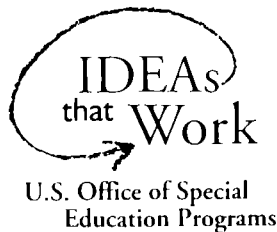


IDEAS that WORK



**The American Youth Policy Forum/Office of Special Education Programs,
Office of Special Education and Rehabilitative Services**

Briefing on

Special Education Research to Practice: Ideas that Work

-Agenda-

12:00-12:10

Louis Danielson, Ph.D., Director of Research to Practice, Office of Special Education Programs, Office of Special Education and Rehabilitative Services

- Explanation of Part D
- History of Investments
- Scope of work under Part D

12:10-12:30

Russell Gersten, Ph.D., Eugene Research Institute at the University of Oregon

- Academic perspective of the advances in special education.

12:30-12:50

Tim Lewis, Ph.D., University of Missouri

- Creating and maintaining safe and effective learning environments.

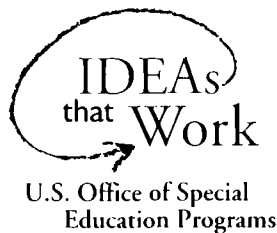
12:50-1:00

Renee Bradley, Ph.D., Special Assistant to the Director of Research to Practice, Office of Special Education Programs, Office of Special Education and Rehabilitative Services

- Wrap-up

1:00-1:30

Question & Answers

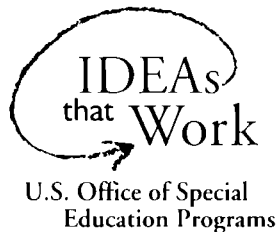


Louis Danielson

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 brings an unparalleled and unique depth of knowledge in both special education policy and research to his current position as Director of the Research to Practice Division in the Office of Special Education Programs (OSEP).

Dr. Danielson was awarded a doctorate of philosophy in educational psychology from Pennsylvania State University in 1976. His career spans several roles in education including secondary school science and mathematics teacher, school psychologist, and teaching at the university level. For the past twenty-three years, Dr. Danielson has held leadership roles in OSEP and 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. He has served in numerous research and policy roles across the Department and has represented OSEP in major school reform activities.

A frequent contributor to professional journals, Dr. Danielson has published extensively in the literature and is a frequent speaker at national and international conferences and events focusing on special education. His particular areas of interest include policy implementation and national evaluation studies.



Russell Gersten

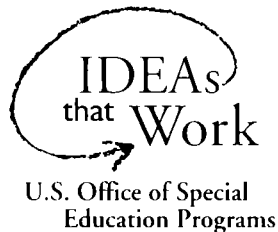
Dr. Russell Gersten is a professor in the College of Education at the University of Oregon and is the president of Eugene Research Institute. He has directed or co-directed 35 applied research grants addressing the educational needs of students with high-incidence disabilities. Most of these grants were for the U.S. Department of Education (totaling over 12 million dollars).

A major emphasis in his research has been on delineating and understanding instructional variables that have an impact on student learning. He has also extensively studied teacher development and collaboration.

Dr. Gersten has over 100 publications in scientific journals such as *Exceptional Children*, the *Journal of Learning Disabilities*, and the *American Education Research Journal* as well as journals geared towards practitioners such as *The Reading Teacher* and *Educational Leadership*. His work has been cited in sources as diverse as *The New York Times*, *Wall Street Journal*, *Education Week*, and *ASCD Update*. Dr. Gersten's work is also routinely cited in major education publications, such as *The Third Handbook of Research on Teaching*, *AERA's Handbook of Educational Research*, and *Becoming A Nation of Readers*.

He has recently completed two research syntheses focusing on effective instructional practices for students with learning disabilities in the areas of reading comprehension and written expression.

Over the past decade he has conducted inservice workshops for special educators throughout the United States. He co-directs a project on development of metacognitive assistive tools for students with moderate cognitive disabilities. He also directed a project involving a synthesis of the literature on language minority students with disabilities or who are at risk for school failure. He was one of three researchers asked to help OSEP delineate strategies for effective translation of research into classroom practice.



Tim Lewis

Dr. Tim Lewis has been involved in the education of students with Emotional and Behavioral Disorders for more than 18 years. He has been a classroom teacher in public schools and clinical settings, served on advisory boards of juvenile detention centers and regional programs serving students with EBD. Tim earned his doctorate in special education at the University of Oregon. He is currently an associate professor, Chair, and Director of Graduate Studies in the Department of Special Education at the University of Missouri.

Dr. Lewis also directs the University of Missouri's cooperative effort with the OSEP Center on Positive Behavioral Interventions and Supports based at the University of Oregon. His research and teaching focus on social behavioral challenges. His specialty areas include social skill instruction, functional assessment, and proactive school-wide discipline systems.

Keys to Successful Learning:

A National Summit on
Research in Learning
Disabilities

Improving Instruction for Students With Learning Disabilities

The Results of Three Research
Syntheses

Office of Special Education
and Rehabilitative Services

Office of Special Education
Programs

Research to Practice

U.S. Department of Education



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For additional information on helping students with learning disabilities, visit the Office of Special Education and Rehabilitative Services at the U.S. Department of Education at the following web site: www.ed.gov/offices/OSERS

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The purpose of this initiative is to translate research and policy on learning disabilities into high standards for learning and achievement in the classroom, and to take action at the local, state and federal levels to ensure that all students, including those with learning disabilities, are afforded the highest quality education.

Keys to Successful Learning is supported by a coalition of national and regional funders as well as a broad range of participating education organizations.

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Improving Instruction for Students with Learning Disabilities

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U.S. Department of Education

Intervention Research for Students with Learning Disabilities:

A Meta-Analysis of Treatment Outcomes

H. Lee Swanson, Ph.D., University of California - Riverside

Executive Summary

Background and Purpose

In the last 20 years, the number of children classified as having learning disabilities has increased substantially, from roughly three-quarters of a million in 1976 to more than 2.6 million in 1997. These children currently make up almost half of schools' special education population, yet it is still unclear which teaching strategies best help these children. Furthermore, a review of past literature reveals few systematic analyses of instructional approaches for students who have learning disabilities. This lack of clear direction creates confusion about how best to educate these students.

Clearly, students with learning disabilities are a heterogeneous group and **no general or single intervention can be recommended for these students**. However, this report can offer recommendations from its investigation of evidence derived from many different studies on teaching students with learning disabilities. In this meta-analysis we synthesize research on the effects of various forms of instruction intended to improve students' academics (e.g., reading, mathematics), cognition (e.g., problem solving), or behavior (e.g., social skills).

The meta-analysis includes 272 studies which met four criteria. Each study had to:

- ▶ Include learning-disabled students of average intelligence who were assigned to an experimental or a control instructional condition.
- ▶ Include information on how students with learning disabilities were selected.
- ▶ Explain treatment outcomes.
- ▶ Have no severe flaws.

We analyzed the effects for a range of studies that included both studies of a single area and studies that examined a mix of subjects across the following: instructional

domains (e.g., reading, mathematics); sample characteristics (e.g., age, intelligence); intervention parameters (e.g., number of instructional sessions); and methodologies.

Findings

This synthesis examining research conducted over the last 30 years produced several findings related to intervention for students with learning disabilities. Unless otherwise noted, these findings come primarily from the group-design studies.

What forms of instruction were most effective?

▶ The most effective form of teaching children with learning disabilities combined components of direct instruction (teacher-directed lecture, discussion, and learning from books) with components of strategy instruction (teaching ways to learn such as memorization techniques and study skills). The main instructional components of this combined model include:

- sequencing (e.g., breaking down the task, providing step-by-step prompts);
- drill-repetition-practice (e.g., daily testing, repeated practice, sequenced review);
- segmentation (e.g., breaking down skills into parts and then synthesizing the parts into a whole);
- directed questioning and responses (e.g., teacher asks process or content questions of students);
- control of task difficulty;
- use of technology (e.g., computers, presentation media);
- teacher-modeled problem solving;
- small-group instruction; and
- strategy cues (e.g., reminders to use strategies, think-aloud models).

Of these components, the one most linked to effect on student achievement was control of task difficulty (where, for example, the teacher provided necessary assistance or sequenced tasks from easy to difficult.) Another influential component was the use of small interactive groups of five or fewer students. A third strongly influential component was the use of structured questioning and directed responses, involving, for example, interactive questions and answers or the teacher directing students to ask questions and summarize.

‡ Children with learning disabilities perform closer to nondisabled (age-related peers) children when treatment includes strategy instruction. Not surprisingly, nondisabled students generally outperform learning-disabled students. Importantly, however, there was less difference between the performance of the two groups when learning-disabled students were exposed to treatments that included strategy instruction compared to competing treatments like direct instruction.

‡ In the area of reading, both phonics and whole word (whole language) instruction make a significant contribution to student achievement in reading. Neither clearly supersedes the other in terms of transfer measures (reading real words and comprehending text).

‡ Only a few instructional components successfully predict effects on student achievement. Although several instructional components seem to produce effects when studied independently (e.g., segmentation predicts outcomes on phonological measures), the results vary more widely when instruction reflects the variance shared across components. This happens because individual strategies typically do not appear in isolation in a classroom, and often their importance as predictors is enhanced in the context of other components.

What subject areas were most affected by different instructional strategies?

‡ Only studies in the areas of reading comprehension, vocabulary, and creativity met our threshold for having a large effect (when adjusted for differences in how the studies were conducted). We found moderate effects in the areas of cognitive processing (e.g., problem solving), word recognition, memory, writing, intelligence (e.g., performance on standardized tests), attitude/self-concept, phonics/orthographic skills (e.g., recognizing correct spelling), and global achievement (e.g., teacher grades, class ranking). We found relatively weak effects

were found in the areas of spelling, mathematics, general reading, social skills, perceptual-motor processes (e.g., handwriting), and language processes (e.g., listening comprehension). However, single subject design studies found large effects in all subjects except for handwriting.

