

Striving for Student Success: Impact of Early Learning Collaboratives Program in Mississippi



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Mississippi Legislature Passed the Early Learning Collaborative Act in 2013

What is Mississippi Early Learning Collaborative Act?

In the year 2013, the Mississippi Legislature passed the Early Learning Collaborative Act to help ensure that all of Mississippi's children have access to quality early childhood education and development services through a voluntary prekindergarten program for four-year-olds. Mississippi's Early Learning Collaborative Act of 2013 established the Early Learning Collaborative program, which provides funding to local communities to establish, expand, support and facilitate the successful implementation of quality early childhood education and development services.

What is Mississippi Early Learning Collaborative Program?

An "Early Learning Collaborative" is a district or countywide council that writes and submits an application to participate in the voluntary prekindergarten program. An early learning collaborative is comprised, at a minimum, of a public school district and/or a local Head Start affiliate if in existence, private or parochial schools, or one or more licensed child care centers.

The first full year of the Early Learning Collaboratives Program's operation was the 2014-2015 school year. In December 2013, the first round of the Early Learning Collaborative awards were given to **eleven** different collaboratives from around the state.

Research Questions:

This study examined the effectiveness of the programs from the following aspects. **First**, whether students who enroll in the Early Learning Collaborative programs score higher than students enrolled in other Pre-K programs; if so then what is the magnitude? **Second**, whether students who enroll in the Early Learning Collaboratives are more likely to score above the kindergarten readiness cutting score (498 points); if so then what is the likelihood?

Data and Methodologies

Treatment Group: Pre-test and post-test scaled scores (as well as performance levels) for each student who took the Kindergarten Readiness Assessments in School Year 2015-2016, as part of the Early Learning Collaborative Act;

Control Group: Pre-test and post-test scaled scores (as well as performance levels) for each student enrolled in a four-year-old prekindergarten program in Mississippi who took the Kindergarten Readiness Assessments but was not a part of the Early Learning Collaborative Act in School Year 2015-2016.

Dummy Variable ELCs: students who were in one of the Early Learning Collaboratives sites are placed in the treatment group (ELCs=1); and students who were in other pre-K programs are placed in the control group (ELCs=0).

