

Themes From the 2015 Summit on Intensive Intervention

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National Center on
INTENSIVE INTERVENTION
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Accelerating the Academic Achievement
of Students with Learning Disabilities
Initiative at Vanderbilt University

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Contents

	Page
Themes From the 2015 Summit on Intensive Intervention	1
Introduction.....	1
Background	1
Summary: Next Steps for Implementing Intensive Interventions.....	8
References.....	10
Policy-Related Response to the White Paper.....	12
Ongoing Policy-Related Issues	12
Investing in Research on Intensive Intervention.....	13
Recommendations.....	14
References.....	15
Response to the 2015 Intensive Intervention Summit: Directions for Future Research.....	16
References.....	18
Themes From the 2015 Summit on Intensive Intervention: Implementation Practice Perspective.....	19
Interventionist Competency	19
Educational System Capacity	19
References.....	21
Appendix A. Glossary of Terms	23
Appendix B. Summit Agenda.....	25
Office of Special Education Programs (OSEP)-Institute of Education Sciences (IES) Intensive Intervention Summit	25
Day 1 (March 23, 2015).....	25
Day 2 (March 24, 2015).....	26
Appendix C. Participants	27

Themes From the 2015 Summit on Intensive Intervention

Introduction

In 2015, the principal investigators for the Office of Special Education Programs, National Center on Intensive Intervention (NCII: Louis Danielson) and the National Commission for Special Education Research (NCSE) Accelerating the Academic Achievement of Students with Learning Disabilities Research Initiative (A3 Initiative: Douglas Fuchs and Lynn Fuchs), along with the NCII Deputy Director (Rebecca Zumeta Edmonds) and NCII Senior Advisor (Sharon Vaughn), worked cooperatively with a team of advisers, including key personnel from NCSE at the Institute of Education Sciences (IES) and Office of Special Education Programs (OSEP), to organize a summit for improving the knowledge and understanding of intensive intervention. The primary purpose of the summit was to integrate research knowledge on promising approaches into intensive intervention and implementation to improve academic outcomes for students with disabilities who have severe and persistent learning needs. The summit was organized to (a) recognize that implementing high-quality, research-based intensive interventions for students with disabilities is necessary; (b) identify key questions to be addressed in future research in order to enhance intensive intervention implementation and timely, accurate identification of students who require it; and (c) improve understanding of the knowledge, expertise, and system-level supports needed by key personnel, including special education teachers and school leaders, to support strong implementation of intensive interventions for students with disabilities.

We provide the following supplementary information in the appendices: a summary of key terms related to intensive interventions (Appendix A), the agenda from the summit (Appendix B), and a list of participants and presenters (Appendix C). The following summary integrates all aspects of the summit, including (a) preparation of presentations, (b) themes from presentations and participant discussions, and (c) conversations following the summit that have influenced this white paper. Brief responses from three summit participants representing perspectives from research, policy, and implementation accompany the paper.

Background

Who are the students that require intensive interventions? Students that require intensive interventions are those students who have demonstrated inadequate progress in target areas, such as reading and mathematics, after research-based practices have been provided. These students demonstrate severe and persistent needs and require a more intensive intervention than is typically provided in what might be described as core instruction (Tier 1) or less intensive interventions (Tier 2). Although the number of tiers of intervention is not the focus, intensive interventions are the most customized interventions aimed at responding to students' specific needs, and may be referred to as Tier 3 or Tier 4 interventions depending upon the model used. Students with disabilities are not the only students requiring intensive interventions; however, many students with disabilities require intensive interventions.

Why are students with disabilities the focus of this summit? Students with disabilities are making inadequate progress toward achieving outcomes related to postsecondary success. There are

numerous data sources to support this claim, but perhaps the most salient is the performance of students with disabilities on the National Assessment of Educational Progress (NAEP; www.NCES.ed.gov). On the 2015 NAEP, students with disabilities demonstrated a proficiency rate of 8–16 percent across fourth- and eighth-grade reading and mathematics. These scores are consistently lower than students without disabilities, and the achievement gap has persisted over time. The 2015 NAEP score for fourth graders in reading is 31 points lower for students with disabilities than for those without and 26 points lower in mathematics. When NAEP scores for students with disabilities in eighth grade are examined, students with disabilities scored 40 points lower in both reading and mathematics than students without disabilities.

Although research and development has made considerable progress in the last decade, producing validated interventions (e.g., Tier 2 interventions) in reading and mathematics for students with learning difficulties (Fuchs & Vaughn, 2012), more intensive interventions are arguably the least consistently implemented and least understood tier of the prevention system.

A key theme of the summit involved a discussion defining intensive intervention, comparing it to standard intervention (or standard protocol), and describing the students for whom intensive interventions are targeted. This included a discussion of ways to customize intensive intervention, further understanding of how to apply it to practice, and how to better explore it through research to improve its effectiveness and efficiency.

To understand intensive intervention, it helps to understand the students for whom the intervention is targeted and how an intensive intervention differs from a standardized intervention.

Who are the students for whom intensive interventions are targeted?

Within multi-tiered systems of support, including response to intervention (RTI) approaches, intensive interventions should be applied to *students with the most severe and persistent learning needs*. Some of these students may be recognized relatively quickly by their classroom teachers as requiring an intensity of instruction exceeding what is possible in the general classroom. Other students who require intensive interventions will have responded inadequately to research-based interventions that are less customized (e.g., these might be thought of as Tier 2-type interventions). Our summit participants reported that there is a third group of students who may require intensive interventions. These are students who have not consistently received research-based Tier 2-type approaches and have fallen so far behind that intensive interventions are necessary to accelerate their progress.

How does an intensive intervention differ from the standardized evidence-based interventions that effectively serve students with milder academic learning challenges?

