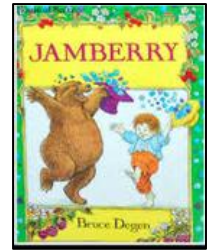
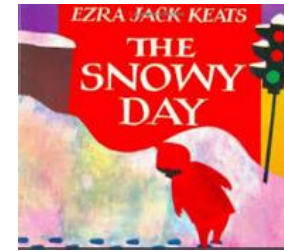
- Minnesota Reading Corps PreK students met or exceeded spring targets – **Kindergarten Ready!**
 - PreK students at comparison sites met spring targets for letter names only
- **Significant effects** for all five measures
 - Largest effect sizes for phonological awareness measures (rhyming, alliteration) and letter sound correspondence (>.66 effect sizes)
 - **Impressive growth** in vocabulary (.49 effect size)



Extending the Impact in Vocabulary

Intervention Features

- ❑ Repeated Read Aloud (Marulis & Neuman, 2010)
- ❑ Targets 4-5K words that make up ~90% of Elementary level texts
- ❑ Explicit and implicit vocabulary learning



Logistics

- ❑ Available for K and 1st grade
- ❑ Groups of 4 students
- ❑ 20 min intervention slots



Bloomington Early Kindergarten Assessment (BEKA)



A Combination of Minneapolis BKA and Bloomington EKA = BEKA

- Numeracy domain strengthened by dropping colors and shapes and adding number sequencing and simple addition.
- Letter and number identification predictive validity correlations were higher for BKA timed fluency measures but Bloomington teachers argued that these measures were not as useful for instruction
- Instead we changed the instructions for 3 second wait period to decrease the time of these items
- Comprehension and Concepts of Print were added to increase overall construct and predictive validity (out-of-print copies found on e-bay).



BEKA: Standardized Assessment Used for Multiple Purposes (5 min)

1. Summative Assessment for determining the success of pre-k interventions.
2. Screener at the beginning of the year for assisting differentiated instruction
3. Benchmark for pathway analysis and Vision Cards including narrowing the achievement gap
4. Pre-test for identifying teachers who “beat the odds” and to give “value-added” feedback.

https://www.youtube.com/watch?v=O-e7xLs7_j4

<https://www.youtube.com/watch?v=0Sv9H8ULvUg>

5. Tool for communicating with families



Sample BEKA – Correlation with Grade 1 Fall MPG Reading Literacy Items

CONCEPTS OF PRINT $r_{xy} = .521$

Score 1 point for each correct response. (check $\checkmark$ each correct concept)

- Shows front of the book _____
- Shows where to begin reading _____
- Shows left to right _____
- Shows return sweep _____
- Counts number of words _____

_____/5

RHYMING WORDS $r_{xy} = .488$

Score 1 point for each correct response. (check $\checkmark$ each correct word)

- 1) cat, sat, _____ 2) hop, top, _____ 3) bug, hug, _____
- 4) men, ten _____ 5) wig, dig, _____ 6) beat, meat, _____

_____/6

ORAL COMPREHENSION $r_{xy} = .529$

- Transfer score from bottom of comprehension score sheet.

