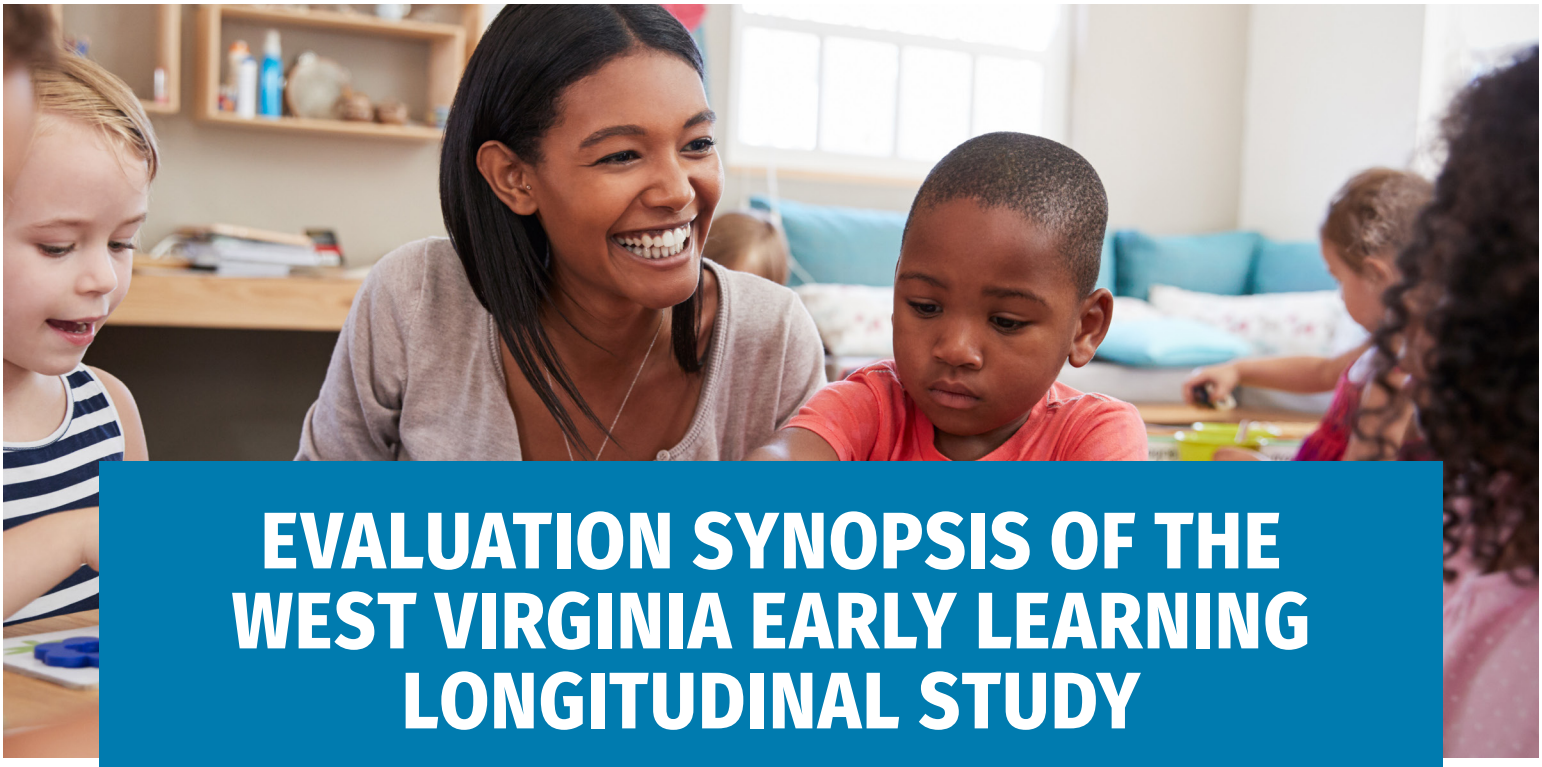

EVALUATION SYNOPSIS OF THE WEST VIRGINIA EARLY LEARNING LONGITUDINAL STUDY

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This study synopsis was compiled by WVDE staff based on the preliminary report provided by the National Institute for Early Education Research (NIEER).