Standardized interventions (implemented as part of a multi-tiered system) are well-delineated, manualized programs delivered in the same way to all students. They are *typically not* customized to meet individual student needs. Ideally, schools select these standardized interventions based on research evidence indicating the benefit for students with similar academic and demographic characteristics as those they will be serving.

By contrast, intensive intervention often begins as a standardized intervention—that is, most students are provided an intensive intervention that is a research-based, standardized intervention typically used for Tier 2-type approaches. However, the process of providing appropriate intensive interventions requires a more customized approach to treatment that uses data to interpret the student’s instructional performance. That is, the teacher uses these ongoing responsiveness data to adjust the intervention. The teacher also may draw on her informal observations of the student’s unique needs and formal diagnostic data on the student’s academic skill strengths and weaknesses. This process continues throughout the intervention, such that the intervention is customized or individualized over time, sometimes by trial and error as the teacher searches for a combination of intervention components that meaningfully accelerate the student’s performance (Fuchs, Deno, & Mirkin, 1984; Lemons et al., 2015; Powell & Stecker, 2015).

As a result, intensive intervention differs from standardized intervention in several ways, including the following:

- First, well-implemented, intensive intervention requires more resources than less intensive (Tier-2 type) intervention (and thus it is not efficient to provide more intensive interventions if they are not needed). These additional resources may include one or more of the following, which are discussed in greater detail later: higher levels of teacher expertise to identify instructional components that are likely to address the student’s needs more effectively and to integrate those components into modifications of standardized interventions (e.g., more instructional time, smaller groups of students, more individual student-teacher interactions where the student receives feedback).
- Second, standardized interventions are typically implemented to align with a research-based standard that is monitored to assure fidelity of implementation. Thus, the standardized intervention provides a format that allows ready implementation of the intervention to a range of students with learning difficulties. This expectation is based on previous research indicating that a majority of students will “respond” and acquire proficiency. By contrast, intensive interventions may begin with a standardized intervention, which is customized over time in response to the student’s ongoing performance data, to meet the individual learning needs of the student. For example, intensive interventions may provide more extended time in learning basic mathematics operations or word study skills than is provided with the standard protocol, or use a greater variety of forms of practice. They may require mnemonic devices to form associative relations between written words and their spoken form or between mathematical symbols and their meaning. They may require a more comprehensive approach to skill building. For example, rather than address comprehension by only teaching strategies (e.g., identifying the main idea), the instruction might explicitly teach text-based and elaborative inference making, vocabulary development, morphology, background knowledge, and so forth. In addition, intensive interventions may require clearer explanations or additional practice.
- Third, whereas Tier 2 interventions are typically expected to provide the types of instructional supports that allow students to eventually respond to the core program without additional support, intensive intervention is frequently conceptualized as more “long term.” Many students with severe and persistent learning problems require these

intensive academic interventions for years because, as the curriculum becomes more complex, these students will require additional intensive interventions to succeed.

How could it be that the intensive interventions aimed at providing supports for the students who need the most help—including many students with identified disabilities—are so poorly understood and implemented?

The precise reasons for this dilemma are complex and difficult to determine. However, several possibilities discussed at the summit include the following:

- There is an underestimation of the severity of learning problems with which students struggle.
- There also is an underestimation of the number of children and youth in need of intensive intervention. Summit participants suggested that students with disabilities may not be adequately recognized as needing intensive intervention.
- There is a related belief that interventions that proved relatively effective for students with milder forms of learning and behavior problems also should be effective for students with more intensive learning needs, including many students with disabilities. For example, peer-mediated approaches such as cooperative learning and peer tutoring, as well as accommodations to the curriculum such as reducing the task, are providing enhanced time and are viewed as research-based programs that meet the needs of virtually all students, including those with disabilities. The empirical evidence suggests otherwise for students with intensive learning needs (e.g., McMaster & Fuchs, 2000; O'Connor & Jenkins, 1996; Scruggs & Mastropieri, 2003).
- Research-based interventions that are less intensive (e.g., Tier 2), especially when designed and implemented by researchers, benefit many at-risk students. However, they do not accelerate the academic achievement of all students with disabilities. Many of these students require something more and different. As suggested in summit discussions, many educators seem unaware of this fact, which may leave many students without access to the more intensive interventions necessary to adequately meet their needs.
- Less intensive interventions (e.g., Tier 2) often make use of standardized interventions that provide teachers with specific language and lesson components. There are strengths and weaknesses associated with the use of standardized interventions; later, we discuss how more customized approaches to intensive intervention may be necessary for students with severe and persistent needs.
- The number of teachers with expertise in implementing these standardized Tier 2-type interventions is larger than the number of teachers with expertise in implementing more customized intensive interventions, such as data-based decision making (www.intensiveinterventions.com). This is because implementing standardized interventions requires less professional training and knowledge than does implementing interventions customized for students with severe and persistent learning needs. Summit participants indicated that teacher training programs need to ensure that new teachers are adequately prepared to deliver intensive intervention. However, participants also indicated that when their training programs prepare teachers to provide more customized, intensive interventions for students with disabilities, very often the school context does not support

implementation of these interventions. For example, some schools have established routines for how many Tier-2 type interventions that students must receive; thus, neglecting the opportunity to provide more intensive interventions when needed.

- The population of students who require intensive interventions is highly varied, with multiple areas of difficulty, and thus is more challenging to teach. Developing the necessary knowledge base to customize intensive interventions for this challenging and complex group of students is needed.
- Schools are not organized to deliver intensive interventions. Many reasons for this lack of capacity were discussed, including (a) inadequate resources, such as inadequately trained personnel to provide the intensive interventions; (b) a focus on less intensive interventions (e.g., Tier 2), largely as a function of knowing how to deliver these interventions and having personnel trained to do so; and (c) challenges posed by school models that unwittingly discourage organizational structures or administrative arrangements that lend themselves to more intensive interventions (e.g., special education teachers may have expectations to use their time in the general education classroom supporting classroom teachers and have inadequate time to provide intensive interventions to needy students).