‡ Treatment effects are specific to the academic problems being addressed. If you look across academic subjects, the most effective model was a combination of direct instruction and strategy instruction. However, its effect was greater in reading than in non-reading measures, such as mathematics and social skills. Within the field of reading, this model is particularly effective for reading comprehension compared to reading recognition. We also found that bottom-up instruction (direct instruction only) was more effective than top-down instruction (strategy instruction only) on word recognition, but not on reading comprehension.

What other factors influence achievement?

‡ Different ways of identifying whether a child has learning disabilities or not (using either cut-off scores in tests or variation between student achievement and that predicted by an IQ test) will affect achievement outcomes. The results suggest that studies that used a cut-off score criteria (at or above 84 and reading scores below the 25th percentile) found smaller effects from the treatment. For both group and single-subject design studies, the model combining direct and strategic instruction yielded higher effect sizes when cut-off scores can be computed than when they cannot. For single-subject design studies, the combined model yields higher effect sizes for the lower IQ discrepancy studies when compared to those studies that report discrepancies, but with relatively higher IQ scores.

‡ Similarly, variations in how the studies were conducted can have a significant impact on treatment outcomes. Studies that account for differences from the control (non-treatment) condition in terms of setting (classroom and school), teacher, and number of instructional steps yield larger effects than studies that fail to control for such variations. A serious threat to interpreting treatment effects are studies that unfairly “stacked” the treatment condition with substantially more steps and procedures than the control condition. Here, although it was clear that how the study was conducted did have a strong influence on its findings, researchers found that there were still significant effects

related to various types of treatment, even with controls for the methodological factors.

Recommendations

- ▶ Researchers should investigate which treatment approaches are most effective and the causal processes by which they work. They also should pay attention to the interactions of instruction and learning disabilities characteristics.
- ▶ Teachers should combine direct instruction with

strategy instruction. They should focus on task difficulty, small interactive groups, and structured questioning and directed responses.

- ▶ Teachers should match instructional techniques to the subject areas in which they are most effective. For example, reading comprehension should be taught with a combination of direct instruction and strategy instruction. Bottom-up instruction can be used for word recognition but not reading comprehension. Both phonics and whole word methods (whole language) should be used to teach reading.

The Effect of Instructional Grouping Format on the Reading Outcomes of Students with Disabilities:

A Meta-Analytic Review

Batya Elbaum, University of Miami

Sharon Vaughn, University of Texas at Austin

Marie Hughes, University of Miami

Sally Watson Moody, University of Miami

Jeanne Shay Schumm, University of Miami

Executive Summary

Background and Purpose

American schools are educating an increasingly diverse student population. This diversity is present in students' cultural and linguistic backgrounds, behavior, and learning abilities. One of the greatest challenges that teachers face is to provide appropriate reading instruction for all students, including students with learning disabilities and behavior disorders.

For decades, schools assigned students with disabilities who needed specialized reading instruction to a part- or full-time special education classroom. The 1997 Reauthorization of IDEA provides support for opportunities to educate students with disabilities in the general education classroom to the extent appropriate and also to ensure these students' access to the general education curriculum. This raises the question of how best to organize the classroom and group students for instruction so as to maximize student achievement. Traditionally, students in regular classrooms were divided into several groups according to reading ability and were provided reading instruction within these groups. In the last twenty years, there has been considerable criticism of same-ability grouping on the grounds that this practice lowers self-esteem and motivation among students with reading problems and often widens the gap between high and low achievers. At the same time, there has been an increase in the popularity of alternative grouping practices such as cooperative learning and cross-age tutoring that are designed to accommodate individual differences while avoiding social stigmas.

As a result of inclusion and other reform movements in special education, increased collaboration between general and special educators, and the rise of new methods of grouping for reading instruction, educators need a comparison of the effects of different ways of grouping students with disabilities for reading instruction.

Findings

This study, a meta-analysis of 20 studies conducted from 1975 to 1995, examined the relationship between reading outcomes of students with disabilities and the grouping formats (i.e., pairing, small groups, multiple grouping formats) used for reading instruction. Most studies compared students who received instruction through one of these grouping formats with similar students who received "traditional" instruction delivered to the whole class. The researchers found that students who were taught in one of the alternative grouping formats had greater reading outcomes, on average, than students in a comparison group (nearly half a standard deviation higher). Thus, this research supports the use of alternative instructional groupings for teaching reading to students with disabilities.

What are the results of students tutoring each other?

- Researchers found clear benefits to tutoring both in cases when the students with disabilities acted as reciprocal tutors-tutees and in cases when they were only tutees. Acting as a reciprocal tutor does not appear to diminish the effect of peer tutoring, and may offer the additional benefit of boosting students' self-esteem through the teaching role.
- The average effect of cross-age tutoring was very high

for cross-age tutors but negligible for cross-age tutees. In the cross-age tutoring studies, tutors were in some cases students with disabilities and other cases regular education students. Hence, the lack of an effect for tutees cannot be explained entirely by the hypothesis that tutors who are students with disabilities lack the content knowledge or teaching skill to help their tutees.

► Outcomes for students with disabilities varied depending on the particular focus of the reading instruction that was provided (for example, whether the focus was on word recognition or reading comprehension), as well as on how these outcomes were measured (for example, whether the test that students were given following the reading intervention was a test of decoding skills, oral reading of passages, reading comprehension, etc.). Future research is needed to clarify these issues.

What are the effects of small group instruction?

► The study supports previous research which found that breaking students into smaller teacher-led groups (typically three to ten students) helps students learn significantly more than students who are not instructed in small groups. Other research suggests that small groups (three to four members) produce more positive results than larger groups (five to seven members). Smaller groups typically result in more efficient use of teacher and student time, lower cost, increased instructional time, increased peer interaction, and improved generalization of skills.

► The authors suggest that the type of instruction provided in small groups and the materials used will affect the benefits to students with disabilities. Benefits are likely to be greater when instructional materials are tailored to the needs of different students. Students with disabilities may require different materials and more direct instruction than students without disabilities.

► The role of the teacher in small group formats requires further research. Small groups can provide teachers with the opportunity to provide intensive, direct instruction, or they can be used as an opportunity for students to work collaboratively with one another. Further studies are needed to address the effects of different types of small group work in reading.

What are the outcomes of multiple grouping formats?

► Average results from these studies showed that using

combinations of grouping formats for reading instruction produces measurable reading benefits for students with disabilities. This finding is important because increasing numbers of teachers use diverse grouping formats in their classrooms. For example, teachers may use whole-class instruction for a part of each language arts period and have students work two days a week in pairs and another two days in small groups.

Did the length of time during which the alternative format was implemented impact the difference in outcomes between students taught using that grouping format and students in a comparison group?

► The analyses revealed that the difference in outcomes between students taught in alternative formats and students in a comparison group was not related to the length of the intervention. Longer interventions were not, overall, associated with a greater difference between students in the alternative format and students in the comparison group.

Recommendations

► Peer-mediated instruction in reading represents an effective complement to other instructional practices for students with disabilities. Peer pairing holds promise not only for improving reading outcomes but also for improving social relationships of students with disabilities. Teachers are encouraged to consider using well-documented and researched peer pairing interventions as part of their reading program.

► When possible, teachers should engage students with disabilities as reading tutors for younger children. Outcomes should be monitored for tutees as well as tutors, to ensure that all children benefit.

► Researchers need to conduct additional intervention studies that directly assess the effects of grouping on outcomes for students with disabilities. For example, an important question that can be addressed by such research is whether an intervention that is successful when conducted one-to-one can be equally successful when implemented in small groups. Further research can provide guidance on how the use of different instructional formats for reading instruction impacts both the academic achievement and social integration of students with disabilities.

Effective Instruction for Learning Disabled or At-Risk English-Language Learners:

An Integrative Synthesis of the Empirical and Professional Knowledge Bases

*Russell Gersten, Scott Baker, Susan Unok Marks, Sylvia B. Smith,
Eugene Research Institute, University of Oregon*

Executive Summary

Background and Purpose

The last 25 years have seen the largest wave of immigration in the history of the United States. Projections indicate that one student in four will be Latino in 2020, compared to only one in ten in 1982.

What is the best way to teach English-language learners? As the number of non-English speaking students in schools rises rapidly, this question presents a major concern to educators. Educators need a professional knowledge base on effective instructional practices for English-language learners. The urgency of this need is highlighted by NCES data indicating that the dropout rate for Hispanics is double that of African Americans and whites. Furthermore, an estimated one million students learning English in schools also have a learning disability. These students are at risk of receiving inappropriate special services or no such services at all.

We therefore conducted a synthesis of all relevant research on effective instruction for English-language learners. The guiding question for the synthesis was:

What do we know about effective teaching practices for English-language learners with disabilities or those at risk for school failure in the elementary and middle school grades (K-8)?

Goals of Research

Our primary goal was to conduct a rigorous examination of existing research to identify and understand those practices and instructional principles that produced a positive impact on student learning.

Unfortunately, we found only a small number of empirical studies (nine) that assessed the impact of specific instructional interventions or learning outcomes. Therefore, we supplemented our synthesis of existing research with additional research of our own (including analyses of discussions from five professional work groups made up of educators working with this population and researchers). Our second goal was to help educators better understand why some practices are more likely to be effective than others. For this purpose, we used a wide range of data sources (including the professional work groups). A third goal was to draw inferences from an examination of nine studies that met our criteria.

