

Outcomes
Study

LEVEL OF EVIDENCE
Gold Standard

Effectiveness Study

The Creative Curriculum® for Preschool

An Independent Study Exploring the Effectiveness of
The Creative Curriculum® for Preschool

Effectiveness Study

The Creative Curriculum® for Preschool

Introduction

Extensive research points to the important link between young children’s development and learning and their later success and school achievement (e.g., Bowman, Donovan, & Burns, 2000; Duncan, 2011; Hamre & Pianta, 2001; Ladd, 1990; La Paro & Pianta, 2000; Lonigan, Burgess, & Anthony, 2000; National Early Literacy Panel, 2008; Sabol & Pianta, 2012). In addition, negative trajectories for children who begin kindergarten behind their peers have been reported (e.g., Halle, Hair, Wandner, & Chien, 2012; Quirk, Nylund-Gibson, & Furlong, 2013). These findings make it imperative that preschool children have the necessary foundation for future school success and are “ready” when they enter kindergarten.

In the past it was assumed that children were “ready” for kindergarten if they were healthy and well-nourished; considerate of others’ feelings; and able to communicate their needs verbally, follow directions, pay attention, take turns, and share. Today, the definition of school readiness has expanded and assumed new prominence. Most states have developed early learning guidelines to determine children’s “readiness” for kindergarten (Barnett, 2011; Daily, Burkhauser, & Halle, 2010; Forry & Wessel, 2012). Head Start developed a readiness outcomes framework for children 3–5 years old to guide programmatic curriculum decisions (U.S. Department of Health and Human Services, 2010). According to the National Research Council, if all children are to enter school with a sufficient foundation for learning, it is especially important that preschool curricula help them to develop the essential core understandings (Bowman, Donovan, & Burns, 2000).

Regardless of which curriculum is being used, it should be based on research and evaluated for its effectiveness with populations that are representative of those who will experience the curriculum (NAEYC & NAECS/SDE, 2003; National Research Council, 2001). The National Association for the Education of Young Children (NAEYC) and the National Association of Early Childhood Specialists in State Departments of Education (NAECS/SDE) outlined specific features of curriculum effectiveness. They state that curriculum should be thoughtfully planned, challenging and engaging, developmentally appropriate, culturally and linguistically responsive, include critical developmental and learning areas, and promote positive short- and long-term outcomes for children (NAEYC & NAECS/SDE, 2003).

This paper describes a study conducted by third party researchers that explored the effectiveness of *The Creative Curriculum for Preschool* (Teaching Strategies, LLC, n.d.). *The Creative Curriculum* is a widely used (Hyson, 2008), comprehensive curriculum based on child development and early education research and theory (Dodge, Durham, Duckett, & Stover, 2011). Curriculum materials detail how to (a) create learning environments, (b) individualize the curriculum to meet the needs of diverse learners, (c) teach in content areas, and (d) integrate in-depth meaningful investigations of topics that interest children.

Research Questions

This study sought to answer the following research questions: (1) What is the impact of *The Creative Curriculum* on the achievement of preschool children in classrooms where teachers used the curriculum for only one year; and (2) What is the impact of *The Creative Curriculum* on the achievement of preschool children in classrooms where teachers used the curriculum for two years?

Procedures

Participants

A total of 45 preschool classrooms from the greater mid-Atlantic region and south Florida were included in the study. Center programs represented considerable variability in the characteristics of the served child populations and in the nature of the preschool service delivery context. Prior to child achievement data collection, program-level background data and family background data were collected. Program data included program size, program context and operation (e.g., Head Start, universal pre-K, year-round), ages of program children served, percent of newly enrolled 4-year olds, 4-year-old class size, and teacher experience and qualifications. Based on this information, participating programs were randomized into either a treatment group or a control group blocking programs by location, size, and scope. Family background data included parental education, family composition, child's prior care experience, and parental reasons for choosing the pre-K program. Additionally, family background data were later used as covariates in the data analyses, thereby increasing precision of impact estimates.

Study Design

The study was conducted over a period of 2 academic years and involved two cohorts of 4-year-old preschool children. Pretest measures were administered to Cohort 1 children during the fall of 2011. Posttest data on the first cohort of children were collected during the spring of 2012. For the second cohort of children, data collection was repeated with the same pretest/posttest sequence in the fall of 2012 and spring of 2013, respectively.

In Year 1 of the study, the control group used a curriculum other than *The Creative Curriculum*, one that they had been using for multiple years. The Year 1 treatment group used *The Creative Curriculum*. In addition, treatment group teachers received a 2-day training provided by Teaching Strategies, LLC, on *The Creative Curriculum* and *Teaching Strategies GOLD*, the latter of which was used by both groups for collection of child assessment data.

In Year 2 of the study, teachers in the Year 1 control group used *The Creative Curriculum* for the first time. These teachers received the same 2-day training provided by Teaching Strategies, LLC, that the Year 1 treatment group had received the previous year. Teachers in the Year 1 treatment group used *The Creative Curriculum* for the second year in a row. These teachers received a 1-day refresher training provided by Teaching Strategies, LLC.