Introduction

Beginning with the 2015-2016 school year, the West Virginia Department of Education (WVDE) partnered with the National Institute for Early Education Research (NIEER) and Marshall University to conduct a five-year study of the quality of the West Virginia Universal Pre-K (WV Pre-K) program. The study was designed to examine the effectiveness of the WV pre-k program, understand the extent to which initial benefits result in persistent education advantages, and assess the quality of educational experiences of children through grade three. The study included seven counties where there were lower pre-k participation rates for comparison group access. Fayette, Greenbrier, Kanawha, Nicholas, Putnam, Roane and Wood counties participated in the study.

West Virginia Early Learning Longitudinal Study Questions

1. Do children who attend the pre-k program show significantly greater progress on math, language, literacy, and executive function measures than children who do not attend the pre-k program starting in kindergarten and through second grade?
2. Are there child subgroups (as defined by low income or child gender) that benefit more from the pre-k program than others?
3. What is the quality of pre-k classrooms and how has it progressed through the 2015-2019 period?
4. What is the quality of pre-k through 3rd grade learning experiences observed for the longitudinal cohort? Were program effects were sustained over time the study followed a cohort of children that attended pre-k through 2nd grade (the original plan was to follow children through 3rd grade, but the 3rd grade data collection was interrupted by the COVID-19 pandemic).

Part One: Child Assessment Measures & Findings

Measures for the study included research-based child assessment and classroom observation tools at each grade level. The following child assessment tools were utilized throughout the study to measure language, literacy, executive functioning, and social and emotional development of children participating in the study at each grade level. The following child assessment tools were utilized throughout the study:

- Peabody Picture Vocabulary Test IV- PPVT; Dunn & Dunn, 2007;
- Woodcock-Johnson Tests of Achievement, 3rd Edition- WJ; Woodcock, McGrew, & Mather, 2001;
- Administering Measures from PRI earning-Related Cognitive Self- Regulation Study, Meador, Turner, Lipsey, & Farran, 2013;
- Peg Tapping Task- PT, Diamond & Taylor, 1996;
- Dimensional Change Card Sort- DCCS; Zelazo, 2006;
- Strengths and Difficulties Questionnaire- SDQ- Goodman, 1997

Large and significant short-term effects were found for children who attended the program, especially children who were low-income; however, over the children´s trajectory through 2nd grade, the performance of children who attended the pre-k program converged with the performance of children who did not attend the program. Observation on quality of the learning experience for the longitudinal cohort suggests that lower quality in kindergarten and 1st grade likely contributed to this convergence. The main findings are:

- Children who attended pre-k outperformed those who had not attended pre-k in every measure of assessment collected. The largest and most statistically significant with the widest margin was in print knowledge.
- The positive association between pre-k participation and literacy was greater for low-income children.
- These pre-k effects persisted through to kindergarten in literacy and language. Yet, beneficial effects of language and literacy observed at the beginning of the kindergarten diminished through kindergarten year.
- Positive impacts of pre-k on math were consistent during the kindergarten year but the impacts were not statistically significant anymore.
- Positive impacts of pre-k on math were consistent during the Kindergarten year but the differences between children that attended and did not attend the pre-k program started to converge by the end of 1st grade and continuously through the end of 2nd grade.
- At kindergarten entry, girls showed significant benefits of pre-k program participation in executive functions as measured by Peg Tapping. At the spring of 1st grade, girls showed small positive program effects in most of the outcomes including literacy, language, and executive functions.
- In 2nd grade, no differences were observed between children that did and did not attend the pre-k program in socio-emotional behaviors.



Part Two: Classroom Observation Measures & Findings

- Early Childhood Environment Rating Scale, 3rd Edition (ECERS-3) (pre-k)- Measurement of 35 items under 6 domains: Space and Furnishings, Personal Care Routines, Language and Literacy, Learning Activities, Interaction, and Program Structure.
- The Classroom Scoring System (CLASS pre-k and CLASS K-2)- Measurement of Interactions among teachers and students through 10 dimensions across three domains: Emotional Support (ES), Classroom Organization (CO), and Instructional Support (IS).
- Assessment of Practices in Early Elementary Classrooms (APEEC) (Kindergarten and Grade 1)- Measures global quality across 16 items under 3 domains: Physical Environment, Instructional Context, and Social context.

