COMMENTARY

Professional Development, Capacity Building, and Research Needs: Critical Issues for Response to Intervention Implementation

Louis Danielson, Jennifer Doolittle, and Renee Bradley
Office of Special Education Programs, U.S. Department of Education

The No Child Left Behind Act of 2001 in conjunction with the Individuals With Disabilities Education Act amendments of 2004 (IDEA) have created incentives to improve how K–12 instruction is provided and to improve the achievement of all students, including those with disabilities. To reach these goals, however, a thorough research base is needed, practitioners and administrators must be provided with training in how to use this research effectively in practice, and systems must be put in place to support practitioners and administrators in implementing and sustaining the use of evidence-based practices in schools. An emerging framework that provides an infrastructure to support the use of evidence-based practices and provides a model for instructing and intervening on behalf of all students to help improve their achievement is response to intervention (RTI). Although the RTI framework holds this potential, many practical questions, such as the fol-

lowing, need to be answered for practitioners and administrators to proceed successfully in its full implementation: What are the evidence-based practices in various components of RTI? What outcomes can schools expect if they implement those practices within the RTI framework with fidelity? How can we prepare teachers to optimally implement a system of RTI? What do states, districts, and schools need to consider if they are to sustain the use of RTI over time? And finally, what are future research needs?

The article in this issue by Kratochwill, Volpiansky, Clements, and Ball (2007), which both lays out the key components of a system of RTI as it should be implemented in an education setting and sets the framework for the series of articles in this special issue, states: "Successful implementation of RTI is multifaceted and involves knowledge of evidence-based interventions, multitiered intervention models, screening, assessment and

Correspondence regarding this article should be addressed to Jennifer Doolittle, Office of Special Education Programs, 550 12th Street SW, Room 4096, Washington, DC 20202; E-mail: jennifer.doolittle@ed.gov

progress monitoring, administering interventions with a high degree of integrity, support and coordinated efforts across all levels of staff and leadership within the school, and sustaining systems of prevention grounded in an RTI framework." For each of these components the authors describe the salient issues, current research, and next steps needed to ensure the use of valid and reliable evidence-based practices within a system responsive to students' education needs and supportive of practitioners' implementation. The results of research are not useful if practitioners are not sufficiently trained in their use. In addition, this training is unlikely to occur in a high-quality, supported way without changing the systems within which schools work and without building capacity to support practitioners in their implementation (Glover & DiPerna, 2007). Thus, we will reflect on professional development and building the capacity necessary for sustained implementation, and address current research needs for the RTI model.

Professional Development

Shinn (2007) distinguishes two RTI processes: "little rti" and "big RTI." As described by the author, the rti process serves all students and ensures that they are benefiting from the instruction they are receiving. The purpose of the RTI process, on the other hand, is to make a special education entitlement decision when a student has not responded to an rti process. When considering what support and coordinated efforts to provide, it may be helpful to split RTI into these two frameworks, if only to differentiate among the special types of training practitioners may need. Depending on their roles, many educators will need training in primary- and secondary-tier interventions, and in the assessments used for screening and progress monitoring, so that they are able to match interventions with student needs. Only some educators will need to be trained in the delivery of intensive, individualized interventions. Certainly special educators will need this training, along with training in (a) the identification of learning disabilities,

and (b) using RTI as part of a comprehensive evaluation. At this point, there has not been sufficient attention paid to the implications of RTI for the preservice preparation of personnel who will play critical roles in implementation (i.e., principals, general education teachers, psychologists, and special educators). Although the Office of Special Education Programs (OSEP) at the U.S. Department of Education funds several projects that support practitioners' use of evidence-based interventions and assessments within an RTI process (e.g., the Center for Early Literacy Learning; the Center on Instruction; the National Center on Student Progress Monitoring; and the Inclusion, Research-to-Practice, Instructional Strategies Center), there is still much to be completed to ensure that personnel participate in appropriate professional development.

