

A Study of Montessori Education in South Carolina's Public Schools

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Purpose

Over the five-year period, this mixed-method study developed a full understanding of how public school Montessori impacts a range of education stakeholders in South Carolina.

Montessori Education

Montessori was developed by Dr. Maria Montessori over 100 years ago. Necessary components for authentic Montessori include multiage groupings that foster peer learning, uninterrupted blocks of work time, and guided choice of work activity. In addition, a properly trained teacher facilitates and a full complement of specially designed learning materials are carefully arranged and available for use in an aesthetically pleasing environment.

Study Components

Analysis of Student Demographics/PowerSchool Data (n=approx. 6500). Compared characteristics (gender, race, family income, ESL status, and SPED) of Montessori students and non-Montessori public school students in S.C.

Analysis of Outcome Variables (n=approx. 6500). Compared test scores, discipline, and attendance of Montessori and non-Montessori public school students in S.C.

Cohort Analysis (n=approx. 120): Examined how participation in a Montessori program impacts affective variables such as work habits, social skills, creativity, and executive function. Included a Montessori school and a demographically matched comparison school.

Surveying Montessori Teachers (n=approx. 175 teachers yearly, 72% response rate): Examined teacher demographics, classroom practices, student learning, job satisfaction, authenticity of Montessori instruction

Surveying Principals/Programmatic Fidelity: (n=approx. 42 yearly) Explored implementation factors with all S.C. public programs, including multi-aged groupings; student assessment protocols; Montessori materials and equipment; Montessori accreditation; and teacher and assistant Montessori credentialing and training

Classroom Observations (n=approx. 30 yearly): Montessori classrooms were randomly selected for observation, conducted in an unannounced fashion by retired Montessori teachers. Observations were 60 minutes in duration and included a post-observation interview and lesson plan review.

Research Questions

- Q1: To what extent are public schools in S.C. implementing the Montessori model with fidelity?
- Q2: To what extent do the demographic and background characteristics of S.C.'s public school Montessori students differ as compared to S.C.'s public school students not enrolled in Montessori programs?
- Q3: To what extent do S.C. public school Montessori students differ from non-Montessori S.C. public school students on student outcome variables (course performance/test scores, discipline, attendance, and progression)?
- Q4: To what extent do S.C. public school Montessori students differ from non-Montessori S.C. public school students on variables generally classed in the affective domain (work habits, social skills, and executive function)?
- Q5: What are the demographic characteristics of public school Montessori teachers in S.C.? What are perspectives of teachers on the impact of Montessori on their students? What are perspectives of teachers on the impact of Montessori on their teaching?

Preliminary Results

On average, schools are implementing Montessori with fidelity, although there is variation among programs. While most Montessori programs are in Title I schools, Montessori students are slightly less likely to be low income, have special education status, and be ESL students. White students are overrepresented in Montessori programs. In 2013 and 2014, Montessori students outscored non-Montessori students in Writing and ELA, controlling for student characteristics. In 2014, non-Montessori students outscored Montessori students in Math.

Researchers examined achievement growth while controlling for student demographics. Montessori students experienced higher levels of growth in Math over two years (2014 to 2016) and over three years (2013 to 2016) of achievement. In ELA, Montessori students' test scores increased more than non-Montessori test scores over two years.

In 2014, 2015, and 2016, Montessori students had higher attendance rates than non-Montessori students and had fewer discipline incidents after controlling for student demographics.

After adjusting for demographic factors, the Montessori students scored 6 percentiles higher on the 2015 executive function assessment than did the same non-Montessori students. An analysis of creativity in 2016 showed that Montessori students scored higher than non-Montessori students did.

A majority of Montessori teachers report that they love their job (77%) and definitely plan to remain in the teaching profession (85%).

Limitations & Challenges

No logic model for Montessori; securing school participation in all aspects of study; finding qualified observers; finding age appropriate instruments for non-academic outcomes; dealing with selection bias

For More Information

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