Methodologies: OLS model and Probit model

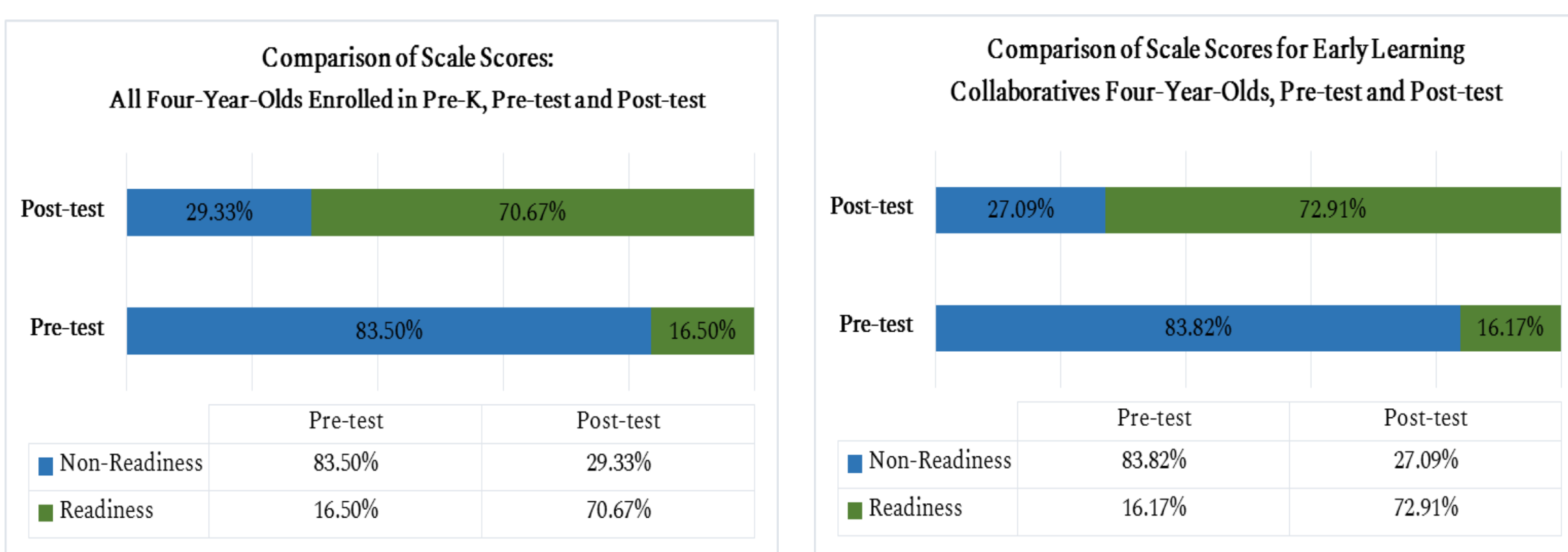


FIGURE 1. Data used is from the 2015-2016 results of the Kindergarten Readiness Assessment.

	Proportion in All Pre-kindergarten Classrooms	Proportion in Early Learning Collaborative Classrooms
ELCs		
0	76.1%	100%
1	23.9%	100%
White		
0	69.9%	67.7%
1	30.1%	32.3%
African American		
0	36.3%	37.3%
1	63.7%	62.7%
Minority		
0	93.8%	95%
1	6.2%	5%
Male		
0	49.7%	50.2%
1	50.3%	49.8%
Female		
0	50.3%	49.8%
1	49.7%	50.2%

TABLE 1. Compared to all pre-kindergarten classrooms, the Early Learning Collaborative classrooms show relatively higher enrollment of White students.

Findings Show that Mississippi's Early Learning Collaboratives Program is Effective quantitatively and qualitatively

First, controlling for test scores at the beginning of the pre-kindergarten, ethnicity, gender, and family economic status, students that attended the Early Learning Collaboratives, on average, score **16 points higher** on the test at the end of pre-kindergarten.

Second, attending the Early Learning Collaborative program increases the probability of students earning a kindergarten-readiness score. Students attending the Early Learning Collaborative program are on average predicted to be **9.2 percent more likely** to be ready for kindergarten.

	OLS Estimates of the Effect of Early Learning Collaborative Program on Four-year Olds' Kindergarten Readiness Results		Probit Estimates of the Effect of Early Learning Collaborative Program on Four-year Olds' Kindergarten Readiness Results, Marginal Effects	
	Column 1	Column 2	Column 1	Column 2
Early Learning Collaboratives (ELCs)Dummy	2.3	16.4	3.1%	9.2%
Yes=1, No=0	(3.40)	(3.67)	(0.15)	(0.018)
Pretest Score		0.8		41.6%
		(0.018)		(0.025)
White		12.7		17.7%
		(5.57)		(0.026)
Gender		7.4		6.2%
Female=1, Male=0		(2.49)		(0.012)
No. of Obs.	5285	5244	5285	5244

TABLE 2. Table 2 presents the key estimates from regression results. Standard errors are in parentheses. Data are from the Mississippi Students Pre-kindergarten pre- and post- test results, and the demographic information for school year 2015-2016, and include linked demographic information from other years if the information for 2015-2016 does not exist. The ELCs dummy equals one if the four-year-old is enrolled in an Early Learning Collaboratives classroom, zero if in other pre-k classroom. Each regression includes the ELCs dummy. Regression shown in Column 2 has fewer observations because the demographic information linking by using other years records are not available for some individuals.

Policy Indications

First, based on the cross-sectional data from School Year 2015-2016, this study suggests that the Early Learning Collaboratives classrooms are performing effectively. Mississippi has solid evidence that high-quality early childhood education gives students a strong start to school.

Second, straightforward descriptive statistics and the simple regression cannot address the potential root-cause issues. The rigor matters in doing research in government agencies. When a question is more politicized, the more rigorous the methodology should be.

Acknowledgments

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References

- Gormley Jr, W. T., Gayer, T., Phillips, D., & Dawson, B. (2005). The effects of universal pre-K on cognitive development. *Developmental psychology*, 41(6), 872.
- Magnuson, K. A., Meyers, M. K., Ruhm, C. J., & Waldfogel, J. (2004). Inequality in preschool education and school readiness. *American educational research journal*, 41(1), 115-157.
- Melhuish, E. C. (2011). *Preschool matters*. *Science*, 333(6040), 299-300.