Findings

- ▶ Instructional approaches that expanded upon the current research base of effective teaching yielded stronger results than some of the seemingly innovative methods. This is especially true in reading and math. For example, quality and quantity of feedback provided was a critical determinant of achievement growth.
- ▶ The meetings and discussions with educators generated some promising instructional practices that are useful for defining best practices for teaching English-language learners. Among these are:
 - Using visuals to reinforce concepts and vocabulary;
 - Utilizing cooperative learning and peer tutoring;
 - Use of students' native language strategically when students are floundering;
 - Providing opportunities for students to practice speaking English in both formal and informal contexts throughout the day; and
 - Focusing on rich and evocative vocabulary words

during lessons so students remain engaged and challenged. The words can serve as vehicles for teaching literary concepts.

Current Challenges

► Extensive discussions with practitioners revealed that many current attempts to merge content area instruction with English-language development instruction are not well implemented. Current classroom practice typically fails to provide sufficient time for teaching English or sufficient opportunities for students to use oral language or to develop English writing skills. There also appears to be a tendency to over-emphasize conversational language use and to devote insufficient effort into building students' command of the abstract language required by many academic content areas.

► It is important to distinguish between the separate goals of language development and academic improvement. Our research indicates that increased language use in the classroom does not lead to increased academic improvement. In some studies, greater use of sophisticated language constructions in content-area classes was found to limit students' cognitive and academic growth. Because of limited and inconclusive research, we do not yet know which form of student engagement (e.g., speaking, listening, reading, writing, content activities, or a combination of these) provides more overall benefit for English-language learners. Further research needs to help clarify the link between academic growth and language learning.

How is research being used to guide practice?

We found only nine valid experimental studies for all academic areas in grades K-8. Currently, there is a limited empirical research base to guide practice. Although many articles and reports claim to describe effective practice, few provide the type of data necessary for firm conclusions.

Recommendations For Practitioners

► We conclude that an effective English-language development program must include a balance of three components: (1) development of proficiency in "natural" language or conversation, (2) traditional emphasis on grammar and syntax, and (3) development of academic or decontextualized language.

► Teachers should use instructional approaches identified in the effective teaching research (e.g., Brophy & Good, 1986) and modulate them for English-language learners.

► Educators need to improve the way they merge content area instruction with English-language development instruction and provide both sufficient time for teaching English and sufficient opportunities for students to use oral language and writing. Key instructional practices for English-language development include introducing sets of no more than four to seven new vocabulary words per lesson, using visuals for reinforcement, using cooperative learning and peer tutoring, and making strategic use of the native language by allowing students to organize their thoughts in their native language before risking an English response.

For Researchers

The greatest need in future research of English-language learners (particularly in the area of special education) is for well-designed and valid intervention research. Existing studies are vague or unclear regarding how teaching methods were implemented, the level of implementation achieved, the language of instruction, and many other "context" variables that provide a rich picture of intervention research.

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TIPS FOR TEACHERS

*Teaching Reading to Students
with Learning Disabilities*



Learning
to
Read

**Reading
to
Learn**



Tips for Teachers:

Teaching Reading to Students with Learning Disabilities

Reading is the single most important educational skill your students will learn. Understanding the organization and meaning of text and instruction in both phonics and literature is essential to helping young children read. By understanding the prerequisite skills for reading, teachers can build a solid foundation for their students to learn and succeed in school.

Create Appreciation of the Written Word

- Share stories with children and invite them to explore a story's magic.
- Share informational texts and invite children to wonder about the new ideas presented.
- Take every opportunity to point out the ways in which reading is essential to the communications of everyday life (e.g., on labels, instructions, and signs).

Develop Awareness of Printed Language and the Writing System

- Make sure students know how books are organized. They should be taught the basics about books--that they are read from left to right and top to bottom, that print may be accompanied by pictures or graphics, that the pages are numbered, and that the purpose of reading is to gain meaning from the text and understand ideas that words convey.
- Read to children from books with easy-to-read large print. Use stories that have predictable words in the text.
- Use "big books" to help children notice and learn to recognize words that occur frequently, such as a, the, is, was, and you.
- Label objects in your classroom.

Teach the Alphabet

- A strong predictor of the ease with which a child learns to read is his or her familiarity with letters of the alphabet. This familiarity is a critical building block for learning to read.
- It is important to go beyond knowing the names of letters. Students must also develop a sense of the purpose of letters. Help them notice the letters in the print that surrounds them and that you share with them every day.
- Engage the students in activities that will help them learn to recognize letters visually.
- Help students learn to form the letters and encourage them to embellish their work with their names and with other first attempts at writing.

Develop the Students' Phonological Awareness

- In listening and speaking, we pay attention to the meaning of language rather than to its sound. To learn to read, however, students must be taught to attend to the sounds,



Tips for Teachers:

Teaching Reading to Students with Learning Disabilities

or phonology, of language. This is necessary for them to understand how speech is represented by print. Children with learning disabilities need special help in learning to develop such phonological awareness.

- Model and demonstrate how to break short sentences into individual words. For example, use the sentence "Frogs eat bugs," and demonstrate with chips, cards, or other manipulatives how the sentence is made up of three words and how the order of the words matters. Using manipulatives to make sentences, play with each word and put it in order.

- Develop students' awareness of the sounds of individual words by asking them to clap out syllables and to listen for and generate rhymes.

- Once children are comfortable in playing games with words, syllables, and rhymes, move onto phonemic awareness.

Develop Phonemic Awareness

Phonemic awareness refers to an understanding that words and syllables are comprised of a sequence of elementary speech sounds. This understanding is essential to learning to read an alphabetic language. The majority of children with reading disabilities fail to grasp this idea.

- In teaching phonemic awareness, the focus of all activities should be on the sounds of words, not on letters or spellings.

- Use strategies that make phonemes prominent in children's attention and perception. For example, model specific sounds, such as /s/ in the word sat, and ask children to produce each sound in isolation and in many different words until they are comfortable with the sound and understand its nature.

- Begin with simple words and simple challenges, e.g., listen for initial /s/ in sat, sit, sip, and sad . . . or for long /e/ in me, see, bee . . .

- Teach students to blend phonemes into words. Begin by identifying just one phoneme, e.g., /m/-ilk, /s/-at, working gradually toward blending all the phonemes in words, e.g., /s/-a/-t/.

- Teach students to identify the separate phonemes within words, e.g., what is the first sound of soup? What is the last sound of kiss? Beginning phonemes are easier to identify than final phonemes.

- Once students are comfortable listening for individual phonemes, teach them to break up words, into component sounds, e.g., /m/-oo/-s/= "moose".

- Create a sequence of segmenting and blending activities to help students develop an understanding of the relationship between sounds in words.

- Provide children with more support when first teaching a task. For example, model a sound or strategy for making the sound, and have the children use the strategy to produce the sound. Model and practice several examples. Prompt the children to use the strategy during guided practice, and gradually add more examples. As the students



Tips for Teachers:

Teaching Reading to Students with Learning Disabilities

master these skills, provide less teacher-directed instruction and more practice and challenge.

- Make teaching phonological awareness a top priority. Opportunities to engage in phonological awareness activities should be plentiful, frequent, brief, and fun.
- Phonemic awareness is essential for learning to read, but it is not enough by itself. It must be coupled with instruction and practice in learning the relationship between letters and sounds.

Teach the Relation of Sounds and Letters

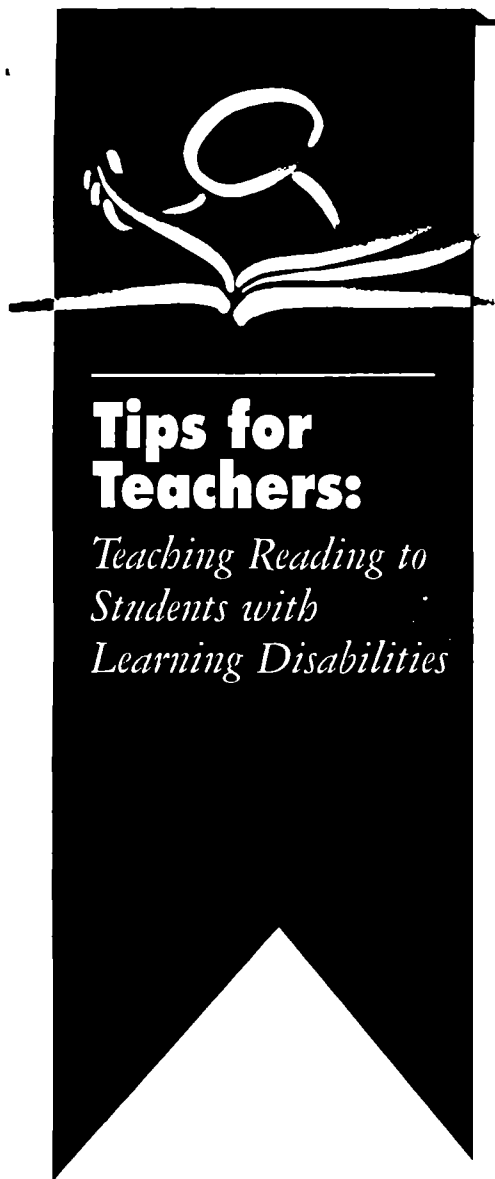
- Students should learn the letters of the alphabet and discriminate each letter from the other, because each stands for one or more of the sounds that occur in spoken words.
- When presenting each letter, model its corresponding sound and have children produce the sound themselves. For children with learning disabilities, the teaching activities must be explicit and unambiguous.
- At first, teach and work with only a few letter-sound correspondences that have high utility in many words (e.g., /m/ in man, mad, him, and ham). Postpone teaching less frequently occurring letters until students have a firm understanding of how left-to-right spellings represent first-to-last sounds (alphabetic understanding).

Teach Children How to Sound Out Words

- After students have mastered a few letter-sound correspondences, teach them to decode words or sound them out. Begin with small, familiar words. Teach the children to sound out the letters, left to right, and blend them together, searching for the word in memory.
- Model sounding out the word, blending the sounds together and saying the word. The ability to sound out new words allows children to identify and learn new words on their own.
- Give children stories containing words that reflect the letter-sound patterns that have been taught, and encourage them to sound out words whenever they are uncertain.
- Help children learn spelling conventions, such as the use of final /e/'s to mark long vowels, by comparing and contrasting lots of examples.