How do we customize intervention to make it more intensive?

As we discussed earlier in the paper, intensive intervention is designed to support students who are highly varied in their specific and individual instructional needs. The most important quality of a successful intensive intervention may be the specialized skills of the teacher providing the intensive intervention. Participants in the summit provided extensive information about the challenges of hiring high-quality personnel with the necessary knowledge and skills to implement intensive interventions for students with special needs. Participants also discussed the challenges at the system level to implementing intensive intervention, including but not limited to adequate time and opportunity to provide academic interventions for students with special needs.

As a means of providing a mechanism for considering intensive intervention for students, we describe several categories of decision making that teachers may consider, recognizing that more than one of these is likely needed. (For more information, consider the National Center on Intensive Intervention, 2013; Vaughn, Wanzek, Murray, & Roberts, 2012.)

Verify Research-Based Instruction. Before implementing an intensive intervention, verify that the student has had adequate opportunity to learn by being provided research-based instruction in the classroom. If the student is demonstrating learning problems, but also has not had adequate opportunity in the classroom, an intensive intervention may not be the best solution. Although there may be a need to move some students directly to intensive intervention from the core program, most should have previously received research-based standard intervention implemented with fidelity. Obtaining data on a student's response to classroom instruction and standard intervention is a useful source for determining how to intervene with a more intensive intervention.

Adjust the Learning Environment. Consider changing the student's learning environment to promote attention and engagement. In this case, the determination might be that the instructional program is a good match for the student, but the student might benefit from a change in group participants, teacher, or setting. For example, it may be that the student is in a group in which many of the students have interfering behaviors, (e.g., behavior, attention), the student is not given adequate opportunities to practice and learn in the group, or students in the group are learning at a rapid pace and the target student is not acquiring proficiency before moving to new tasks. Adjusting the composition of the group or providing the intervention one-on-one might be a useful change. Another example may be that the intervention is provided in a setting in which learning is difficult for the student (e.g., within a loud or crowded classroom), thus warranting a change in the setting. Perhaps, one of the most significant changes that may promote a more intensive intervention is a change in the teacher so that the student has the opportunity to work with an individual with expertise in the academic area (e.g., mathematics or reading) or with specialized skills in working with students with severe, persistent learning needs (e.g., a special education teacher) who can provide the student with the more intensive intervention. Summit participants also recognized that the absence of adequate professional development for both general and special education teachers may serve as a barrier to effectively implementing intensive interventions.

Change the Intervention Dosage or Time. For many students, the rate of progress can be improved by providing additional intervention time, including (a) increasing the number of days a week that students receive the intervention (e.g., three times a week to five times a week), and/or (b) increasing the amount of time the intervention is provided (e.g., from 30 minutes to 50 minutes a day). The decision to increase the dosage may be a productive one when students need additional time to practice or extended opportunities for scaffolding learning with feedback.

Align the Program With the Individual Student's Specific Learning Needs. For students requiring intensive intervention, it is often useful to determine whether there are elements of the research-based program that align better with the target student's learning needs, and to prioritize these elements. For example, for students who are unable to read words accurately and fluently, implementing those elements of the program that provide a sequenced opportunity to expand phonics, word reading, and fluency skills may be a high priority, and students may benefit from additional instructional time. In this way, additional time is spent on the skills most needed without excluding any of the other key elements needed for successful academic performance.

Ensure That the Student's Motivational, Self-Regulation, Perseverance, and Challenging Behaviors Are Addressed. Participants at the meeting recognized that there are student factors

related to motivation, self-regulation, perseverance, and behavior that interfere with successful performance. They suggested that students may benefit when intensifying interventions are designed by considering the types of social-behavioral characteristics the student exhibits, and include a plan for promoting more positive motivation and self-regulation and/or practices for decreasing behavior and attention problems.

Data-Based Individualization. In addition to the considerations described earlier for customizing interventions to make them more intensive, perhaps one of the most effective practices is to implement data-based decision making wherein educators use students' academic and behavioral data to identify learning needs and make instructional adjustments to target those areas (e.g., Deno & Mirkin, 1979; Fuchs, Deno, & Mirkin, 1984).

How should we make decisions about placing students in intensive intervention?

Summit participants discussed that most students participate in less intensive intervention (e.g., Tier 2) before they gain access to intensive instruction. This lockstep process raises a basic question: Can schools identify the students who will not benefit from less intensive interventions without waiting for them to make inadequate progress first? In other words, can we identify students who would require intensive interventions without requiring them to experience an extended period of failure before gaining access to a more appropriate level of instructional intensity? It also would avoid the cost of providing the less intensive intervention that would inadequately meet the needs of these students.

Participants at the summit discussed the need to move some students into more intensive interventions more rapidly. As an example of how this might occur, Compton (a summit participant) summarized findings from a 2012 study. Compton and colleagues showed that assessment conducted in the fall of first grade can circumvent placement of the students who would eventually prove unresponsive to standardized intervention (Compton et al., 2012). In the fall, children who entered first grade with low initial reading skills were progress-monitored for six weeks, while they participated in reading instruction in their classrooms. The research team was looking to identify students who both entered first grade with low reading performance and then also showed poor response to the first six weeks of classroom instruction. About half of the children identified with low initial performance improved with the classroom program; the other half responded inadequately. In November, they were assessed on a multi-dimensional reading battery that included tests of phonemic awareness, rapid naming, oral vocabulary, listening comprehension, untimed and timed word identification skill, and untimed and timed decoding skill. Teachers also completed an attention rating scale on the students.

Next, half of the children who showed inadequate progress in the classroom reading program were randomly assigned to a standardized intervention for 14 weeks. During the standardized intervention, students completed weekly progress monitoring assessments and, at the end of tutoring, tutors completed an attention/behavior rating scale. Approximately 7 percent of the students who entered first grade remained inadequately responsive.