As mentioned, classroom quality has a direct correlation on performance convergence. Regarding classroom quality and teacher-child interaction, researchers found the following:

- Pre-k teachers surveyed reported high levels of education and experience.
- Classrooms were observed to be generally of average quality.
- Classroom quality scores across the sample range from excellent to inadequate.
- Classroom emotional support (ES) scores were high between 2016 and 2019, demonstrating nurturing and safe environments for children.
- CLASS Classroom organization (CO) scores in pre-k show an overall positive trend between 2016 and 2019.
- Instructional supports scores have remained as a critical area to strengthen. These averaged 2.65 in 2016 and 2.28 in 2019, with small variations year to year.
- In relation to other programs across the country WV pre-k study classrooms score in the mid-range on CLASS emotional support and classroom organization and in the low range for CLASS instructional support (IS).
- In terms of global quality, kindergarten and 1st grade classrooms were rated with the APEEC in the spring of 2017 and 2018, respectively.
- APEEC ratings were lower in 1st grade, with the average being 3.55 in kindergarten and 2.95 in 1st grade.
- Most classrooms evidence low- to mid-range levels of global quality throughout this period.
- Integration across and breadth of subject areas, displaying child work, use of materials and instructional methods were areas that evidenced the greatest need for support.

Conclusions

- The study reveals performance advantages among children attending pre-k. The yearly reports demonstrated a pattern of short-term positive impacts of pre-k on children's learning and development in the print knowledge and math assessments, with low-income children benefitting the most.
- Positive impacts diminished by the end of kindergarten year and their developmental trajectories started to converge with that of non-pre-k attending children.
- Observations of classroom quality following the longitudinal sample showed that classroom quality in kindergarten may be an important driver of convergence, as kindergarten and 1st grade classroom quality proved to be much lower than what the pre-k longitudinal sample had experience in pre-k. Through the years, the study also assessed quality in preschool to have a multi-year perspective on global quality and classroom processes.



NIEER Recommendations

1. Strengthen instructional supports throughout the P-3 grades. Improvement is needed for pre-k but even more so across the early elementary grades. Intentional and robust professional learning opportunities focusing on lesson differentiation could build on and sustain the gains from pre-k through the early elementary years.
2. Employ efforts to increase participation in pre-k where rates are lower. Examine populations of children who did not participate in pre-k and what methods can be used to increase participation.
3. Establish a coherent P-3 system of alignment using learning standards to determine curriculum choices and regularly assessing child progress toward meeting those standards. This coherent P-3 system requires development of an integrated continuous quality improvement system in which child progress and classroom instruction are regularly measured, analyzed and used for planning at the child, classroom, grade level, P-3 continuum, and at the school and district levels.

WVDE Recommendations based on this study, anecdotal data, and repercussions of the COVID-19 pandemic

1. Create a plan to educate and promote an Early Childhood Classroom Assistant Teacher (ECCAT) in all WV pre-k through Grade Two classrooms. ECCATS currently exist in all WV pre-k and Kindergarten classrooms. First and second grade ECCATS would be required over a set period of time (example, 3 years) to take e-learning coursework to benefit young children's social and emotional development, literacy development, and numeracy development. This would greatly strengthen the quality of grades one and two (the areas with the largest deficits as described in the study).
2. Strengthen instructional supports throughout the P-3 grades. Improvement is needed for pre-k but even more so across the early elementary grades. Intentional and robust professional learning opportunities focusing on lesson differentiation could build on and sustain the gains from pre-k through the early elementary years.
3. Expand the WV Early Literacy Network of Support to include Instructional Support Specialists, who are assigned to specific schools in low-performing counties to focus on coaching, high-quality literacy instruction, and other professional learning for grades one and two.
4. Establish a coherent P-3 system of alignment using learning standards to determine curriculum choices and regularly assessing child progress toward meeting those standards. This coherent P-3 system requires development of an integrated continuous quality improvement system where children's progress and classroom instruction are regularly measured, analyzed, and used for planning.

Reference

Nores, M., & Contreras, C., (2021). Evaluation of West Virginia Universal Pre-K: 5 Year Summary. New Brunswick, NJ: National Institute for Early Education Research.

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