Teach Children to Spell Words

- Teach children to spell words by sounding their letters one by one. Model the sounding and spelling process for children as they spell.
- Begin with short words children can sound out, because these words follow regular spelling conventions, e.g., cap, bat, and sit instead of cape, bait or sight.
- Begin with simple words that do not contain consonant blends, e.g., ham and pan instead of slam and plan.



Tips for Teachers:

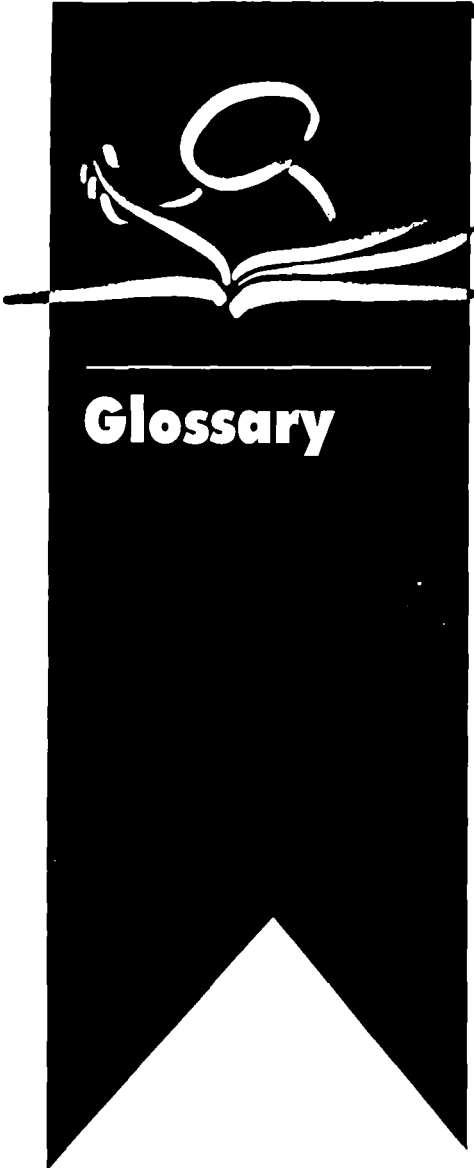
Teaching Reading to Students with Learning Disabilities

- Encourage students to use spelling knowledge and strategies regularly in their own writing.
- Introduce spelling conventions systematically. Begin with words that exemplify the most frequent and basic conventions, and provide support and practice to help students generalize from these words to others. The goal is to help them see the spelling conventions in the words.
- Use words in which letter-sound correspondences represent their most common sounds (e.g., get instead of gem).
- Develop a sequence and schedule of opportunities that allow children to apply and develop facility with sounds and words at their own pace. Specify what skills to assess and when to assess them so that you will know when to move on. Take into account each student's background knowledge and pace in moving from sounding out to blending words to reading connected text.

Help Children Develop Fluent, Reflective Reading

- Help children learn to read fluently by requiring them to read new stories and reread old stories every day.
- Help children extend their experience with the words, language, and ideas in books by interactively reading harder texts with them and to them every day.
- Relate information in books to other events of interest to children, such as holidays, pets, siblings, and games. Engage children in discussion of the topics.
- In both stories and informational texts, encourage wondering. For example, "I wonder what Pooh will do now?" "How do you think the father feels?" or "I wonder what frogs do in the winter? Do you think that's a problem? Why?"
- Model comprehension strategies and provide students with guided assistance.
- Point out how titles and headings tell what a book is about.
- Help students identify the main ideas presented in the text, as well as the supporting detail. Graphics help to reveal main ideas, and the relationship between text and graphics helps students understand what they are reading.
- Point out unfamiliar words and explore their meaning. Revisit these words frequently and encourage students to use them in their own conversations.
- Show children how to analyze contextual clues to figure out the meaning of an unfamiliar word. Research shows that most vocabulary growth comes from learning new words in reading.

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Glossary

Alphabetic awareness - Knowledge of the letters of the alphabet coupled with the understanding that the alphabet represents the sounds of the spoken language.

Alphabetic understanding - The understanding that, in principle, the left-to-right spelling of printed words represents their phonemes from first to last.

Background knowledge - All children bring some level of background knowledge to beginning reading (e.g., how to hold a book, knowledge of words, knowledge of the world). Priming this background knowledge--relating new knowledge to that which is already known--helps children draw on their experiences as a means of understanding new information. When sufficient background knowledge does not exist, it will be necessary to adjust instruction accordingly.

Fluency - The ease with which students translate print to speech.

Phonemes - The elementary speech sounds represented by the letters of a perfect alphabet. In the English alphabet, which is not perfect, some phonemes are represented by combinations of letters (e.g., /th/, /sh/), and some letters represent more than one phoneme (e.g., c, g, a, e, l, o, u).

Phonemic awareness - The awareness that spoken words or syllables can be thought of as a sequence of phonemes. Phonemic awareness is a sub-category of phonological awareness.

Phonological awareness - The ability to attend to the phonological or sound structure of language as distinct from its meaning. Types of phonological awareness include word awareness, syllable awareness, rhyme awareness, and phonemic awareness.

Phonological decoding - Translating the letters or spelling patterns of a written word into speech patterns in order to identify the word and to gain access to its meaning.

Phonological encoding - Writing a letter or word based on its sounds.

Phonological recoding - Translating the spelling of written words into the speech sounds they represent.

Print awareness (orthographic awareness) - Awareness of how print works and how it looks. Print is made up of letters, the letters correspond to sounds and words, and text is read from left to right across the page.

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READING THE FIRST CHAPTER IN EDUCATION

*Helping Children With
Learning Disabilities to Succeed*



Learning
to
Read

**Reading
to
Learn**



Reading: The First Chapter in Education

No other skill taught in school and learned by school children is more important than reading. It is the gateway to all other knowledge. If children do not learn to read efficiently, the path is blocked to every subject they encounter in their school years.

The past five years have brought major breakthroughs in our knowledge of how children learn to read and why so many fail. These new insights have been translated into techniques for teaching reading to beginning readers, including the many students who would otherwise encounter difficulties in mastering this fundamental skill. Researchers have come to appreciate that early identification and treatment of such students can make all the difference. Researchers have also documented the problems — personal, social, and educational — that too often result when early attention and intervention do not occur.

Reading to Learn

Students who do not "learn to read" during the first three years of school experience enormous difficulty when they are subsequently asked to "read to learn." Teaching students to read by the end of third grade is the single most important task assigned to elementary schools. During the first three years of schooling, students "learn to read." That is, they develop the capacity to interpret the written symbols for the oral language that they have been hearing since birth. Starting in fourth grade, schooling takes on a very different purpose, one that in many ways is more complex and demanding of higher-order thinking skills. If efficient reading skills are not developed by this time, the English language, history, mathematics, current events, and the rich tapestries of literature and science become inaccessible.

In addition, a strong body of evidence shows that most students who fall behind in reading skills never catch up with their peers become fluent readers. They fall further and further behind in school, become frustrated, and drop out at much higher rates than their classmates. They find it difficult to obtain rewarding employment and are effectively prevented from drawing on the power of education to improve and enrich their lives. Researchers speak of this syndrome as the "Matthew Effect" — the rich get richer and the poor get poorer.

Most Americans know how central reading is to education. According to a 1994 poll conducted by Peter D. Hart Research Associates for the American Federation of Teachers and the Chrysler Corporation, nearly 70 percent of teachers believe that reading is the "most important" skill for children to learn. Two years earlier, the same polling firm reported that 62 percent of parents believed that reading was one of the most important skills for their children to master. Both teachers and parents ranked reading as more critical than mathematics and computer skills. In other words, there is general agreement among researchers and the public that all children must learn to read early in their academic careers.

The Challenges of Illiteracy

More students fail to learn to read by the end of the third grade than many people imagine. Indeed, it is no exaggeration to say that all schools encounter students who fall into this category and that all schools should have plans for addressing the special needs of these students.

In its 1994 Reading Assessment, the National Assessment of Education Progress



Reading: The First Chapter in Education

(NAEP), a federally supported program that tracks the performance of American students in core academic subjects, reported that more than four out of 10 fourth-graders (42 percent) in American schools were reading at a "below basic" level. This means that they could not understand "uncomplicated narratives and high-interest informative texts." NAEP also reported that such illiteracy persists in the higher grades. The report found that nearly one-third (31 percent) of eighth-graders and nearly one-third (30 percent) of twelfth-graders are also reading at a "below basic" level. The latter figures probably understate the problem, because many poor readers drop out of school before twelfth grade.

Other researchers have come to similar conclusions regarding how widespread students' reading problems really are. National longitudinal studies have measured the ability of children to recognize individual words in text. Their data suggest that more than one child in six (17.5 percent) will encounter a problem in learning to read during the crucial first three years of school. Further evidence comes from the sharp rise in the number of students who are diagnosed as learning disabled or are referred to special education because they cannot read at the proper grade level.

In contrast to popular belief, reading failure is not concentrated among particular types of schools or among specific groups of students. To the contrary, students who have difficulty reading represent a virtual cross-section of American children. They include rich and poor, male and female, rural and urban, and public and private school children in all sections of the country. According to the NAEP assessment, for example, nearly one-third (32 percent) of fourth graders whose parents graduated from college are reading at the "below basic" level.

In short, the failure of a substantial number of students to learn to read during the critical first three years of school is a national problem — one that confronts every community and every school in the country.

A Common Stumbling Block: Phonemic Awareness

Whatever the reason children fail to read by the end of the third grade, most non-readers share a common problem. They have not developed the capacity to recognize what reading experts call phonemes. Phonemes are the smallest units of speech — the basic building blocks of speaking and writing. The word "cat," for example, contains three phonemes — the /k/, /a/, and /t/ sounds. Phonemes are often identical to individual letters, but not always. The word "ox," for example, has two letters but three phonemes — the /o/, /k/, and /s/ sounds.

