Effective Use of Data
Data can be powerful when educators have the ability to interpret and respond to them in ways that promote positive changes in teacher behavior and classroom/program environments. At the heart of the process lies the need for a school-wide culture of collaborative inquiry that fosters open and honest dialogue. Making effective use of data includes a thoughtful selection from multiple sources of information, systematic data collection, analysis and dissemination, and the intentional application of findings to ongoing changes to instructional practice and policy.

There are four domains in this Cornerstone:
- Collaborative Inquiry
- Multiple Sources
- Collection, Analysis, and Dissemination
- Intentional Application

Culture of Collaborative Inquiry
In a school culture that promotes inquiry over evaluation, teachers ask questions relevant to children’s learning, try to answer these questions systematically, and collaborate to enhance their practice. Within this culture educators must be guided and supported to recognize the power of data to reveal disparities and to engage in open and honest dialogue focused on changes in practice and policy that result in improved experiences and outcomes for African American, Latino, and low income children.

Structures
Structures, such as Professional Learning Communities, data teams, and horizontal and vertical teams give teachers the time and format to reflect, identify needs, create plans for data collection, and discuss the implications of information already collected.

Processes
Processes, such as the reciprocal sharing of information between a teacher and family member allow all parties to better understand the individual needs of a child. Sharing data across classrooms and teachers also facilitates better understanding of learning needs, targets of instruction, and sharing of strategies.

Data Literacy
Time is specifically devoted to developing data literate educators who know how to effectively identify and utilize data. Data-literate professionals concentrate time and effort on tasks that will yield the greatest benefit for teachers, schools, and families, and provide a detailed picture of areas in which schools have the greatest needs.
Multiple Sources
Making effective use of data begins with choosing relevant sources of information. Children are influenced by a variety of environments. Gathering information from each of these environments allows professionals to make informed decisions.

Student
Student data includes information pertaining to individual children. This information may be demographic, like gender and ethnicity, or provide information about student progress in a variety of areas. For example, a teacher may use informal assessments to determine a student’s level of mastery of an academic objective like counting or reading sight words. These data inform instructional practice. While much of the information collected by teachers and schools pertains to academic progress, educators should also collect information about children’s social, motor and language development.

Classroom
Classroom data describe the educational environment provided for a particular group of students. Children’s learning and growth are heavily influenced by classroom factors, so measuring this environment is critical to improving school outcomes for young people. With support from FirstSchool, teachers have access to data about their classroom practices and environment.

School
Information about groups of students, classrooms or grade levels can create an overall picture of the school. Figures relating to absences, suspensions, retentions, and teacher working conditions offer details about the prevailing school culture. Such data can allow teachers, administrators, and families to see how school-wide policies differentially affect individuals or groups of individuals, especially in the case of African American, Latino and low income children and their families. This information should be used to begin important conversations and to shape practices and policies at the school and district level.

Family
Families provide unique insights into children’s development and their strengths, interests, and needs. Additionally, parents are uniquely positioned to provide information about family culture, strengths, and experiences. Information from a strength model is critical for school professionals to gain a complete picture of students’ knowledge base, as well as the challenges they may be facing.

The Snapshot is a tool used to examine how children in grades PreK through 3rd spend their school day. Data are presented as graphs at the school, grade and individual teacher levels to inform schools of the minute by minute experiences of children. Teachers and administrators are able to see the amount of time children spend in various activity settings like whole group, small group, and transitions; in various content areas such as math and literacy; and, the kinds of instructional approaches that are used during the day such as didactic and scaffolded. The instrument was developed by Dr. Sharon Ritchie and colleagues over the last two decades.
Collection, Analysis and Dissemination
After educators identify relevant sources for information, an organized approach for the collection and analysis of data is needed. Within the FirstSchool framework, this is a three-step process. First, data must be collected in a systematic way. Second, these data must be analyzed and presented in a manner that allows educators to gather insight from the information. Finally, these analyses must be disseminated to individuals to whom they are relevant and those in a position to create change in the school.

Collection
The first step is the systematic collection of information. Depending on what educators wish to learn, they must either select an existing data source, such as standardized test scores or school attendance records, or determine the best way to collect the needed information themselves. The FirstSchool framework emphasizes that all assessments are formative in nature. Even information gleaned from an assessment at the end of a school year or academic unit may form the basis for instruction at the beginning of the next. By viewing all assessments as formative in nature, teachers may increase collaboration as they share the information they learn with others who influence a child’s learning and development. It is important to collect data that help school staff focus on the success and challenges of African American, Latino, and low-income children and their families.

Analysis
Regardless of the source of the data, careful analysis provides the structure for future inquiry and staff development. Various ways to analyze data might include multiple points over time, subgroup performance, and skill level or competency performance.

Dissemination
Findings must be disseminated to individuals who can benefit from thinking about and interpreting the data, and to those in a position to make timely changes at various levels. A culture of inquiry in a school promotes sharing data in ways that allow professionals to make substantive changes that will improve children’s experiences, rather than simply using data to evaluate a professional’s capacity to accomplish a job.

This pie chart is an example of the type of information FirstSchool provides to schools from the Snapshot observations. It shows the different types of groupings in use during the day. Seeing the heavy use of whole group time might lead to some faculty-wide conversations about other types of instructional groupings that might benefit children.
Intentional Application
Simply acknowledging successes or areas for improvement does not result in changes that positively impact the lives of young children. Instead, the data must be used to make changes in instruction and policy. Key areas in which data may be most effectively used to impact children’s school experiences are: in the classroom, in collaboration with families, and for program and policy change. Consistently focusing on using the results of the data to inform policy and practice that impact the school experiences and outcomes for African American, Latino and low income children and their families is essential to decreasing the achievement gap and increasing learning and excellence in children.

Reflective Teaching
Teachers engaging in reflective practice use data and inquiry to assess the success of instructional choices, improve classroom management, and collaborate with peers. Frequently, this information may be shared with other professionals using structures like professional learning communities and data management teams, so that professionals can take joint responsibility for children’s success and maintain a focus on equity.

Home-School Partnerships
Educators and family members can work together to make sense of individual student and classroom data. Families can contribute insights and knowledge about children that would otherwise be unavailable to teachers and other school professionals. By better understanding one another, schools and families may more effectively communicate with one another, leading to better support for children both at home and in the classroom.

Program/Policy Decisions
Data can provide a foundation for program and policy decisions at all levels of the student’s experience (classroom, grade, demographic group, school, district). Administrators, teachers, and families are in a better position to judge the effectiveness of programs and policies when they have concrete information that confirms or denies their value. Through the use of data, decisions may be made that build on the strengths and address the areas of improvement that are unique to each classroom, school, or district.

For more information about FirstSchool, visit our website at:
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