_____/21

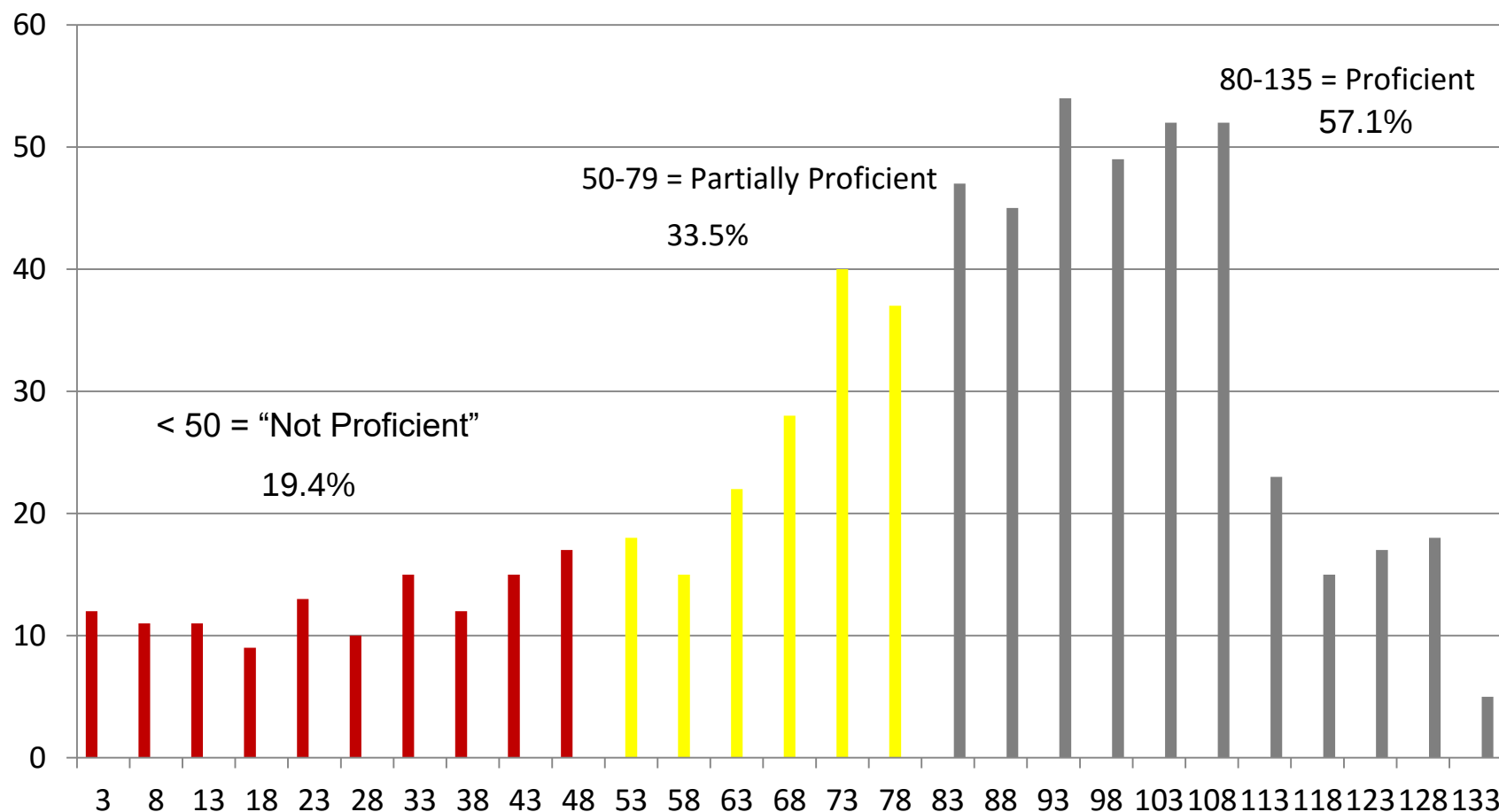
■ Total Literacy $r_{xy} = .626$

■ Total Numeracy $r_{xy} = .632$

Note: These are restricted range estimates



District Raw Score Distribution of BEKA Literacy



BEKA Literacy Strand Proficiency Cut Scores

■ Total Literacy

□ Alphabetic Principal (Letters + Concepts of Print) = 49

- Upper Case Proficiency = 24
- Lower Case Proficiency = 22
- Concepts of Print = 3