The research team then looked to see whether the data on responsiveness to the standardized intervention were necessary to identify these persistently unresponsive children (who required intensive instead of standardized intervention), or whether they could have predicted the

unresponsive children using data that had already been available in the fall assessment. Results indicated that the data generated during the standardized intervention did *not* enhance identification of these persistently unresponsive students. Relying exclusively on data collected in the fall of first grade, before standardized intervention began, provided similar classification accuracy.

These data, as well as those from other studies (e.g., Fuchs et al., 2008), suggest that a multi-stage screening process that uses multiple phases of assessment to accurately and efficiently identify at-risk students may be a useful way to avoid a “wait-to-fail” model. This would allow schools to avoid providing costly less intensive interventions to students who we can identify early as requiring more intensive interventions.

More recently, Al Otaiba, Wagner, and Miller (2014) provided evidence from a randomized controlled trial showing that children can be accurately identified for direct movement to intensive intervention (without requiring that they first receive Tier 2 intervention). These researchers were able to make this identification with a 3- to 5-minute assessment at the start of first grade, which also considered teacher ratings of initial reading performance. Importantly, they also demonstrated that learning was superior when these students went directly to intensive intervention, rather than waiting to fail in Tier 2 intervention before moving to the more intensive level of service.

Discussion from the summit indicated that schools could consider providing intensive interventions for students with severely discrepant initial reading performance. Considering this recommendation, the participants recognized that additional research is indicated because both studies were conducted in reading at first grade. Work also is needed in both mathematics and reading at higher grade levels.

Summary: Next Steps for Implementing Intensive Interventions

The presentations and discussions at this summit provided a foundation for emphasizing professional preparation, research, and policy activities needed to promote understanding, implementation, and resources for intensive interventions for students with severe and persistent learning needs. The following sections include a summary of the issues requiring further work in subsequent years.

Next Step 1: Prepare Professionals With Expertise to Implement Intensive Interventions

Repeated consistently throughout the summit was the need for professionals with expertise in implementing effective intensive interventions across all grade levels (e.g., early elementary, upper elementary, middle grades, high school). The need for professional expertise was expressed across all academic areas, but emphasized for reading and mathematics. Participants also noted a need for personnel with adequate diagnostic and clinical skills to effectively identify individuals requiring intensive intervention, and implement practices for customizing interventions to meet these students’ complex needs.

Next Step 2: Address Inadequate Systemic Support for Intensive Intervention

The many barriers at the state, district, and school levels surrounding the effective implementation of more intensive intervention were consistently mentioned as reasons for inadequate implementation. Barriers identified included, but were not limited to, (a) state and district policies that made it challenging for professionals to provide small-group, intensive intervention to students with more severe academic needs; (b) personnel and resources allocated to core reading instruction and other secondary interventions, but not to more intensive intervention; and (c) lack of adequately trained personnel to facilitate data-based decision making and provision of intensive intervention.

Next Step 3: Strengthen the Implementation of What We Already Know About Intensive Intervention

The research and practice community recognized that knowledge about intensive interventions is currently not adequately used at the state, district, and school levels. In addition, the community recognized that knowledge about intensive intervention needs to be expanded considerably and is not commensurate with knowledge about instructing typical learners or students at risk for academic difficulties. Participants at the summit recognized that the inadequate knowledge base about intensive intervention requires an extensive investment in research and model implementation sites.

Next Step 4: Expand Research Knowledge That Addresses the Complex Needs of Students Requiring Intensive Intervention

Students requiring intensive intervention have complex learning needs. By definition, these learners display intractable difficulties in acquiring academic proficiency and challenges with learning that are considerably more extensive than other students with learning problems. Developing a more sophisticated and complete knowledge base about these learners and mechanisms for impacting their learning outcomes requires additional targeted research.

This paper attempts to identify some of the key issues related to intensive interventions and to provide some initial thinking about how research, practice, and policy might consider enhancing our knowledge and effective implementation of intensive interventions. We do not consider this a consensus document nor a thorough elaboration of all of the issues related to intensive interventions. Rather, we aim for it to serve as an initial probe into the issues related to intensive intervention, with the goal of improving research, practice, and policy benefiting students with the most intractable learning needs.

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The leadership team for the summit identified three individuals to provide their commentaries on the summit. All three of these individuals attended the summit and were identified to represent three focus areas: policy (Chard), research (Clemens), and practice (Goodman). Each of these commentaries represents the individual views of the author and is not meant to represent the policy, research, or practice communities more broadly—though based on comments offered at the summit, the commentaries likely represent a large number of individuals in these communities.

Policy-Related Response to the White Paper

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The hosts of the Summit on Intensive Intervention asked me to develop a response to their white paper from a policy perspective. Intensive intervention as a part of tiered instruction stems from the 2004 reauthorization of the *Individuals with Disabilities Education Improvement Act* (2004; P.L. 108-446) when statutory and legislative changes allowed states and local schools to use a response to intervention (RTI) model to identify and serve students with learning disabilities.

Ongoing Policy-Related Issues

Wait-to-Fail Concern. Many advocates for students with severe and persistent needs for intensive interventions believe that RTI has created a “wait-to-fail” scenario. From their perspective, students with intensive learning needs have to proceed through tiers of intervention demonstrating that they are not receiving adequate benefit before they can obtain the intensive support they require (Reynolds & Shaywitz, 2009). Ironically, this “wait-to-fail” concern with RTI is the same concern that parents and advocates raised when the severe discrepancy model was employed prior to 2004. Under that approach, schools would wait to identify students with learning disabilities or serve students in special education until they could detect a severe discrepancy between IQ and performance. Often, this meant waiting until students were in second grade before their performance was significantly different from their intellectual ability as measured by IQ tests. Congress’ endorsement of RTI as an alternative to the IQ-discrepancy model was an attempt to ensure that a “wait-to-fail” approach would not prevent students from receiving a Free Appropriate Public Education (Fletcher, 2008). In the RTI model, however, it would seem that a similar “wait-to-fail” approach might result if schools felt that they needed to use a standard protocol for learners before they were able to intensify instruction. The summit included a discussion of recent research that supports the spirit of the law intending to avoid “wait-to-fail” schemes. The white paper also provides evidence that students with intensive learning needs may be identified early and that there is little benefit from waiting for data from intervention efforts that indicate a student qualifies for more intensive support.