Results from various studies of professional development in the 1990s suggest that professional development can influence teachers' classroom practices significantly and lead to improved student achievement (American Educational Research Association, 2005). Kratochwill et al. (2007) report that professional development has achieved greater importance as this link between practitioner skills and student performance levels has been delineated. To help improve student performance, the critical features of high-quality professional development should be in place, including professional development structures, such as teacher networks and study groups (Kratochwill et al., 2007). In addition, effective professional development will provide practitioners with a way to directly apply what they have learned to their instruction (American Educational Research Association, 2005). Kratochwill and colleagues provide a number of models, such as the Wisconsin model, that they believe provide a template for integrating professional development with adoption, implementation, and replication of RTI. Professional development, when embedded within a system-change perspective that is focused on the issues of adoption and implementation, will help to create an environment that can help sustain a given practice. This process of building capacity to fully imple-

ment and sustain a practice or program is the subject of the next section.

Building Capacity

In addition to evidence-based intervention strategies and high-quality training materials, other critical factors are likely to influence the implementation and sustainability of research-based instruction in classrooms (Boudah, Blair, & Mitchell, 2003). The beginnings of a science exist that will assist implementers in using not only evidence-based practices but also evidence-based implementation strategies to ensure their practices are implemented with fidelity and their use sustained (Fixsen, Naoom, Blase, Friedman, & Wallace, 2005). The science of implementation and sustainability have received much attention of late (Bernfield, Blase, & Fixsen, 2006), especially with the growing realization that training practitioners in the use of evidence-based practices is not enough and that effective professional development and effective implementation strategies must be in place if real school improvement is to be achieved with new practices.

Glover and DiPerna (2007) correctly state that the research on systems change and sustainability is limited; however, studies in these areas across various fields (e.g., business, medicine, and agriculture) can be mined to form an emerging knowledge base (Doolittle, 2006). Fixsen et al. (2005) have used this base to provide a model of implementation, and McIntosh, Horner, and Sugai (in press) have built upon the implementation model to create a model of sustainability. The model presented by Fixsen et al. (2005) contains the following "implementation drivers," which are stated to be integrated and compensatory: (a) facilitative administrative supports, (b) systems interventions, (c) recruitment and selection, (d) preservice training, (e) consultation and coaching, (f) staff performance evaluation, and (g) decision-support data systems. These necessary features of implementation are considered integrated because they rarely occur without having some effect on or support from one of the other features. They are considered compensatory because often one feature will be stronger or further along in its development and thus it can support another feature that is not as strong.

Understanding the systems that support an RTI model and promoting effective systems that will assist educators in carrying out and sustaining the model may be difficult charges, but they are necessary if the paradigm shift in how educators deliver instruction is to be sustained. For its part, OSEP is funding the Technical Assistance Center on Response to Intervention to support states in developing the capacity to provide technical assistance to local education agencies in the area of RTI. In addition, the IDEA Partnership Project's Title I/IDEA Collaboration Community of Practice is helping organizations to build capacity by providing dialogue guides and presentations that can be used to train various stakeholders across the nation.

Research Needs

Next we review the research needs in some of the other key areas of RTI, as considered by the authors of this issue's articles. Specifically, we will discuss research needs in the following areas: evidence-based practices used within multitiered intervention models; screening, progress monitoring, and other types of assessment; and implementation fidelity of all of these areas. In addition to the previously named technical assistance centers, OSEP has several centers that have provided research and assistance in these areas, including the National Research Center on Learning Disabilities. Further, the Institute for Education Sciences at the U.S. Department of Education is supporting research in RTI.

RTI is based on the premise that evidence-based practices are implemented in classroom settings. Glover and DiPerna (2007), as well as Wanzek and Vaughn (2007), discuss the topic of using evidence-based interventions, specifically the idea that instruction should be supported by rigorous empirical evidence. Advanced research on a practice should provide practitioners with information regarding the level of standardiza-

tion that must be used, the duration, the group size, and age group with which the practice has the most chance of being effective. Wanzek and Vaughn (2007) attempt to look at the effects of these features across studies, but find that generally the features cannot be isolated. Researchers, when investigating the effectiveness of a practice, however, should delineate all of these features, and practitioners should have the knowledge of the features that should be in place to implement the practice with fidelity. The National Research Center on Learning Disabilities, which conducts research on the identification of learning disabilities, formulates implementation recommendations, disseminates findings, and provides technical assistance to national, state, and local constituencies, has surveyed exemplary sites and described the evidence-based practices these sites use within their RTI framework. (Visit http://www.NRCLD.org to learn more about these practices.)

