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# Embedded, Collaborative, Comprehensive: One Model of Data Utilization

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As noted by Stein, Freel, Hanson, Pacchiano, and Eiland-Williford (this issue), the field of early childhood education (ECE) has witnessed an increasing demand for the utilization of research-based practices and data-driven decision making. At least two assumptions underlie this demand. First, there is an assumption that there is a research literature on best practices that supports specific data use procedures. In ECE, this is a flawed assumption. The call for using data has not been accompanied by clear guidance on how to utilize data most effectively. For example, are some types of data more helpful than others? With whom should data be shared to have the most impact, and in what format is it best shared? What frequency of data sharing is most useful? As more and more programs are collecting and using data, systematic research on the practices and procedures is warranted and feasible.

All too often, without such guidance, programs may collect data, then not know what to do with the information. Programs that do use data may focus narrowly on one level, typically the child level, without considering using data that might address aspects of the broader systems within which children and families function. For example, recent response-to-intervention approaches in ECE use child assessment data within tiered intervention hierarchies to deliver research-based curriculum, instruction, and focused interventions to meet children's learning needs. With these approaches, data that would inform work with families to support their children's learning may not be collected or translated in a useful way.

Second, the demand for data utilization assumes that programs have the capacity—including the personnel, knowledge, and financial means—to gather data and use results for individualization and program improvements. Again, this assumption is incorrect. In ECE programs, data collection tasks are often undertaken by teachers, using measures that may require more training than is provided to administer and/or interpret properly. There is a great need for professional development on measurement selection and training as well as increased resources to support the utilization of data for individualizing children's activities as well as improving the quality of overall classroom programming (Cromey, 2000). This almost always requires a person whose dedicated job is evaluation. Most early childhood programs cannot afford such a person, although programs in collaborative networks (e.g., Head Start or state-funded prekindergartens) may have

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some dedicated evaluation funds. Establishing partnerships with universities or local school systems may help a program expand its evaluation and research capacity.

Stein and colleagues offer a noteworthy and useful model of data utilization. Although their article does not provide specificity regarding the how of data utilization, three qualities of the Chicago Educare data utilization process may prove efficacious and may be informative to the field. In particular, the Chicago Educare data utilization model is embedded, collaborative, and comprehensive.

*Embedded*. Data utilization is a key component of the Educare model and is closely tied to all aspects of programming. The Research Program Partnership is not an ad hoc committee formed to work on a particular problem; rather, it is a permanent structure of the program. Because data utilization is embedded in programming, improvement efforts are continuous. The embedded nature of the process would also seem to facilitate the routine use of various types of data, not just child outcomes. For example, the program effectively used fairly simple and easy-to-obtain descriptive information on where children attended school to guide programmatic efforts with parents. It surely must have been rewarding to program staff to see the subsequent increase over just a year or two in the proportion of their graduates whose parents enrolled them in more highly rated charter schools.

*Collaborative*. The data utilization process at Chicago Educare includes a research/evaluation team working in conjunction with program leadership and staff. In addition, although parents are not a regular part of the data utilization structure, the example provided in the article of using Educare graduate parents as a resource for current families highlights the possibilities of parent involvement in the data utilization process. A collaborative data utilization structure would seem to (a) ensure buy-in from all parties, so that all members of the Educare community value the collection and use of data; (b) distribute accountability among those working with children and families, such that all members of the Educare community view improving children's outcomes as their job; (c) serve as professional development and peer learning for staff, offering them the opportunity to learn data interpretation skills as well as how to design program responses to needs identified by data; and (d) serve as an intervention in itself for parents, providing them with new knowledge and social networks. Educare's commitment to data collection and utilization is so high that these activities are part of the job description of almost all staff, enhancing the motivation of all team members to be truly collaborative.

*Comprehensive*. Although the Stein et al. article focuses primarily on a follow-up study of school-age Educare children, as the national evaluators of the network of Educare schools, we know that data utilization at Chicago Educare targets multiple levels, from children to families to classrooms to larger systems. The child-level example is given of using progress data from math assessments to provide individualized math lessons. The article provides several program-level examples of classroom (e.g., math initiative) and family support/engagement (e.g., assistance with school applications) interventions that were implemented based on data. The article provides the system-level example of using data with school partners to align programming at the 0–5 level with that at the K–12 level. Finally, the Educare model used data on program graduates, not only current attendees. The use of data on former students and families would seem to be a fruitful (and ambitious) practice for early childhood program improvement efforts.

These three qualities of data utilization—embedded, collaborative, and comprehensive—are the characteristics often mentioned in best practice recommendations to early childhood programs when encouraging the use of data to improve effectiveness (Boudett, Murnane, City, &

Moody, 2005; Flowers & Carpenter, 2009). Although more research is needed to determine whether particular practices are more effective for program improvement or for increasing children's developmental progress, it is encouraging to see programs such as Educare establishing systems and creating procedures that work for them.

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