Calls for Continued Education Accountability. Education policy changes at the state and federal levels are relevant to the present discussion on intensive intervention because the relationship between school accountability and implementation of RTI and special education remains unclear. Recent reauthorization of the *Every Student Succeeds Act* (ESSA; P.L. 114-95) resulted in significant changes in the manner in which the federal government is promoting education accountability. In contrast to *No Child Left Behind* (NCLB; P.L. 107-110, 115 Stat.

1425), each state has much more discretion in creating evaluation systems that will ensure schools are accountable for student learning. Because RTI implementation and efforts to identify students who will benefit from intensive intervention depend on effective general education and Tier 2 supports, disability advocates worked tirelessly under NCLB to ensure that students with disabilities were included in statewide assessments and that schools were accountable. Today, the disability community continues to call for inclusion in accountability efforts (Consortium for Citizens with Disabilities, Aug. 1, 2016).

Focus on Increased Teacher Preparation, Evaluation, and Support. The white paper notes that the success of intensive intervention depends on the expertise of teachers and the resources they receive to implement data-based instruction. Unfortunately, although the importance of highly skilled interventionists is highlighted and ESSA reinforces the importance of teacher excellence, many states are experiencing significant special education teacher shortages (National Coalition on Personnel Shortages in Special Education, 2014). These shortages are exacerbated by the fact that attrition of special education teachers is nearly twice that of general education teachers (National Coalition on Personnel Shortages in Special Education, 2014). Moreover, although states are developing systems of teacher evaluation to ensure adequate preparation, support, and retention of high-quality education personnel, these systems are largely untested and may result in even greater teacher attrition. Furthermore, few of these systems have addressed the evaluation of special education teachers specifically. It seems we are in a particularly precarious position of needing higher quality professionals to implement intensive interventions at a time when we are struggling to attract teachers to the classroom.

Investing in Research on Intensive Intervention

In 2002, Congress passed the *Education Sciences Reform Act* (P.L. 107-279) in an effort to create an independent research arm for the U.S. Department of Education. Two of the four centers included in the Institute of Education Sciences (IES) are the sister centers of the National Center for Special Education Research (NCSER) and the National Center for Education Research (NCER). The primary responsibility of NCSER and NCER is to support research designed to determine “what works, for whom, and when” in U.S. schools. Numerous grants awarded through NCSER and NCER have focused on interventions for students at risk for academic failure and students with or at risk for disabilities, including interventions targeting a wide range of academic domains.

As noted in the white paper, the complexity of students with intense intervention needs requires a “sophisticated and complete knowledge base about these learners” and a thorough understanding of the “mechanisms for impacting their learning outcomes.” Unfortunately, there has been less work funded on intensive interventions than on general education and Tier 2 efforts. One reason why there has been less of a focus on intensive interventions is likely due to the fact that since 2006 when the IES infrastructure was launched, a knowledge base of “what works” was just being established. Researchers focused first on issues and methodologies that would impact larger numbers of students rather than those needing intensive intervention. A secondary reason that also may explain why a knowledge base on intensive intervention has not yet been targeted is likely due to funding challenges in NCSER. In 2006, the first year that NCSER held research competitions, the number of proposals approved did not use up all available funding. In subsequent years, because the available funding in Year 1 was not fully awarded, Congress

reduced funding for NCSER, despite increasing funding for all other centers in IES. This reduced funding has limited the amount of research conducted that is focused on students with disabilities. IES staff and members of the National Board for Education Sciences have advocated for significant increases of funding that would provide additional support for research targeted to intensive intervention.

Intensive intervention for students with severe and persistent learning needs dates back decades. More recently, however, schools have turned their attention to schoolwide prevention approaches and general education supports. Because of policy changes designed to improve the effectiveness of special education through an RTI model, schools have once again begun focusing on those students for whom standard interventions are ineffective. Recent changes in federal and state policies raise concerns from parents and advocates of students with severe and persistent learning needs. They want to be sure that their children continue to be included in statewide assessments for accountability purposes and are concerned that new systems of teacher evaluation will hinder efforts to attract, train, and support highly qualified teachers who have the time and skills to provide intensive intervention. Finally, the authors of the white paper strongly suggest that meeting the needs of students with significant learning needs depends on further targeted research. Although policies have been adopted that could result in greater research on intensive intervention, research funding has not remained robust over the past decade.

Recommendations

1. If evidence suggests that a student has severe and persistent learning needs, do not wait until a student fails to respond before providing intensive interventions.
2. Employ strong systems of teacher support in which intervention quality is evaluated and teachers receive adequate training and coaching to improve outcomes.
3. Advocate for increased federal research funding to expand our knowledge base on intensive intervention for students with severe and persistent learning and attention needs.

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Response to the 2015 Intensive Intervention Summit: Directions for Future Research

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The 2015 Intensive Intervention Summit advanced critical conversations on our current knowledge of best practices for responding to students with severe and persistent learning needs. The talks and discussions throughout the summit highlighted a number of areas in need of further inquiry. In this response, I offer a brief set of reactions focused on future research directions. My comments are by no means exhaustive and, given the brevity of this piece, I have under-acknowledged the wealth of prior work related to this topic. I provide these comments to extend the discussions that occurred at the summit and help advance the science of intensive intervention.