According to Daly and colleagues (Daly, Martens, Barnett, Witt, & Olson, 2007), "selecting, organizing, and delivering intervention programs to meet the needs of all students requiring assistance may be one of the most formidable challenges faced by schools." Nevertheless, the logic model of RTI is based on the tenet that all students will receive evidence-based instruction from which they can benefit. Kratochwill et al. (2007) note that there is limited cultural diversity in the students sampled for most studies that provide an evidence base for academic instruction. Daly et al. (2007) make the case that schools need interventions with proven efficacy and researchers need to help fulfill the promise that the use of evidence-based instruction provides. As such, there is a need to conduct research with culturally diverse samples and to explain fully the context in which a practice is most likely to be successful. Without demonstrations of the effectiveness of practices within specific contexts for a diverse sample of students, it is difficult to know if the students should be expected to respond to the practice, or, in a turn of phrase, have an adequate opportunity to learn. Accordingly, if all students do not have adequate opportunities to

learn, the promise of RTI is unlikely to be fulfilled (National Center for Culturally Responsive Education Systems, 2005).

In a multitiered model of intervention, services are provided on a continuum for all students, differentiated instruction is provided as needed, and overall prevention is an emphasis. To provide interventions on a continuum, the strength of interventions must be considered. Daly et al. (2007) state that the notion of strength involves the consideration of treatment duration, specificity, and relevance for a particular instructional need, as well as intensity. School-based instruction teams must balance the needs of the student, in terms of strength, with the resources available (Daly et al.). The idea of productive practice time (Daly et al.) leads to the question of what strength of intervention is needed to meet a particular student's needs in the most effective way possible. If this question is to be answered correctly, researchers will also need to account for the other elements of intervention delivery. In addition, future research should examine the degree to which, at the systems level, measurement and instructional adjustments within standard protocol approaches contribute to student outcomes, including improved proficiency and reduced placement in special education (Daly et al.).

To choose appropriate interventions within a multitiered model, assessment practices used should also be evidence based. Accuracy, sensitivity, specificity, prediction validity, reliability, and concurrent validity are all important factors in choosing a screening, progress-monitoring, or other assessment tool; however, some of these features may be more relevant than others when choosing a specific assessment instrument. The decisions to be made using the results of an assessment should influence the importance given to each of these factors. In this issue, Shinn (2007) raises the concern of which norms should be used when screening students for being at risk in reading. Particularly, he compares the use of local, state, and national norms. Given the No Child Left Behind Act of 2001 requirements for statewide achievement standards, it would seem that the benchmarks used by the school

should be representative of those state standards rather than of local norms. Academic success can be seen in many different lights; however, the ramifications of students not meeting the state standards can be great, and a school's decision-making process in a multitiered model should reflect that. Accordingly, a deeper understanding of how to choose an assessment tool based on (a) the data that will be most relevant and helpful for a particular situation, such as how a student will do on a statewide assessment; (b) the tools that meet efficiency-training needs, and (c) the level of accuracy that can be expected from the tool that will assist practitioners most in making the important decisions of how best to serve their students. In addition, there is a need for further development and validation of screening instruments in academic areas beyond early reading and behavior.

Implementation integrity, as discussed by Glover and DiPerna (2007), becomes more critical depending on the importance of the outcomes of the assessments. The ultimate determination of disability is an important decision in the education of a student. Even the decision of providing more support to a student with small-group or individualized interventions could be critical to the academic and possibly the earning potential of the student. Although currently few are available, the number of fidelity instruments specific to academic curricula, practices, and programs is growing at the request of practitioners and administrators. The development of RTI model fidelity tools is also following suit and examples can be found from the Vermont and West Virginia Departments of Education, among others. In the meantime, not having available all of the instruments needed produces frustration for the practitioners and administrators who are expected to use them to ensure they can expect to achieve the desired outcomes. It is the responsibility of those who produce curricula and programs and those who create and study the effectiveness of practices to also provide valid and reliable implementation fidelity instruments.