Researchers have demonstrated that accomplished readers are adept at recognizing phonemes and putting them together to construct words and phrases. They do this quickly, accurately, and automatically. The absence of this critical linguistic skill makes it difficult for children to decode and read single words, much less sentences, paragraphs, and whole stories. Teaching phonemic awareness and discrimination among phonemes is imperative for all students.



Reading: The First Chapter in Education

Solutions in the Classroom

Teaching beginners to read must be highly purposeful and strategic. Effective techniques have been developed for helping students, including those with learning disabilities, to develop phonological awareness, word recognition, and other advanced skills required for reading.

Phonological awareness activities build on and enhance children's experiences with written (e.g., print awareness) and spoken language (e.g., playing with words). A beginning reader with successful phonological awareness and knowledge of letters ostensibly learns how words are represented in print.

Intervention for learners who have difficulty with phonological awareness must be early, strategic, systematic, and carefully designed. It must be based on a curriculum that recognizes and balances the importance of both phonics instruction and the appreciation of meaning.

For children who have difficulty reading, effective reading instruction strategies should be used to build phonological awareness and alphabetic understanding. These strategies should be explicit, making phonemes prominent in children's attention and perception. For example, teachers can model specific sounds and in turn ask the children to produce the sounds. In addition, opportunities to engage in phonological awareness activities should be plentiful, frequent, and fun.

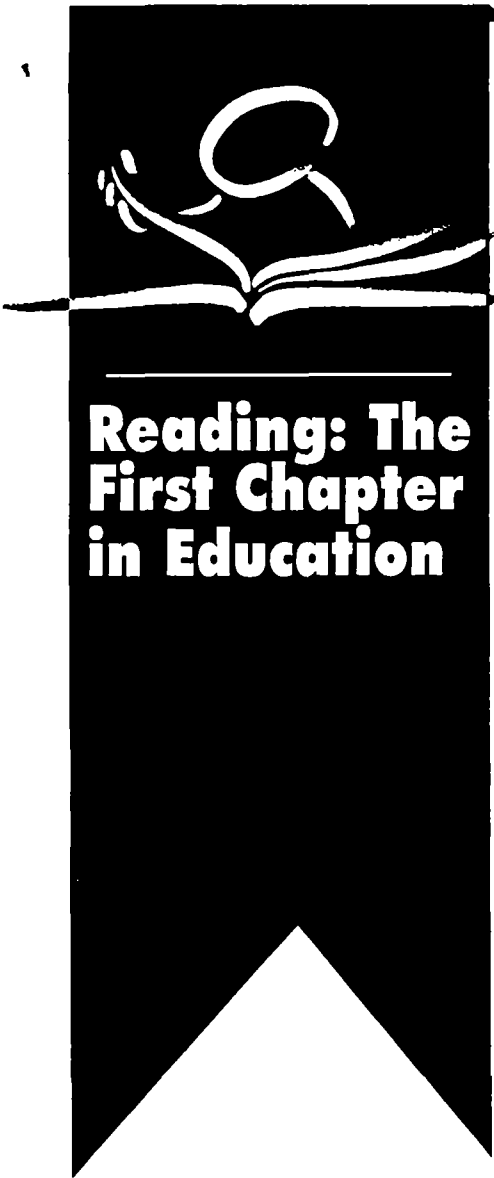
Instructional strategies should consider the characteristics that make a word easier or more difficult to read. These include: the number of phonemes in the word; phoneme position in words (initial sounds are easier); phonological properties of words (e.g., continuants, such as /m/, are easier than stop sounds, such as /t/); and phonological awareness dimensions, including blending sounds, segmenting words, and rhyming.

Many early readers will require greater teacher assistance and support. Using a research-based strategy known as scaffolding, teachers should provide students with lots of instructional support in the beginning stages of reading instruction, and gradually reduce the support as students learn more about reading skills. The ultimate goal is for students to read on their own without the help of a teacher.

A Balanced Approach

Unfortunately, it is not always easy for teachers to recognize students with reading difficulties. When they do, teachers sometimes find themselves caught between conflicting schools of thought about how to treat reading disabilities. One school of thought gives considerable attention to the teaching of phonics in the early stages of reading. Another school of thought emphasizes the whole language approach. Should teachers rely on phonics instruction, whole language instruction, or a combination of the two?

The U.S. Department of Education and the National Institute of Child Health and Human Development (NICHD) have supported the review of hundreds of studies done in recent years on reading instruction and disabilities. This body of research suggests that the relatively recent swing away from phonics instruction to a singular whole language approach is making it more difficult to lift children with learning disabilities out of the downward learning spiral and, in fact, may impede the progress of many students in learning to read with ease.



Reading: The First Chapter in Education

Few dispute the value of giving children opportunities to write, surrounding children with good literature, and generally creating a rich literate environment for students. But for many children this is not enough. Such children will have continued difficulty with reading unless they master the decoding skills associated with phonics instruction.

Research makes clear that children do not learn to read the way they learn to talk. Speech is a natural human capacity, and learning to talk requires little more than exposure and opportunity. In contrast, written language is an artifact, a human invention, and reading is not a skill that can be acquired through immersion alone. Beginning readers benefit from instruction that helps them understand that the words they speak and hear can be represented by written symbols — and that letters and the sounds associated with them, when combined and recombined, form words — just as they benefit from experiences that make reading fun.

California's experience with a chosen reading approach is instructive. A decade ago, the state became a leader in the movement to embrace whole language instruction. However, as a result of low reading scores, a task force was formed and has recently adopted a more balanced reading approach that includes building phonological awareness along with the reading of meaningful and engaging texts.

Research indicates that reading can be taught effectively with a balanced approach that uses the best of both teaching approaches. Such an approach incorporates phonics instruction with the rich literacy environments advocated by whole language instruction.

The Learning to Read/Reading to Learn Initiative

Throughout the Learning to Read/Reading to Learn: Helping Children with Learning Disabilities to Succeed initiative, three leading researchers in the field of reading instruction, Marilyn Jager Adams, author of *Beginning to Read: Thinking and Learning about Print*, a book supported by the Office of Educational Research and Improvement (OERI); Ed Kameenui of the University of Oregon, a researcher supported by the Office of Special Education Programs (OSEP); and Reid Lyon of the National Institute of Child Health and Human Development (NICHD) have identified what they believe are the most important strategies for improving early reading instruction. These strategies are effective for virtually every child but are absolutely critical for children with learning disabilities. By evaluating the ways in which students learn to read, researchers have identified nine skills essential to the learning process. Identification of these skills will alert teachers and parents to ways in which they can help children learn to read more efficiently.

Reading: The Key to Success

As already discussed, reading is the gateway to learning. Facility to understand and use written language has always been a prerequisite to the efficient acquisition of knowledge, and it is becoming increasingly important in today's information society. In the past, it may have been possible for persons who were illiterate to obtain a good job, support a family, and live a comfortable life, but those days are gone. Children who do not learn to read today can expect to live on the margins of society in every way. Universal literacy is the ultimate "access" issue in American education.



Reading: The First Chapter in Education

American schools thus face a new and monumental challenge. For the first time, educators are being asked to bring all students to a level of performance that was demanded of only a relatively few students in the past. Educational and political leaders understand this challenge, and a major effort is underway to raise the standard of teaching and learning in American schools. Improved reading instruction is crucial to this process. Attainment of the National Education Goals by the year 2000 will require enhanced reading skills in American students. Developments such as national standards in core subjects, new forms of accountability, or decentralization of school management will have few positive effects in the absence of well-conceived reading instruction.

Attaining such goals also means that ways must be found to address the learning needs of those students who, for whatever reasons, face difficulties in learning to read. Doing so is not only a matter of equity; it is also a practical necessity if the overall objectives of improving American education as a whole are to be met.

Not only are American schools facing new demands, they also are being asked to deliver more education without the addition of substantial new resources. Thus they must become more efficient. Incorporating the new knowledge we now possess about reading and how to teach it is imperative if schools are to use their resources effectively and efficiently. All students must start reading as soon as they are developmentally ready to do so, and they must build on basic reading skills as they move into higher grades. In the absence of such orderly progression, schools are put in a position of having too many children in remedial or special education programs.

Toward a Nation of Readers

We are living at a pivotal time in the history of American education. More than ever before, schools are being asked to deliver a higher level of education and to do so for all students. Meeting this challenge requires that the process of "learning to read" be securely underway for virtually all students by the end of the third grade.

No American school would knowingly withhold a vaccine from students that would prevent a childhood disease like measles. Yet this is, in effect, what is happening when it comes to the teaching of reading. Recent gains in our knowledge of the reading process have given us the tools to help the majority of students, including those with learning disabilities, to learn to read at the level required to function as effective individuals, workers, parents, and citizens in today's world. The challenge is to put this new knowledge in the hands of teachers, parents, and school administrators so that millions of American students who otherwise would fail to learn to read will gain access to this important skill.

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TIPS FOR PARENTS



*Ways to Help Your Child
With Learning Disabilities
Become a Better Reader*

Learning
to
Read

**Reading
to
Learn**



Tips for Parents

Ways to Help Your Child Become a Better Reader

Parents can have a strong positive influence on their child's reading. Research has shown that enjoying books with a child for even a few minutes a day can make a measurable difference in the acquisition of basic reading skills, and that everyday activities — such as a trip to the grocery store — can be turned into enjoyable learning experiences.

Following is a list of ways in which parents can encourage the development of the skills needed by children in order for them to become good readers.

Create Appreciation of the Written Word

- Find time to read aloud with your child every day. Typically, parents play an important role in developing this skill by reading to children and showing how important reading is to their daily life. Lap time with picture books and stories can strongly motivate your child to enjoy reading. Try to make these books available for your children to explore and enjoy on their own as well.