1. *What Is the Current Status of Teachers' Knowledge and Expertise on Implementing Intensive Interventions?* A key theme of summit discussions was an observed lack of knowledge and expertise among many teachers for effectively implementing intensive interventions. As noted in the white paper, our observations were largely anecdotal. The field would benefit from contemporary data on preservice and inservice teachers' knowledge and skills surrounding the implementation of intensive interventions, which may include new survey research to understand how teachers identify research-based interventions, set goals, make decisions based on progress monitoring data, use diagnostic assessments, and select interventions based on assessment results. Contemporary data will help elucidate the prevalence of knowledge and skill gaps among teachers, and identify where additional training efforts should be directed.
2. *Toward a New Generation of Intensive Interventions.* Summit discussions noted that continued research is needed to improve the effectiveness of intensive interventions. This work might consider new intervention frameworks or the inclusion of components that will more comprehensively address the multifaceted needs of students with intensive learning needs. For example, research might better identify strategies that enhance motivation, engagement, and self-efficacy for students who have experienced persistent failure and embarrassment due to their academic difficulties. Wider use of basic research may be needed to improve our understanding of effective treatments for students with severe learning difficulties. Research funding agencies could enhance productivity in this area by supporting work built upon small-scale and tightly controlled experiments that identify highly effective instructional components. We are in need of interventions that foster generative and inductive learning mechanisms that are characteristic of typical development and may result in more comprehensive and lasting change (Compton, Miller, Elleman, & Steacy, 2014). In addition, our future intervention research will benefit from expanded collaborations with scholars in other fields, such as linguistics, computer science, developmental psychology, social psychology, and neuroscience.
3. *What Strategies Foster Sufficient Teacher Expertise in Implementing Intensive Interventions?* Although improving teacher training programs should continue to be a long-term objective, it is important to consider that the majority of the skills that teachers

use in the classroom are learned on the job (Hattie, 2015). More research is needed that targets inservice teachers and seeks to identify the best ways to improve teachers' expertise in areas such as (a) data-driven decision making, (b) identifying research-based practices, and (c) matching instruction to individual student needs. Training models should be informed by prior work on teacher professional development (Guskey & Yoon, 2009) and build on previous research on teachers' data-based decision making (e.g., Allinder, Bolling, Oats, & Gagnon, 2000; Fuchs, Fuchs, & Hamlett, 1989). Teacher training programs should be sure to target teachers' knowledge of how academic skills develop, as teachers with expert knowledge of skill development are more likely to accurately interpret assessment data, understand why certain skills are important and causally related to students' difficulties, and identify instructional strategies that are best matched to students' learning needs. Moreover, just as intensive interventions are individualized for students, programs to improve teachers' expertise should be customizable to meet their individual learning needs.

4. *How Can Technology Better Assist Teachers in Implementing Intensive Interventions?* Implementing intensive interventions is an information-saturated endeavor. Teachers must consider multiple domains of information and sources of data, including information on their students' specific learning needs, current rate of progress, instructional content and available interventions, and individualized goals. Technology has been used to support intervention efforts for quite some time, particularly for progress monitoring (e.g., Fuchs, Hamlett, Fuchs, Stecker, & Ferguson, 1988), and current Web-based software applications continue to improve the efficiency of progress monitoring tasks. However, there are ways in which technology could provide more comprehensive support for implementing intensive interventions. For example, technology might assist in administering, scoring, and reporting diagnostic assessment data (which could include error analysis), and better integrate them with prior results from progress monitoring and other assessments. Intensive interventions require individualized instructional materials, which take time to acquire or create; thus, technology might be used to rapidly gather instructional content that is matched to students' individual learning needs. Further research is needed that identifies how technology might make data and instructional content more accessible and better integrated, which will ultimately allow teachers to devote more time and resources to their delivery of intensive interventions.

Although much has been learned about implementing intensive interventions, one accomplishment of the 2015 Summit on Intensive Intervention was the identification of how much more there is to learn. It is hoped that researchers and research funding agencies will continue to attend to this important area, and produce work that improves outcomes for students with the most severe and persistent learning needs.

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Themes From the 2015 Summit on Intensive Intervention: Implementation Practice Perspective

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From the perspective of an educational leader who works in schools and districts every day, I find it valuable to understand the core features of intensive interventions. This is important to ensure that the educator is providing intensive intervention with fidelity and to allocate adequate resources for the success of students and teachers. Even when research-based approaches are implemented with fidelity, academic challenges increase for some students, requiring greater intensity in the programming. Intensity of programming for students with intensive needs requires precision in identifying explicit and systematic delivery of the intervention and providing increased opportunities for practice of skills and performance feedback. Improving outcomes for students with severe learning needs is often challenged by the complex relationship between difficulties in academics and behavior (McIntosh, Bohanon, & Goodman, 2010). Furthermore, the student not only needs to catch up to peers, but also “the bar” is continually being raised due to increasing curricular demands placed on each grade level. In order to accomplish efficient and effective intensive interventions, there should be a focus on both the competency of the interventionist and the adequacy of the educational system’s capacity to support effective interventions.

Interventionist Competency

The interventionist must have the knowledge and skills to effectively implement intensive interventions. As an example of intensive intervention, data-based individualization (DBI) requires application of decision rules to link intervention to student need and to monitor the student’s responsiveness to the intervention as well as practices for adjusting the intervention program. Successfully monitoring and adjusting instruction requires systematic adjustment of the delivery of instruction, focusing on critical features matched to the student’s needs. The interventionist needs to be able to manage intensified instruction by providing time, learning opportunities, and feedback. Finally, the interventionist also needs to evaluate the success of the intensive intervention.

Educational System Capacity

Supporting Students. Not all students require the same intensity of supports to be successful in school. When schools implement a multi-tiered system of support (MTSS) with fidelity, the educational system can prevent and/or reduce the severity of academic and behavioral difficulties through a systematic approach to layering on supports for students with persistent difficulties. The MTSS approach can reduce the number of students requiring more intensive supports, allowing educators to better allocate these resources to those who need them. MTSS also provides for layering of support for students with severe and persistent learning and behavioral challenges. In addition, students benefit when their educational needs are considered within an integrated MTSS framework.