□ Phonological Awareness (Sounds + Rhyming) = 20

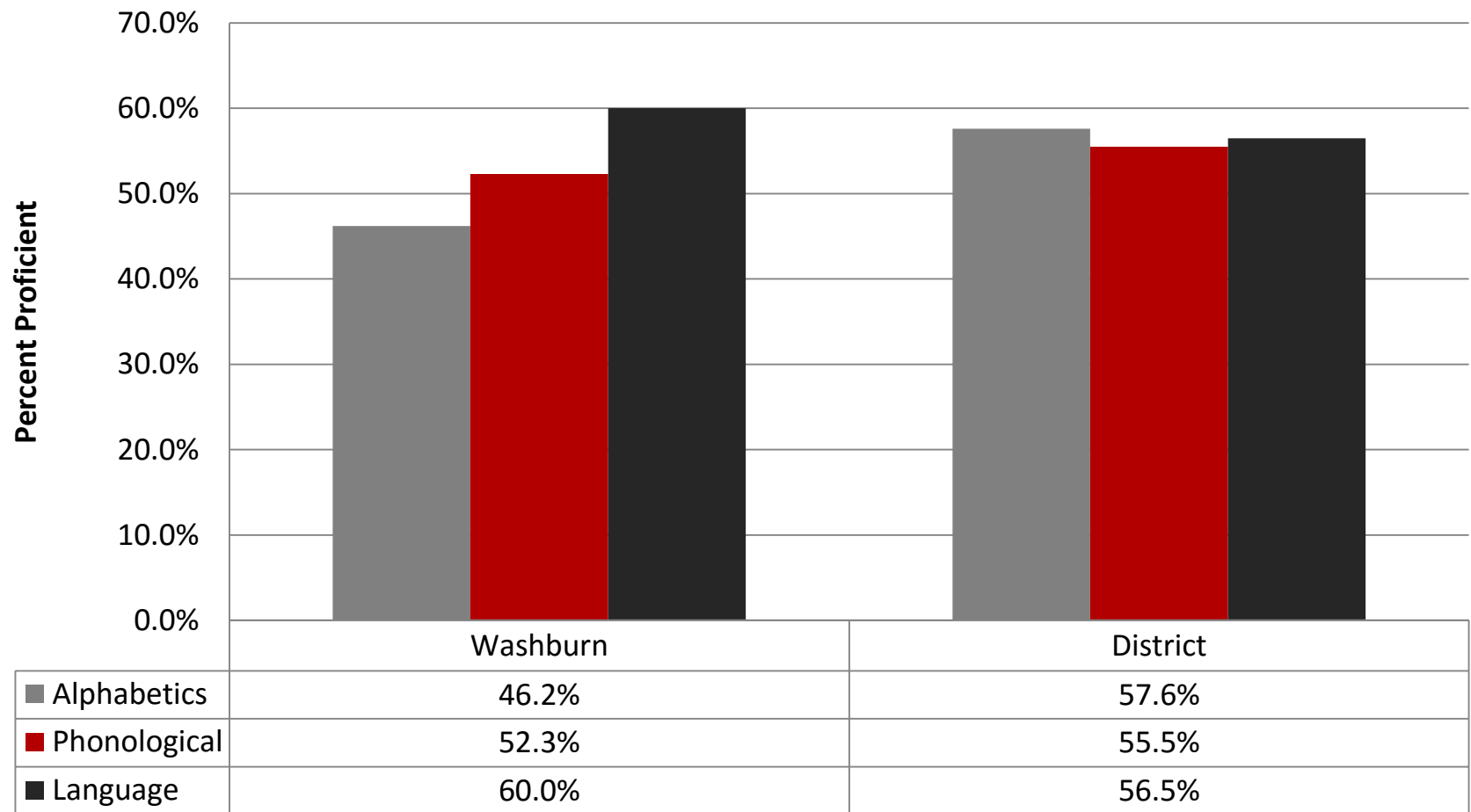
- Beginning Sounds = 4
- Rhyming = 3
- Letter/Sound Recognition = 13

□ Language (Sight Words + Oral Comprehension) = 14

- Sight Words = 1
- Oral Comprehension = 13



BEKA Literacy Strand Proficiency



Overview of the Study

- K-3 students who were served by Minnesota Reading Corps (MRC) volunteers during 2010-11 in Minneapolis Schools were matched with students with similar demographic characteristics who were not served by Reading Corps volunteers.
- Special education status was obtained from the official MARSS report submitted to the Minnesota Department of Education
- A matched sample analysis found a statistically significantly different Special Education placement rate for MRC vs. Matched students



Matching Criteria

- The file of all k-3 students with fall total literacy (K-1) or fall MAP reading scale scores (Grades 2 and 3) was sorted hierarchically on variables in the MPS data system in spring of 2011 using the following sort order:
 1. Fall 2010 Literacy/Reading scale scores
 2. Fall Special Education Disability Category
 3. English Language Learner Status (end of year)
 4. Home Language (end of year)
 5. Free or reduced price Lunch (end of year)
 6. Racial Ethnic Category (end of year)
 7. Prior year Attendance (grades 1-3 only)
 8. Gender (end of year)
 9. Homeless/highly mobile status (end of year)
 10. Birth date (only to break ties)



Overall Special Education Placement Results

- 17/ 753 Reading Corps students were Eligible for Special Education at the end of the year = 2.3%
- 43/753 Matched Sample students ended up Eligible for Special Education at the end of the year = 5.7%
- Results were statistically significant at a p-value <.01



Special Education Cost Savings

Estimates for Reading Corps

- Robert Wedl, former Minnesota Commissioner of Education, estimated the potential cost savings using actual budget figures for an elementary school in Minneapolis.
- “The Minneapolis cost estimate of \$8,527.49 for both initial evaluation and instruction in 2010 is well within the national average and in fact is a low estimate. When removing the initial evaluation costs, the special education instruction only cost is \$5,397.66” (p.7)
- “The cost estimates in Minneapolis were compared with national data. In 1999-2000, Jay G. Chambers, Jamie Shkolnik and Mania Perez did an analysis of special education costs for the National Center on Special Education Finance. The report published in 2003 was titled, “Total Expenditures for Students with Disabilities Variation by Disability.” It concluded that the national average costs for serving children with learning disabilities was \$6,489 of which \$4,071 was special education costs and \$2,418 regular education support.”





*A strategic initiative
of ServeMinnesota*