Develop Awareness of Printed Language

- Teach about books. When reading aloud to your child, let your child open the book and turn the pages. Point to the words as you read. Draw attention to repeated phrases, inviting your child to join in each time they occur.
- Point out letters and words that you run across in daily life. Make an obvious effort to read aloud traffic signs, billboards, notices, labels on packages, maps, and phone numbers. Make outings a way to encourage reading by showing your child how printed words relate to daily living.

Learn the Alphabet

- Play alphabet games. Sing the alphabet song to help your child learn letters as you play with alphabet books, blocks, and magnetic letters. Recite letters as you go up and down stairs or give pushes on a swing. A-B-C, dot-to-dot and letter-play workbooks, games, and puzzles are available at most toy stores. Many engaging computer games are designed for teaching children letters. Make sure these toys are available even when you are unable to play along.
- Watch "Sesame Street" with your child. Show the child how to sing along, answer the riddles, and engage actively in its fun.
- Make writing materials available to your child and encourage their use. Help your child learn to write his/her name and other important words or phrases. Gradually, help the child learn to write more and more letters. At first, most children find it easier to write uppercase letters.

Understand the Relation of Letters and Words

- Teach your child to spell a few special words, such as his/her name, "stop," or "exit." Challenge the child to read these words every place they are seen. Draw attention to these and other frequently occurring words as you read books with your child. Challenge the child to read these words as they arise or to search them out on



Tips for Parents

Ways to Help Your Child Become a Better Reader

a page. Play word-building games with letter tiles or magnetic letters. Have the child build strings of letters for you to read.

Understand That Language is Made of Words, Syllables, and Phonemes

- **Sing songs and read rhyming books.** Sing the alphabet with your child, and teach your child songs that emphasize rhyme and alliteration, such as "Willaby Wallaby Woo" and "Down By the Sea." Emphasize the sounds as you sing. Play rhyming games and clap out names. Jumble the wording or word order of familiar poems and challenge your child to detect the error. Talk like a robot, syllable by syllable.

- **Play word games.** Challenge your child to play with words. For example, ask your child to think of words that rhyme with "bat" or begin with /m/. What would be left if you took the /k/ sound out of "cat"? What would you have if you put these sounds together: /p/ and ickle; /m/ and ilk; and /s/, /a/, and /t/. Which of these words starts with a different sound -- "bag", "candy", "bike"? Do "boat" and "baby" start with the same sound?

Learn Letter Sounds

- **Sound out letters.** Point out other words that begin with the same letter as your child's name, drawing attention to the similarities of the beginning sound. Use alphabet books, computer games, or car games such as, "I'm thinking of something that starts with /b/" to engage the child in alliterative and letter-sound play. If you have a book that lends itself to alliteration and rhyme, such as a Dr. Seuss book, sound out rhyming words as you read or challenge the child to do so for you. Play word games that connect sounds with syllables and words. For example: If this spells "cat," how do you spell "hat"?

Sound Out New Words

- **Point out new words.** As you encounter them, say the sound while touching each letter in a new word. For example, say "s-u-n" and then blend sounds to create the word. In practicing new words, use predictable words with common sounds and spellings, like "fun" or "sat" instead of "night" or "saw."

If you encounter words with unknown meanings or with complex spellings, encourage your child to try to sound out the words. However, if too many words require this kind of attention and effort, it is best to find an easier book.

- **Play spelling games with your child.** After your child begins pronouncing words, encourage spelling by saying each sound in the words and then writing the letter that goes with the sound.

- **Encourage your child to spell.** After your child has learned to pronounce words, have the child say each sound.

- **Independent writing.** Encourage your child to use inventive or independent spelling. At this stage, the child will tend to omit letters and confuse letter names with letter sounds, producing such spellings as LFNT for elephant, BN for bean, and FARE



Tips for Parents

Ways to Help Your Child Become a Better Reader

for fairy. Use correction wisely. You should be most concerned about is the child's sensitivity to the sounds that need to be represented.

Identify Words in Print Accurately and Easily

- Help your children to read easy, enjoyable stories as often as possible. It is likely that your child will enjoy reading more and learn more from reading if you sit together, taking turns reading and encouraging discussion. In the beginning, invite the child to read well-chosen words. Gradually, as the child becomes able, take turns with sentences, speakers, paragraphs, and pages. At the end of each section or story, revisit those words that caused trouble. Rereading the entire story over several days, and again weeks later, is a powerful way to reinforce this learning.

Know Spelling Patterns

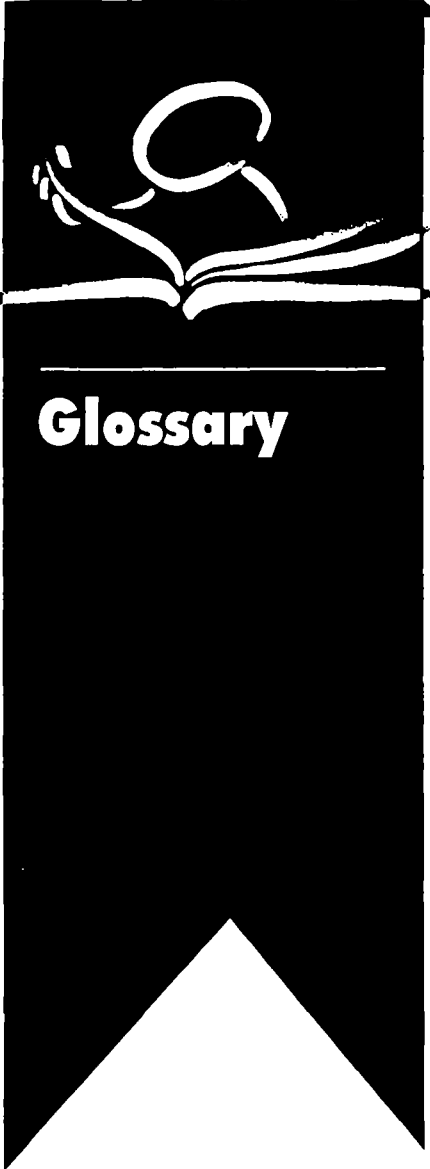
- Now it becomes useful to point out the similarities between words such as will, fill, and hill or light, night, and sight. This is also the time to help your child learn the correct spelling of the words he/she writes.

Learn to Read Reflectively

- Pause for discussions as you read. As you read stories to and with your child, stop frequently to discuss their language, content, and relevance to real life and other knowledge. Pause to explore the meanings of new words, using them in other sentences and contrasting what they mean with words that have similar meanings. Make an effort to revisit new words and concepts later, when the book has been put aside. When reading stories, pause to discuss the various characters, problems, events in the story, and invite your child to think about how the problems might be solved or to wonder about what might happen next. When resuming a story, ask your child to review what has happened so far, drawing attention to looming mysteries and unresolved conflicts. In reading expository text, invite the child to marvel at the creatures or events described and to wonder about details or connections not mentioned by the text.

- Above all: Read, read, and re-read

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PRINCIPLES FOR LEARNING TO READ

*Essential Skills for Children
With Learning Disabilities*



Learning
to
Read

**Reading
to
Learn**



Principles for Learning to Read:

*Helping Children
with Learning
Disabilities to Succeed*

Create Appreciation of the Written Word

Long before children are able to engage in reading themselves, they must feel that reading is something they would like to do. They must develop an appreciation of the pleasures of written language and of the many ways language is useful.

Develop Awareness of Printed Language

Children need to develop a basic sense of what print looks like and how it works. They must learn how to handle a book, which way to turn the pages, and that the printed words — not the pictures — tells the story when you read. Children should be taught that words are all around them — in newspapers, mail, billboards, signs, and labels — and have many different and valuable purposes.

Learn the Alphabet

Comfortable and early familiarity with letters is critical for learning to read. Children should learn the names of letters and to recognize and form their corresponding shapes.

Understand the Relation of Letters and Words

Children need to learn that printed words are made up of ordered strings of letters, read left to right. They should be helped to understand that when the combination or order of letters is changed, the word that is spelled also changes.

Understand That Language is Made of Words, Syllables, and Phonemes

The ability to think about words as a sequence of phonemes is essential to learning how to read an alphabetic language. Children should become aware of the building blocks of spoken language. They need to understand that sentences are made up of strings of separate words. They should become comfortable in hearing and creating rhymes. They should be led to play with the sounds of language until they can pull words apart into syllables, and pull syllables into individual phonemes.*

Learn Letter Sounds

Given a comfortable familiarity with letters and an awareness of the sounds of phonemes, children are ready to learn about letter-sound correspondence. The most important goal at this first stage is to help children understand that the logic of the alphabetic writing system is built on these correspondences.

* A phoneme is the smallest functional unit of speech. (The word "cat" contains three phonemes: the /k/, /a/, and /t/ sounds. Letters often represent more than one phoneme — the a in "cat" is a different sound than the a in "cake" — and sometimes a single letter will contain more than one phoneme. For example, the word "ox" has two letters but three phonemes, /o/, /k/ and /s/). Fluent readers learn to recognize these discrete sounds of spoken words quickly, accurately, and automatically. Phonemic awareness is the foundation on which all other reading skills are built.



Principles for Learning to Read:

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with Learning
Disabilities to Succeed*

Sound Out New Words

As children learn specific letter-sound correspondences, they should be challenged to use this knowledge to sound out new words in reading and writing. Making a habit of sounding out unfamiliar words contributes strongly to reading growth, not just for beginners, but for all readers. Children need to understand that sounding out new words can actually be a strategy for helping them unlock pronunciations of words they have never seen before, and can make what they are reading understandable.