Supporting Educators. Providing interventions for students with the most intensive academic challenges is hard work. Educators need support in the design and delivery of intensive supports and DBI. Teachers require assistance in creating effective student support plans. A team approach to designing the intervention and supporting the interventionist can be more successful when membership includes (1) technical expertise in intensifying interventions, (2) understanding the context in which the intervention will take place, and (3) understanding the strengths and needs of the student targeted for intervention (Benazzi, Horner, & Good, 2006). Sometimes, educators need help in engineering the classroom environment not only for providing intensive interventions but also to continue to support other students while addressing students with severe and persistent needs. Considering the knowledge needed to effectively implement and monitor intensive interventions, most educators require ongoing professional development to develop and refine their knowledge and skills.

Leadership at the school level ensures that there is a team available locally to develop a plan and support the teacher(s). A principal can play a critical role in supporting the data-based decision-making process by providing time and resources for this effort. The principal can make room for this work to take place by rescheduling competing activities, removing barriers to implementation, and ensuring adequate communication to school, home, student, and staff. The principal also can provide encouragement to staff to keep the momentum and motivation moving forward. Communication is critical for all those involved, both inside and outside the classroom.

The school district plays a significant role in supporting educators to be successful in intervening for students with persistent and challenging difficulties. The district-level administration sets the stage for commitment and ongoing support to improve outcomes for *all* students, and helps to efficiently organize and distribute resources. Also, the district often has greater opportunity to provide technical assistance and professional development opportunities than is possible at the school level.

We have an opportunity to not only better prepare educators to be effective intensive interventionists, but also to better support all practicing educators. Future research might focus on the development of durable systems (e.g., trained coaches who provide building- and classroom-level support) to promote implementation of effective practices across the variety of districts (in terms of size and/or resources). In addition, there is an opportunity to better connect teacher and leader preparation programs with schools to create precise feedback for the types of challenges for which educators need preparation. Institutions of higher education could collect specific information from educators in the field on the effectiveness of recent graduates in improving academic outcomes for students with the most severe and persistent needs. This information would then be used to modify teacher preparatory programs given the students that teachers work with and the systems in which they teach.

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Appendix A. Glossary of Terms

Data-Based Decision Making: Data-based decision making is the ongoing process of analyzing and evaluating student data to inform educational decisions, including but not limited to approaches to instruction, intervention, allocation of resources, development of policy, movement within a multi-level system, and disability identification.

Data-Based Individualization: Data-based individualization (DBI) is a systematic approach to intensive intervention. It is an iterative, multi-step process that involves (1) collecting frequent (usually weekly) progress monitoring data; (2) analyzing those data according to standard decision rules to determine when an increase in the student’s goal is needed (in the case of strong progress) or a revision to the intervention program is needed (in the case of inadequate progress); (3) introducing a change to the intervention program when progress is inadequate, which is designed to improve the rate of learning; and (4) continuing to use Steps 1–3 on an ongoing basis to develop an individualized program that meets the student’s needs.

Explicit Instruction: Explicit (or direct) instruction involves teaching a specific skill or concept in a highly structured manner. It often is used for teaching new skills or teaching students to generalize knowledge to novel settings. During explicit instruction, the teacher clearly identifies the expectations for learning, highlights important details of the concept or skill, gives precise instructions, models concepts or procedures, and connects new learning to previously learned material.

Intensive Intervention: Intensive intervention is designed to address severe and persistent learning or behavioral difficulties. It also is used for students who have proven nonresponsive to Tier 2, or secondary intervention. Intensive intervention is characterized by increased intensity (e.g., smaller group, increased time) and individualization of academic or behavioral intervention. Intensive intervention is sometimes synonymous with *Tier 3*, or interventions delivered within the *tertiary prevention level*.

Intervention Platform: An intervention platform is a validated, research-based program or instructional practice that provides targeted instruction in a specific skill or set of skills (e.g., phonemic awareness, vocabulary, mathematics problem solving). The intervention platform also may be known as a *standard intervention protocol*; in some schools, this approach may be considered a *Tier 2, or secondary prevention level intervention*. Within a DBI process, the intervention platform serves as the departure point for intensification.

Multi-Tiered System of Support: A multi-tiered system of support (MTSS) is a prevention framework that organizes building-level resources to address each individual student’s academic and/or behavioral needs within intervention tiers that vary in intensity. An MTSS allows for the early identification of learning and behavioral challenges and timely intervention for students who are at risk for poor learning outcomes. It also may be called a *multi-level prevention system*. The increasingly intense tiers (e.g., *Tier 1, Tier 2, Tier 3*), sometimes referred to as *levels of prevention* (i.e., *primary, secondary, intensive prevention levels*), represent a continuum of supports. *Response to intervention* (RTI) and *positive behavioral interventions and supports* (PBIS) are examples of an MTSS.

Nonresponsive: A student whose progress monitoring data show little or no change after exposure to a learning intervention.

Problem-Solving Approach: Within an MTSS, RTI, or PBIS model, a problem-solving approach is used to tailor an intervention for an individual student. A problem-solving approach typically has four stages: problem identification, problem analysis, plan implementation, and plan evaluation.

Response to Intervention: Response to intervention (RTI) integrates assessment and intervention within a multi-level prevention system to maximize student achievement and reduce behavior problems. With RTI, schools identify students at risk for poor learning outcomes; monitor student progress; provide evidence-based interventions, and adjust the intensity and nature of those interventions depending on a student's responsiveness; and identify students with learning disabilities or other disabilities.

Responsive: A student whose progress monitoring data show change as a result of exposure to a learning intervention.

Systematic Instruction: An educational framework that is clearly mapped out and built upon prior learning to strategically plan out learning.

