

Results of the IES Efficacy Study for ARC Core

ARC Core Kindergarten is formerly known as Zoology One

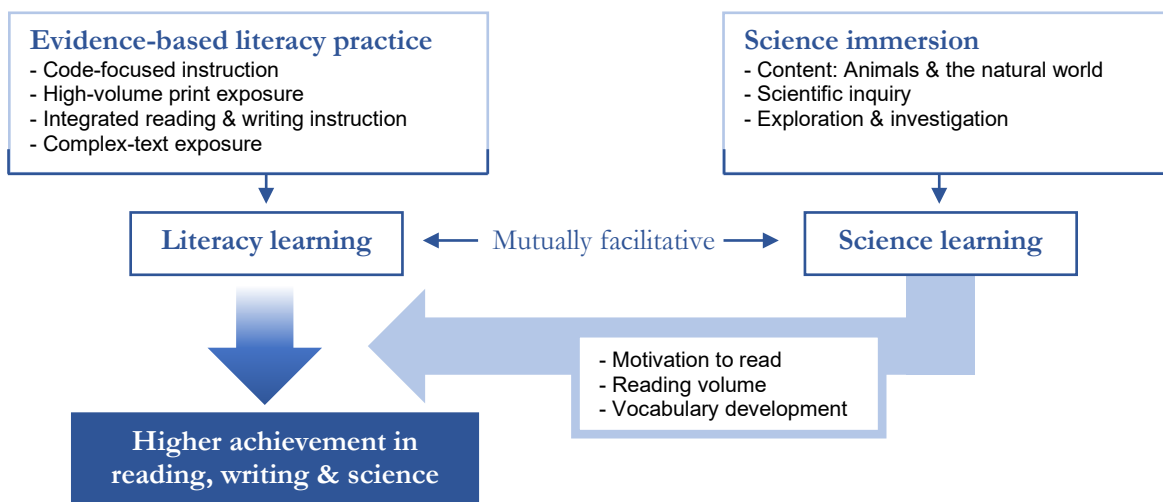


An independent study funded by the Institute of Education Sciences (IES) and conducted by the Consortium for Policy Research in Education (CPRE) and the University of Pennsylvania Graduate School of Education on the effectiveness of ARC Core Kindergarten (formerly Zoology One) has recently concluded. Results have been provided to American Reading Company (ARC) prior to publication.

Methodology

This longitudinal, multisite cluster-randomized control trial included 21 schools, 71 classrooms, and 1,529 students in the School District of Philadelphia (SDP). The study began in the 2016–2017 school year.

The purpose of the study was to discover whether the use of ARC Core Kindergarten leads to more learning in reading, writing, and science than with a business-as-usual model. In this instance, a variety of disparate programs, including Saxon Phonics, were in use. Impact at the end of kindergarten and grades 1 and 2 was assessed, as was whether there were impacts on motivation to read, vocabulary, and volume of reading.



(Goldschmidt & Jung, 2011; Pearson, Moje, & Greenleaf, 2010; Baker et al., 2013; Swanson et al., 2011; Stahl & Murray, 2011; Ehri, 2005; Allington, 1977, 2011; Cipielewski & Stanovich, 1990; Mol and Bus, 2011; Lonigan & Shanahan, 2008; Slavin et al., 2014; Cervetti et al., 2012; Goldschmidt & Jung, 2011; Guthrie et al., 1999a; 2004; Romance & Vitale, 2001; Shanahan et al., 2010; Wang & Herman, 2005; Wigfield et al., 2008; 1992; Baker, 1991; Padilla, Muth, & Padilla, 1991)

To measure impact on literacy growth (reading, writing, and vocabulary), the Woodcock Reading Mastery Test and the Kaufman Test of Educational Achievement were used. To measure impact on motivation, the Kindergarten Reading Motivation Scale was used. Teacher surveys were used to measure reading volume.

Throughout the course of the study researchers were presented with opportunities to investigate an additional element of interest: gender differences in science interest and learning behaviors. Data related to these differences were collected using surveys.

Findings

While teachers in the study were in their first year of ARC Core, significant changes were found: students in ARC Core Kindergarten classrooms had better reading comprehension (effect size = .17), stronger letter-naming fluency (effect size = .27), and higher motivation for reading (effect size = .32) than students in control classrooms. Girls defied gender stereotypes in reading interests, meaning that girls in treatment classrooms were statistically significantly less likely than girls in control classrooms to indicate that they preferred books with topics identified as stereotypically female, reducing the likelihood of “female” book topic selection by 26%.

ARC Core K Classrooms Showed Positive Statistically Significant Differences

Increased Reading Comprehension	✓
Increased Letter Naming Fluency	✓
Increased Motivation for Reading	✓
Decreased Gender Stereotypes	✓

By first grade (post treatment), students from ARC Core Kindergarten classrooms were categorized as either “strongest in class” or “above average” on learning behaviors at a significantly higher percentage than their peers from control classrooms.

In First Grade, Students From ARC Core K Classrooms Stand Out
% of Students Categorized as Either “Strongest in Class” or “Above Average” Post Treatment

Learning Behavior	Control	Treatment	
Reading independence	35%	43%	*
Student confidence	40%	49%	*
Verbal expression	41%	49%	*
Student collaboration	43%	50%	~
Love of learning	44%	55%	**
Interest in science	42%	50%	*

~ p < .10 *p < .05 **p < .01

Results from this study have captured the attention of IES, and CPRE has been invited to apply for additional funding to extend this study.



Changes in Teacher Perceptions

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“In past years, I would not have [seen] more than half my room reading... This year, it’s 100% reading, down to my lowest reader is reading—big improvement.”

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“They’re constantly using the words that have come up... They can tell you about herbivores and carnivores, and adaptations, and things like that.”

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“Well, one of the things that I notice is it really encourages the children to be more responsible in their learning.”

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“[In the beginning,] I said, ‘Not in kindergarten. You don’t do this [level of writing]. I was the biggest doubter. I take it back. I definitely accept that they can do it.’”

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