Identify Words in Print Accurately and Easily

The ability to read with fluency and comprehension depends on recognizing most words almost instantly and effortlessly. Once the framework for a new word or spelling has been laid, through sounding and blending, the key to recognizing it quickly and easily is practice. The most useful practice is reading and rereading of meaningful text made up of words the child has been taught to sound out. For beginners, such reading helps most if it is relatively easy. As a rule of thumb, no more than one in 20 words should cause trouble.

Know Spelling Patterns

As children become reasonably capable of sounding out words in reading and spelling, it is important that they notice the similarities in their spellings. Awareness of spelling patterns that recur across words hastens progress in reading and writing, and weak knowledge of spelling is an impediment to mature readers.

Learn to Read Reflectively

Although the ability to sound out words is essential for learning to read, it is not enough. Written language is not just speech written down. Instead, text brings new vocabulary, new language patterns, new thoughts, and new modes of thinking. To enjoy and profit from reading, children must also learn to take the time to reflect on these aspects of text.

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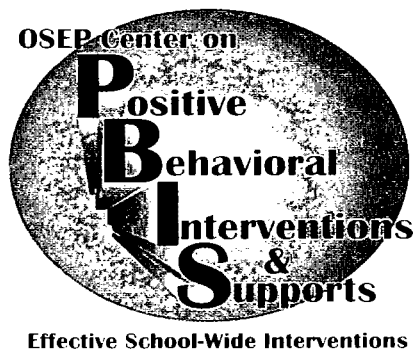
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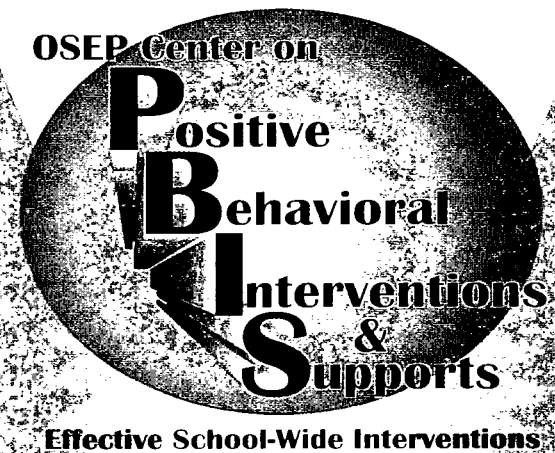
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See the PBIS Web Page for
Information about:

- ✓ Positive Behavioral Interventions and Support
- ✓ Functional Behavioral Assessment
- ✓ School-wide Positive Behavior Support
- ✓ Individual Student Support Systems
- ✓ Workshops and Inservices
- ✓ Links to other PBS-related Links
- ✓ Research Bibliography

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A National Technical Assistance Center

University of Oregon
University of Kansas
University of Kentucky
University of Missouri
University of South Florida

Supported by the U. S. Office of
Special Education Programs



Mission

The Center has been established by the Office of Special Education Programs, U. S. Department of Education, to give schools capacity-building technical assistance for adopting and sustaining effective school-wide disciplinary practices.

Schools Using Positive Behavioral Interventions Will Build Their Capacity To

- ✓ Address behavioral challenges.
- ✓ Diminish disruptions that impede teaching and learning.
- ✓ Create teaching and learning communities that establish and sustain positive and safe school climates.
- ✓ Reclaim instructional time lost to behavioral disruptions.

Activities/Products

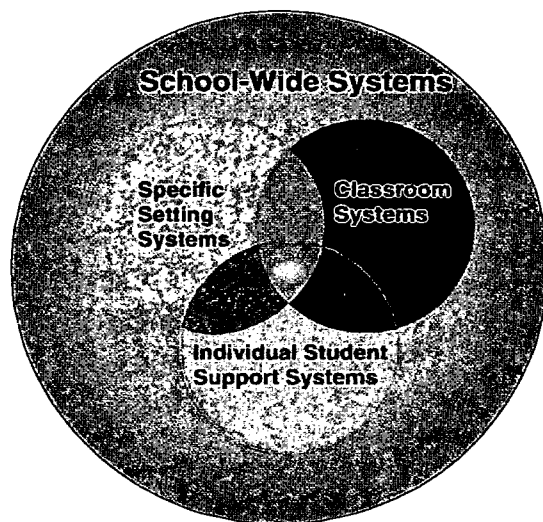
Policy Guidelines for the Design of school-wide discipline and behavior support systems.

Networks for Information exchange with administrators, educators, families, and researchers.

Research-Validated Procedures related to:

- ✓ School-wide discipline systems
- ✓ Classroom and nonclassroom management
- ✓ Individual student behavior management
- ✓ Functional assessment-based behavior support planning
- ✓ Social skills and self-management instruction
- ✓ Systems change and maintenance
- ✓ Safe schools
- ✓ Discipline and behavior support policy
- ✓ Family, school, and community partnerships

State, District, and School Exemplars of school-wide behavior support practices and systems.



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- Council for Exceptional Children
- National Association of State Directors of Special Education
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SCHOOLWIDE APPROACHES TO BEHAVIOR

Several years ago, the main office at Fern Ridge Middle School in Elmira, Oregon processed over 7,000 discipline referrals in a single school year—sometimes more than 100 a week. Administrators and teachers realized that their school had become a negative learning environment for both teachers and students. These educators, determined to “save their school,” came together to implement a schoolwide system of behavior in order to more proactively manage discipline at their school.

The data on office referrals suggested that the traditional set of consequences currently in use was not bringing about the desired changes in student behavior. To address this problem, the School Climate Committee (SCC) was formed. The committee worked with school staff to draft a set of behavioral expectations across school settings, targeting in particular those identified as most troublesome. This led to the development of a plan to teach students these expectations and the skills needed to meet them.

Once the staff had initiated implementation, the SCC continued to monitor progress. New data suggested additional modifications, such as the need for a new program to teach seventh and eighth graders how to avoid conflict. By the end of the next school year, the SCC reported that office referrals for discipline were down to by nearly 75 percent. It was clear that the project was having a positive effect on behavior and learning.

Introduction

Schoolwide Approaches to Behavior are designed to establish high expectations and provide support for socially appropriate behavior. They reinforce positive behavior and establish appropriate consequences for problem behavior. Schoolwide approaches include school staff, students, and families in the development, discussion, and implementation of rules and consequences. The goal of schoolwide approaches is to create and maintain a positive learning environment for all students.

Why This Approach is Important

The opportunities for inappropriate behaviors that may result in violence are greater in schools that do not implement schoolwide behavior programs. A growing number of schools have found that the most effective way to reduce suspensions, expulsions, office referrals, and other behaviorally related actions is to emphasize a schoolwide commitment and approach to behavior. Such approaches focus on using proactive measures to prevent problem behaviors from occurring and effectively and efficiently addressing the minimal problem behaviors that occur.

Key Principles of Practice

- Safe schools develop and consistently enforce schoolwide rules that are clear, broad-based, and fair.

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- Effective schoolwide behavior systems are simple, proactive, positive and are applied consistently across all school settings.
- Rules and disciplinary procedures are developed collaboratively by school staff, families, students, and community representatives. Rules for student behavior should be posted throughout the school and should be referenced and reinforced frequently by all staff.
- Schoolwide disciplinary policies include a code of conduct, specific rules, and consequences that can accommodate student differences.
- Effective schoolwide approaches ensure that the cultural values and educational goals of the community are reflected in the rules.
- Supports are provided throughout the school and within classrooms to implement the rules.
- Schoolwide programs can incorporate peer mediation and conflict resolution to promote a climate of nonviolence.
- Safe schools evaluate the physical environment to ensure that the campus is safe and secure.
- Students know and can explain expectations for behavior as well as the incentives and consequences associated with adherence to or violation of those expectations.

Where To Go For More Information

Office of Special Education Programs

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The OSEP Center on Positive Behavioral Interventions and Supports (PBIS)

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SOCIAL SKILLS INSTRUCTION

Hector, a six-year-old Hispanic child, attended kindergarten in his neighborhood school. His teacher was concerned about Hector's inappropriate social behaviors. She reported that he was prone to sudden mood swings and often got into arguments or fights, both during class as well as on the school playground. Early in first grade, Hector participated in a new behavioral program that stressed specific social skills to improve his competence in such areas as listening, answering questions, managing his anger, and getting along with other children and adults. He was also asked to work cooperatively with three other students to observe, firsthand, other children behaving appropriately in class each day. By the end of first grade, there had been a dramatic change in Hector's behavior at school. He now was able to control his anger, avoid fights, and play more cooperatively with his classmates.

Introduction

Social Skills Instruction teaches students appropriate interpersonal communication skills, self-discipline, and problem solving skills. It combines a number of strategies to prevent and replace problem behaviors, and increase skills and behaviors leading to social competence. It is most effective when it becomes a part of the daily academic curriculum and is implemented on a classwide and schoolwide basis.

Why This Issue is Important

The ability of children to interact effectively with peers, teachers, and families is crucial to their social-behavioral development and adjustment at school. Further, poor social-behavioral skills correlate highly with children's low academic achievement, especially their reading ability. Children with antisocial behavior patterns are at early risk of poor adjustment to school.

Key Principles of Practice

Children learn social skills as they grow and develop. These skills are acquired and demonstrated in a broad social context—the home, school, and community. Schools are ideal settings for teaching social skills because of their accessibility to children, teachers, and families.

Below are recommendations for enhancing schools' ability to improve the social competence of students.

- Implement social skills programs to establish a positive learning and teaching environment for all students and school staff across all school settings. This means exposing the entire school to a social skills curriculum.
- Integrate social skills instruction into the school curriculum. *Formal* social skills instruc-

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tion should be planned, focused, and scheduled within all teaching and learning activities. *Informal* social skills instruction takes advantage of naturally occurring opportunities to teach appropriate social behavior such as in the hallways or in the cafeteria.