Tier 1: Tier 1 also may be referred to as the core curriculum or *primary prevention*. The primary prevention level is the first level in a multi-level prevention system. It consists of a high-quality core curriculum and research-based instructional practices that meet the needs of most students.

Tier 2: Tier 2 also may be referred to as the *secondary prevention level* or targeted intervention. It is the second level of intensity in a multi-level prevention system. Interventions occurring at the secondary level are evidence based and address the learning or behavioral challenges of students identified as at risk for poor learning or behavioral outcomes.

Tier 3: Tier 3 also may be referred to as *intensive intervention* or the *tertiary prevention level*. This level is typically the most intense level of a multi-level prevention system. It consists of individualized, intensive intervention(s) for students who have severe and persistent learning or behavioral needs. DBI is an approach that may be used within the tertiary prevention level.

Appendix B. Summit Agenda

Office of Special Education Programs (OSEP)-Institute of Education Sciences (IES) Intensive Intervention Summit

March 23, 2015: 11:30 a.m. to 5:30 p.m.

March 24, 2015: 8:30 a.m. to 12:15 p.m.

1000 Thomas Jefferson St. NW

Washington, DC 20007

Room 200 A-C

Moderators: Renee Bradley (OSEP) and Kristen Rhoads (IES)

Day 1 (March 23, 2015)

11:30 a.m.–12:20 p.m.: Welcome, introductions, logistics, meeting purpose, and framing “intensive intervention”

12:20–2:10 p.m.: Working lunch and Panel 1: Approaches to intensive intervention: What can we learn from research and what do we still need to know?

- Get food and settle in (20 min.)
- Panel topics (90 min.)
 - Data-based individualization as a means of accomplishing intensive interventions: What do we know? How might research productively improve and extend this approach?
 - Presenter: Lynn Fuchs
 - Discussants: Ben Clarke and Chris Lemons
 - Other methods for intensifying intervention: What do we know and how might research productively improve and extend such methods? What are other ways of intensifying instruction when individualization is not possible?
 - Presenter: Doug Fuchs
 - Discussants: Marcia Barnes and Michael Coyne

2:10–2:25 p.m.: Break

2:25–3:15 p.m.: Panel 2: Efficient identification for intensive intervention: What can we learn from research and what do we still need to know?

- Panel topics
 - What do we know about early identification of students who are likely to require intensive intervention?
 - What do we know about “fast tracking” students to intensive intervention?
 - How might research productively improve and extend this approach?
- Presenter: Don Compton

- Discussants: Nathan Clemens and Kristen McMaster

3:15–3:30 p.m.: Break

3:30–4:20 p.m.: Panel 3: Intensive intervention in intermediate and secondary grades: What can we learn from research and what do we still need to know?

- Panel topics
 - In what fundamental ways might advancing age or grade alter the nature of intensive intervention and identifying students for intensive intervention?
 - How might research productively improve and extend services at these ages or grades?
- Presenter: Sharon Vaughn
- Discussants: Brett Miller and Deborah Speece

4:20–5:30 p.m.: Discussion of themes from panels and preview Day 2 (Moderators: Renee and Kristen)

Day 2 (March 24, 2015)

8:30–9:00 a.m.: Breakfast available with review and additions to Day 1 discussion: After you sleep on it, what do you have to add to what we know about intensive interventions?

9:00–9:50 a.m.: Panel 4: Implementing intensive intervention: What can we learn from implementation and what do we still need to know?

- Panel topics
 - What are the challenges with implementing intensive intervention in schools?
 - What additional research is needed to support implementation?
- Moderator: Russell Gersten
- Presenters: Joe Jenkins, Devin Kearns, Erica Lembke, and Rebecca Zumeta
- Discussant: Leslie Anderson

9:50–10:15 a.m.: Individual reflection on themes from panels with implications for research, personnel preparation, and implementation

10:15–11:10 a.m.: Transition and small working groups to discuss panel themes and implications

11:10 a.m.–12:15 p.m.: Transition and large-group discussion (Moderators: Renee and Kristen)

- Debrief small-group discussions
- Identify potential themes and implications to be used as the basis for future documents or white papers
- Discuss next steps

12:15 p.m.: Adjourn for travel

Appendix C. Participants

Name	Affiliation (at the time of the summit)
Marcia Barnes	University of Texas
Renee Bradley	Office of Special Education Programs
Mary Brownell	University of Florida
David Chard	Southern Methodist University
Ben Clarke	University of Oregon
Nathan Clemens	Texas A&M University
Donald Compton	Vanderbilt University
Michael Coyne	University of Connecticut
Louis Danielson	American Institutes for Research
Douglas Fuchs	Vanderbilt University
Lynn Fuchs	Vanderbilt University
Allison Gandhi	American Institutes for Research
Russell Gersten	Instructional Research Group
Steve Goodman	Michigan Integrated Behavior and Learning Support Initiative
Marty Ikeda	The Homestead
Joseph Jenkins	University of Washington (emeritus)
Edward Kame'enui	University of Oregon
Devin Kearns	University of Connecticut
Erica Lembke	University of Missouri
Christopher Lemons	Vanderbilt University
Kathleen Mann Koepke	National Institute of Child Health and Human Development
Joan McLaughlin	National Center for Special Education Research
Kristen McMaster	University of Minnesota
Brett Miller	National Institute of Child Health and Human Development
Melody Musgrove	Office of Special Education Programs
Kristen Rhoads	National Center for Special Education Research
Celia Rosenquist	Office of Special Education Programs
David Sienko	Rhode Island Director of Special Education
Deborah Simmons	Texas A&M University
Deborah Speece	Virginia Commonwealth University
Elizabeth Truly	United Federation of Teachers
Sharon Vaughn	University of Texas
Larry Wexler	Office of Special Education Programs
Michael Yudin	Office of Special Education and Rehabilitative Services
Deborah Ziegler	Council for Exceptional Children
Rebecca Zumeta Edmonds	American Institutes for Research