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## Business Impact

“The best way to improve the American workforce in the 21st century is to invest in early childhood education, to ensure even the most disadvantaged children have the opportunity to succeed.”

James J. Heckman  
Nobel Laureate in Economics and  
Professor of Economics,  
University of Chicago

## Challenges

- **Identify and enroll children eligible for early learning programs.** Data is frequently housed in disparate systems – often of poor quality – and in formats not conducive to analysis.
- **Measure and document improvements in student success.** It’s difficult to collect and analyze relevant data from early learning, K-12 and post-secondary systems, and from workforce environments.
- **Generate accurate reporting for program effectiveness.** Data access issues make it difficult to create understandable reports that meet federal and state reporting requirements.
- **Achieve consistent quality across early learning programs.** Achieving the best outcomes requires consistent implementation of high-quality components and ongoing monitoring to ensure positive outcomes.

## Improve Student Outcomes Through High-Quality Early Care and Education Programs

### Your Goal

Research confirms high-quality early learning programs increase academic proficiency, graduation rates, post-secondary education enrollment, and skill levels needed in our global economy. As a result, significant municipal, state and federal investments have been made in these programs nationwide, particularly for at-risk children. Programs have demonstrated returns on investment ranging from \$5 to as much as \$16 for every \$1 invested.

But challenges exist. How can stakeholders ensure these programs are high-quality, accessible, and monitored to understand student outcomes in the K-12 system and beyond? This is critical, as policymakers are more likely to implement effective programs backed by data.

The answer is by capturing quality data and applying advanced analytics that help you:

- Identify and enroll children eligible for early learning programs.
- Implement and monitor components of Quality Rating and Improvement Systems (QRIS).
- Document student success and understand what’s working and where to improve.
- Compile complex data in an understandable way to demonstrate the value of programs, address concerns, and meet reporting requirements.
- Ensure that family and child data is safe and secure.

### Our Approach

Superior data integration, quality and analytics can ensure early learning programs are high-quality and will get results. SAS® can help you:

- **Ensure data quality while protecting privacy.** Integrate, manage and ensure the quality of data from multiple sources to fully inform stakeholders on program effectiveness, while protecting child and family privacy.
- **Gain an accurate and comprehensive view of families of eligible children.** SAS data management techniques enable you to access, integrate and cleanse data across all available sources.
- **Monitor the effectiveness of programs.** Data collection and analysis tracks staff-to-child ratios, teacher skills, curricula, family involvement and screening services.
- **Inform policymakers and stakeholders.** Turn complex data into understandable visualizations that illustrate positive outcomes.
- **Build foundations for success in career and college.** Collect and analyze K-12, post-secondary, and workforce data to demonstrate the impacts of early learning on long-term student outcomes.
- **Align performance and academic standards.** Align standards from pre-K through K-12 to ensure seamless education continuity and college- and career-readiness.
- **Track programs and student success longitudinally.** Analyze longitudinal data to spot trends and improve the state education systems and policies.

## The SAS® Difference: A comprehensive, data-driven approach

SAS uses a comprehensive analytical approach to address a broad range of education issues. SAS provides:

- **Data management.** SAS combines, cleanses and manages data from disparate sources across agencies, including education, social services, health care, workforce and more.
- **Domain expertise.** SAS has worked across agencies and departments to streamline the data gathering process, while compiling and sharing information with stakeholders to develop the most effective education policies and programs.
- **Advanced analytics.** SAS advanced analytics enable you to assess the effectiveness of early care and education, home visiting, childcare, nutrition, and child health programs. Policymakers can see improvements in student outcomes, spot patterns, course correct and reallocate budgets to programs delivering results.
- **Data visualization capabilities:** SAS pulls together all relevant data into a holistic picture using dashboards and visualizations. Users can visually interact with data; answer questions quickly; make more accurate, data-informed decisions; and easily share their findings with others.
- **Experience with state longitudinal data systems.** SAS has experience in establishing these systems to inform policymakers and stakeholders about student outcomes and effective programs and policies.

## Case Study: A major US city

### Situation

A major US city launching a “universal” pre-K system needed to cost-effectively communicate the availability of its new program. Their challenge was reaching key constituents, including immigrants with limited English skills and lower socioeconomic groups wary of calls from the city.

### Solution

- Using SAS Data Management and SAS Data Quality, the city built an accurate database of 4-year-olds and family contact data.
- The database merged public birth records, data on families in contact with local social service or health care agencies and data from private marketing firms.
- The data was managed and presented to call center staff in a way that protected family privacy.
- As new data became available, the city was able to clean the files quickly and update the database.

### Results

- The city was able to efficiently identify eligible 4-year-olds by merging data from multiple sources and cleansing the data to remove duplicate students.
- This led to the successful enrollment of more than 53,000 pre-K students in a matter of months.
- The city reduced costs and improved citizen experiences by ensuring that families were not called multiple times, while protecting their privacy at all times.

### What if you could ...

#### Improve child education outcomes?

What if you could use data management and data quality to effectively implement and monitor high-quality early learning programs?

#### Improve outreach?

What if your outreach program had accurate data on eligible families so they could easily contact and enroll children in available early learning programs?

#### Make data-informed decisions?

What if you could enable policymakers to make more informed decisions that will positively influence student outcomes?

**You can. SAS gives you  
THE POWER TO KNOW®.**

### SAS Facts

- SAS software is used by more than 3,000 educational institutions around the world.
- SAS provides P-12 and degree-granting educational institutions access to SAS software at a significantly discounted rate, free curriculum and mobile apps for K-12 and free and low-cost access to SAS software for teaching and learning.
- Today, SAS has customers at more than 80,000 sites using our software to improve performance and deliver value by making better decisions faster.

Learn more about SAS software and services for early learning at: [sas.com/P12](https://sas.com/P12)