Summary

One of the benefits of looking at the research base through an RTI lens is that the comprehensive nature of RTI—covering type, frequency, and duration of instruction, as well as varied types of assessments—helps reveal gaps in research. For example, we can now see that the research base supporting the intensive interventions required for many students is lacking, particularly in mathematics and science. We see similar gaps in the available research on screening tools and outcomes measures. Very little research beyond that for kindergarten through fourth grade has occurred for critical RTI components, including screening, progress-monitoring, and more intensive interventions. In our discussions of professional development and building capacity for sustainability, we saw that an emerging knowledge base is present, but again, the research base will need to expand greatly if educators are to be supported in improving the achievement of *all* students—the ultimate goal of the No Child Left Behind Act of 2001.

References

American Educational Research Association. (2005). Teaching teachers: Professional development to improve student achievement. *Research Points: Essential Information for Education Policy, 3*(1), 1–4.

Bernfeld, G. A., Blase, K. A., & Fixsen, D. L. (2006). Towards a unified perspective on human service delivery systems: Application of the teaching-family model. *Behavior Analyst Today, 7*(2), 168–187.

Boudah, D. J., Blair, E., & Mitchell, V. (2003). Implementing and sustaining strategies instruction: Authentic and effective professional development or "business as usual"? *Exceptionality, 11*(1), 3–23.

Daly, E. J., III, Martens, B. K., Barnett, D., Witt, J. C., & Olson, S. C. (2007). Varying intervention delivery in response to intervention: Confronting and resolving challenges with measurement, instruction, and intensity. *School Psychology Review, 36,* 562–581.

Doolittle, J. H. (2006). *The sustainability of positive behavior supports in the schools.* Unpublished doctoral dissertation, University of Oregon, Eugene.

Fixsen, D. L., Naoom, S. F., Blase, K. A., Friedman, R. M., & Wallace, F. (2005). *Implementation research: A synthesis of the literature.* Tampa: University of South Florida, National Implementation Research Network.

Glover, T. A., & DiPerna, J. C. (2007). Service delivery for response to intervention: Core components and directions for future research. *School Psychology Review, 36,* 526–540.

Individuals with Disabilities Education Act of 2004, P.L. 108–446.

Kratochwill, T. R., Volpiansky, P., Clements, M., & Ball, C. (2007). Professional development in implementing and sustaining multitier prevention models: Implications for response to intervention. *School Psychology Review*, 36, 618–631.

McIntosh, K., Horner, R. H., & Sugai, G. (in press). Sustainability of systems-level evidence-based practices in schools: Current knowledge and future directions. In Sailor, W., Dunlap, G., Sugai, G., & Horner, R. (Eds.), *Handbook on positive behavior support.*

National Center for Culturally Responsive Education Systems. (2005). *Cultural considerations and challenges in response-to-intervention models.* Position statement, Denver, CO.

No Child Left Behind Act of 2001, P.L. 107–110.

Shinn, M. R. (2007). Identifying students at risk, monitoring performance, and determining eligibility within response to intervention: Research on educational need and benefit from academic intervention. *School Psychology Review, 36,* 601–617.

Wanzek, J., & Vaughn, S. (2007) Research-based implications from extensive early reading interventions. *School Psychology Review, 36,* 541–561.

Louis Danielson, a national leader in the field of special education, has been involved in programs that improve results for students with disabilities for nearly three decades. He was awarded a doctorate of philosophy in educational psychology from Pennsylvania State University in 1976. For the past 33 years, he has held leadership roles in OSEP. He is currently responsible for the discretionary grants program, including research, technical assistance and dissemination, personnel preparation, technology and parent training priorities, national evaluation activities, and other major policy-related studies in OSEP.

Jennifer Doolittle received her PhD in Special Education from the University of Oregon. Before her current position as a project officer for OSEP, she was a classroom teacher and a service coordinator for people with disabilities. She has authored articles on the topics of RTI, positive behavior supports, and behavioral assessment.

Renee Bradley has over 21 years experience in special education. She received her PhD in Leadership and Policy from the University of South Carolina, and her focus has been on children with behavior disorders. She joined the U.S. Office of Special Education in 1997 and currently serves as the Deputy Director of the Research to Practice Division.