The study design allowed for two distinct comparisons: the **effect of two years of treatment implementation**, in which outcomes of children in centers with two years of *The Creative Curriculum®* were compared with outcomes of children in centers that had been using a different curriculum for many years; and the **effect of two years versus one year of implementation** of *The Creative Curriculum®*, in which children in classrooms implementing *The Creative Curriculum®* for two years were compared with children in classrooms implementing *The Creative Curriculum®* for the first time.

Cognitive Pretest and Posttest Measures

A battery of cognitive measures in mathematics and language from the *Woodcock-Johnson III Test of Achievement (WJ-III)* were individually administered to each study child by trained data collectors. All assessment measures are widely used, have been validated with diverse populations, and exhibit strong psychometric properties of validity and reliability (.80 - .97 reliability for 4-year olds in preschool) (Puma, 2013; Puma, et al., 2010). The data collection process was monitored throughout the study to ensure continued reliability and accuracy.

Mathematics

WJ-III: Applied Problems measures the ability to analyze and solve practical problems in mathematics. As the assessor reads the problems, the child must recognize the procedure to be followed and then count/and or perform simple calculations.

Language

WJ-III: Letter-Word Identification measures letter and word identification skills. The initial items involve symbolic learning, or the ability to match rebus (pictographic representation of a word) with an actual picture of the object. The remaining items measures a child's reading identification skills in identifying isolated letters and words.

WJ-III: Spelling measures the ability to correctly write orally presented letters and words. For the initial items, pre-writing skills are measured through tasks such as drawing lines and copying letters. As the items increase in difficulty, the child is asked to write specific upper- and lowercase alphabet letters and specific words.

WJ-III: Oral Comprehension measures the ability to comprehend a brief spoken passage and provide the missing word based on syntactic and semantic clues. The test requires the child to use listening, reasoning, and vocabulary skills. The assessor reads an analogy or passage with one word missing; the child is asked to respond orally with the correct word that completes the passage or analogy.

Composite skills

An overall composite score of pre-academic skills that measures pre-reading, letter and word identification, developing mathematics, and writing production skills was created by combining scores from the *WJ-III: Applied Problems, Letter-Word Identification, and Spelling* tests.

Study Results

In the first year of the study, no statistically significant impact was found when comparing the scores of children in centers using *The Creative Curriculum* for one year (Year 1 treatment group) to centers using another curriculum (Year 1 control group). However, when teachers in Year 2 of implementation were compared with Year 1 control group teachers, researchers found evidence of positive impacts on student achievement in literacy and math as well as evidence of an educationally meaningful difference on spelling skills for children whose teachers were using *The Creative Curriculum* for the second year. These findings are particularly notable because the results after one year of implementation did not reflect any statistically significant differences across student outcome measures. This suggests two things: (1) that teachers who had more time with *The Creative Curriculum* were able to increase their effectiveness, as evidenced by positive payoffs in terms of higher student achievement; and (2) that students in classrooms where a curriculum other than *The Creative Curriculum* had been used for many years did not show the same gains in literacy and math as did children in classrooms whose teachers used *The Creative Curriculum* for only two years.

Results comparing teachers using *The Creative Curriculum* for a second year with teachers using it for the first year only also provided strong evidence that more time with *The Creative Curriculum* may lead to increased teacher effectiveness. Researchers found strong statistical evidence of positive impacts on literacy and math outcomes, as well as evidence of a positive impact on student achievement in spelling. The differences are considered educationally meaningful, meaning that children had better outcomes after their teachers used *The Creative Curriculum* for two years as compared to children in classrooms where their teachers used it for only one year.

Discussion

This research examined the effectiveness of *The Creative Curriculum for Preschool* on children's cognitive development when their teachers used the curriculum for one and/or two years. Results imply that *The Creative Curriculum* is in fact effective and that it promotes children's cognitive achievement. Few studies have assessed child outcomes and curriculum implementation longitudinally (Domitrovich, Gest, Jones, Gill, & Sanford-DeRousie, 2010). Studies do show that teachers sometimes struggle initially when trying to implement a new curriculum (e.g., Domitrovich et al., 2010; Pence, Justice, & Wiggins, 2008). This is indicative of the complexity of the change process, especially when the curriculum is comprehensive and encompasses attention to curricular activity contexts, focused instructional processes (Pence et al., 2008), and teaching in the content areas (e.g., Ginsburg, Lee, & Boyd, 2008; Powell, Diamond, Bojczyk, & Gerde, 2008). It is therefore reasonable that child outcomes assessed in the second year of implementation would be stronger as teachers become more familiar and comfortable with the curriculum and more skilled in using it.

In sum, this study adds a critical and heretofore missing piece to the research on curriculum effectiveness. The extensive use of *The Creative Curriculum* with preschool children around the country makes these findings relevant and timely, particularly in relation to children's school readiness.

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