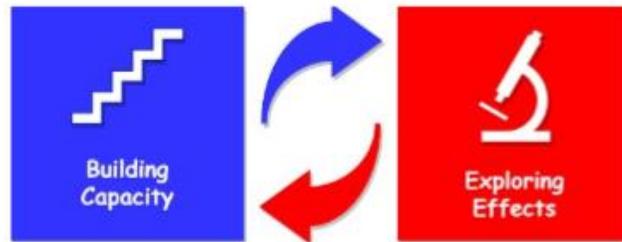
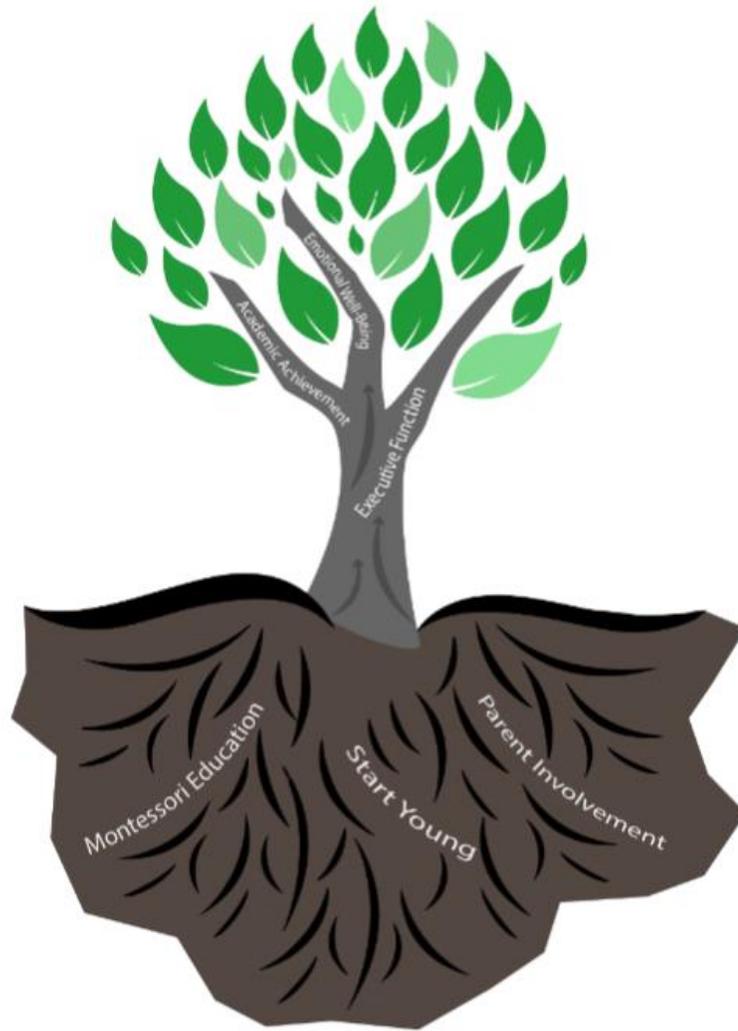


Since 1978, Lumin Education has started young, involved parents, and provided Montessori education to expectant parents and young children from birth through the third grade. Lumin Education is collaborating with Southern Methodist University's (SMU) Annette Caldwell Simmons School of Education and Human Development in a long-term partnership for the primary aims of 1) building capacity and data infrastructure, and 2) exploring possible effects of how Lumin students fare over time, as well as compared to others, as appropriate. In this three-phased approach, SMU conducted a data inventory and planned analyses in the first phase, built a dashboard and requested comparison data in the second phase, and is currently in the process of analyzing jointly-identified research questions in the third phase.



The emphasis in Phase 1 was to build capacity and data infrastructure. SMU and Lumin Education worked in close collaboration to digitize and organize a vast array of data files spanning more than 40 years into a single database. SMU also formalized a theory of change to bring to light that Lumin Education is about more than just academics; it is also about improving social and emotional learning and executive function in children to build the foundation for future success and happiness later in life. Too often, rigid academic standardized tests pigeon-hole Montessori schools into measuring what may or may not be appropriate in the context of Montessori education. As such, SMU and Lumin Education seek to examine how best to measure other dimensions to begin to understand “the whole child.” Lumin Education also places great emphasis on starting young and involving parents, facets that cannot be ignored when considering the entirety of a child’s educational experience.



Phase 2 built on this stage-setting and data organization in two ways. First, in consultation with Lumin Education, SMU developed an interactive dashboard to understand some basic information about demographics, parental involvement, home visiting, academic achievement, social emotional learning, and executive function. This dashboard enables school leaders to examine copious amounts of data in a simple visual format with graphs and tables, and allows them the added capability of filtering data along different demographic and time variables. For example, this dashboard allows Lumin Education to see if Latinx girls performed better or worse than their White counterparts on social emotional learning. It also allows Lumin Education to see if 3rd grade STAAR Math scores improved from 2016-2019. This kind of easy data visualization is intended to help Lumin Education make data-driven decisions about instruction, equity, home visiting, etc. The second portion of Phase 2 was that of training a data governance team. SMU initiated a series of eight practical, hands-on training sessions about issues ranging from data ethics and security to data management and use. This highly rated training equipped 10 Lumin Education staff members to streamline and use data much more effectively moving forward.

Figure 2: Sample of STAAR data visualization from Dashboard



Starting in September 2020 and running through December 2021, Phase 3 aims to take the data that has been organized and visualized from Phases 1 and 2 respectively and analyze some key questions about Lumin students. These questions were identified primarily by Lumin leadership as some of the most pertinent questions to understand how Lumin students fare along different dimensions. Some of these questions look only at Lumin students, such as determining how many students receive the “full Lumin experience” from prenatal through third grade. Other questions compare Lumin students to similar, or matched, students in Dallas ISD and Uplift Education, another charter school in the DFW area. Careful, advanced statistical analyses will be conducted to understand the potential similarities and differences between Lumin students and comparison students in academic achievement and social emotional learning. Currently, there is no appropriate comparison data available for executive function.

Throughout all three phases, SMU’s Annette Caldwell School of Education and Human Development’s Teaching and Learning Department and the Center on Research and Evaluation (CORE) work in close partnership to make recommendations and offer guidance for data collection, tool selection, and a range of other research and evaluation evidence-based best practices, customized to Lumin’s needs.

Dr. Jan Mallett, the Principal Investigator on this project, is currently a Research Assistant Professor in the Department of Teaching and Learning at SMU. Co-Principal Investigator, Hiba Rahim, and Elisa Gallegos, Harvey Luna, and Yusuf Kara are CORE staff members who bring a range of evaluation capacity building, data management, data visualization, and analysis skills to the project.

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