- Match the intensity of social skills instruction with the intensity and type of social skills problem.
- Incorporate strategies in all social skills interventions to facilitate the generalized use of social skills. The success of social skills instruction should be judged on the degree to which students use acquired social skills across settings, people, and time.
- Evaluate the success of social skills based on the: (a) accuracy and fluency with which a student can display a skill, (b) degree to which peer and adult acceptance is enhanced; and (c) degree to which significant adults judge the student positively.
- Make social skill assessments and interventions culturally relevant. Culturally relevant factors, such as ethnicity and race, influence the student's social behavior as well as the social environment in which those behaviors are performed.

Where To Go For More Information

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POSITIVE BEHAVIORAL INTERVENTIONS AND SUPPORTS

Sam is an 11-year-old child with autism who was unable to concentrate either in the classroom or at home. Violent outbreaks and the inability to communicate effectively characterized her behavior. A network of parents, therapists, teachers, and students gathered around Sam to identify her problem, assess her needs, and develop an effective solution to meet her needs.

The team decided that the Positive Behavioral Intervention and Support process could help Sam. First, Sam's daily life was carefully observed in order to identify a set of triggers that led to Sam's problem behavior. Second and most importantly, a positive behavioral support plan was developed to avoid this behavior and to encourage positive social skills. The plan created a new "environment" that consisted of a varied group of people, an inclusive classroom, a relaxation room, a daily schedule and academic adaptations.

The program led to great improvements in her behavior. The team successfully designed preventative measures, direct instruction methods, self-management skills, and crisis management strategies that helped her transform her negative behaviors into positive social interactions and academic connections. Over time she was able to be less dependent on her aide, attend to tasks, concentrate her attention on the classroom teacher, and be more like her peers.

Introduction

Positive Behavioral Interventions and Supports (PBIS) is an application of a behaviorally-based systems approach. It is based on research regarding behavior in the context of the settings where it occurs. Schools, families, and communities work with this approach to design effective environments to improve behavior. Such environmental interventions, in turn, serve to make problem behavior less effective, efficient, and relevant and desired behavior more functional. In addition, the use of culturally appropriate interventions is emphasized.

Why this Approach is Important

The use of PBIS emerged 12 years ago as an alternative to more traditional behavior approaches for students with severe disabilities who engaged in self-injury and aggressive behavior. PBIS has since emerged as a tool to be used with all children—with and without disabilities—to achieve long-term positive social behavior. PBIS is a powerful tool that all schools and families can use as they address issues related to troubling behavior and create effective learning environments.

Key Principles of Practice

- The difference between PBIS and traditional approaches is that PBIS focuses on changing the environment while traditional approaches focus primarily on changing the person.

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- A key component of PBIS is a functional behavioral assessment (FBA). The FBA includes the observations and input of people close to the person exhibiting problem behavior. This team observes the person's behavior to identify and define the problematic behavior, what actions or events precede the behavior, those that follow the behavior, how often the behavior occurs, what actions or events precede the behavior and those that follow the behavior. The FBA serves as an important part of the process in determining appropriate positive behavioral support plans.
- The Individuals with Disabilities Education Act (IDEA) requires that, at a minimum, the FBA be conducted when disciplinary sanctions result in extended periods (i.e. either before or not later than 10 business days after either the first removal beyond 10 cumulative school days in a school year or commencing a removal that constitutes a change in placement) in which a student is removed from school.
- PBIS components are implemented in schools, homes, and communities. Families, educators and other professionals administer the program.
- PBIS can be used for individual students with chronic behavior difficulties and with entire schools.
- The goal of PBIS is to eliminate problem behavior, to replace problem behavior with more appropriate behavior, and to increase a person's skills and opportunities for an enhanced quality of life.
- PBIS is effective. Schools and individuals that implemented PBIS have demonstrated effective results

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FUNCTIONAL BEHAVIORAL ASSESSMENT

Felix is an inquisitive, resourceful 15-year-old high school student with traumatic brain injury. He has struggled academically and behaviorally for years. In middle school, when presented with a difficult or complex assignment, he would frequently whine, stomp his feet, or hit his teacher or another student. When reprimanded, Felix would often run out of the room and, on several occasions, left the school grounds without permission.

Instead of removing Felix from his neighborhood school, the school personnel conducted a functional behavioral assessment to evaluate the reasons for his problem behavior. The team determined that Felix acted inappropriately when he was frustrated with the academic demands. Therefore, the school revised his academic program to meet his individual needs. This included an adapted curriculum with individual and small group tutoring and a revised behavioral support program. The last two years of middle school were a great success for Felix, his family, and school staff.

Introduction

Functional Behavioral Assessment (FBA) is an integral component of designing effective behavior support plans. FBA is a systematic process for describing problem behavior, and identifying the environmental factors and surrounding events associated with problem behavior. This information is used to identify and teach more appropriate replacement behaviors and to develop an effective plan for reducing the frequency or severity of the problem behavior.

Why This Approach is Important

The Individuals with Disabilities Education Act (IDEA) requires that, at a minimum, the FBA be conducted when disciplinary sanctions result in extended periods (i.e. either before or not later than 10 business days after either the first removal beyond 10 cumulative school days in a school year or commencing a removal that constitutes a change in placement) in which a student is removed from school. In addition to the IDEA requirements, the FBA gives schools valuable information about the possible causes of problem behavior. Research demonstrates that the process of positive behavioral interventions and supports (PBIS) and developing behavioral support plans is more effective when the FBA is conducted prior to developing interventions. The FBA is used to a) define the problem behaviors, b) describe the settings under which problem behaviors are and are not likely to be observed, c) identify the function (the why) of the problem behaviors, and d) collect information from direct observation to support these outcomes.

Key Principles of Practice

While there are a variety of techniques available to conduct a functional behavioral assessment, all FBA processes as a general matter, based on research, include the same basic steps:

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- *Collect Information* through informal consultation as well as direct observation. Conversations, questionnaires, checklists, and structured interviews with key persons (e.g., teachers, parents, the student) who have contact and experiences with the individual student can offer insights into the contexts or conditions under which the behavior occurs. Direct observations should also be made, so that observers can watch the behaviors as they are occurring and note the environmental events (environmental factors, antecedent and consequence events) that may initiate or sustain the behaviors. Specific, concrete behaviors are defined after observational assessments have been performed.
- *Propose Testable Explanations* of the student's behavior. A testable explanation is a hypothesis that may explain the relationship between a problem behavior and environmental factors that seem to be associated with its occurrences. Variables observed may include settings or circumstances that seem either to lead to the problem behavior or reinforce it after the fact. The hypothesis should consider the possible functions of the behavior for the student.
- *Assess the Validity of Your Hypotheses* to confirm the validity of the testable explanations. In general, additional information is collected about the conditions under which the problem behavior occurs and does not occur. This information should demonstrate that occurrences of the behavior and the presence of these conditions are related and predictable.
- The results of the FBA should be used to develop an effective and efficient behavioral intervention/support plan.
- Although the FBA term was introduced formally in the IDEA '97, there has been a strong history of using FBA for reducing behavioral problems. It is a critical tool for developing effective behavior intervention/support plans.

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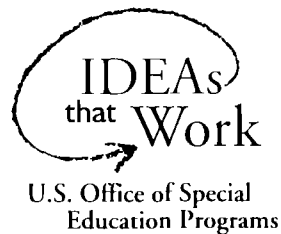
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POSITIVE BEHAVIOR SUPPORT AS AN APPROACH FOR DEALING WITH PROBLEM BEHAVIOR IN PEOPLE WITH DEVELOPMENTAL DISABILITIES: A RESEARCH SYNTHESIS

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EXECUTIVE SUMMARY

Background and Purpose

Problem behaviors (aggression, self-injury, tantrums, property destruction, etc.) have long been barriers to successful education, socialization, employment, and community adaptation. Positive Behavior Support (PBS) involves applying behavioral principles within community norms to reduce problem behaviors and build appropriate behaviors that result in durable behavioral changes and, just as important, an improved lifestyle. The key to PBS is that, to remedy problem behavior, it is necessary first to remedy deficient contexts.

There are two kinds of deficient contexts: environmental conditions and behavior repertoires. Deficient environmental conditions include features such as unpredictable schedules, lack of choice, inadequate teaching strategies, and poorly designed physical spaces. Deficient behavior repertoires include inadequate or absent skills in communication, self-management, socialization, and other functional skills. There has been much recent discussion of the strong association between these two types of deficiencies, leading to the conclusion that problem behavior often can be addressed by environmental redesign and instruction on adaptive skills.

Since all strategies for remedying deficient environmental conditions involve manipulating stimuli (e.g., curriculum materials and daily living routines), they are referred to as stimulus-based interventions. Likewise, since all strategies for improving deficient behavior repertoires involve a systematic and targeted application of reinforcement, they are referred to as reinforcement-based interventions.

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The purpose of this report is to synthesize the research on PBS between 1985 and 1996. The research synthesis provides an analysis of the existing PBS research database (109 published articles, with data on 230 participants, met the criteria for inclusion); compares that database with current clinical needs in the field; and suggests future directions for research, practice, and policy. The focus is on the application of behavior support for people with developmental disabilities and autism from early childhood to adulthood.

Findings

There were five research questions posed as the core of this review of the literature on PBS research. Those questions, and the key findings associated with each, follow.

How widely applicable is PBS?

- The approach is widely applicable to people with severe disabilities (e.g., mental retardation and autism) who exhibit severe behavior problems (e.g., aggression and self-injury) as well as those with mild to moderate disabilities.
- The approach can be applied by typical intervention agents (those persons who would normally be the primary support people or caregivers in a community, such as parents, teachers, and job coaches) in typical settings (homes, community, and integrated schools). Its use is not restricted to involvement of highly trained professionals, such as psychologists and researchers (atypical intervention agents), even though that is often still the case.

In what ways is the field evolving?

- PBS is not merely a passing fad. It has been showing steady and dramatic growth, especially during the 12-year period reviewed.
- Successful outcomes involving the most severe problem behavior (e.g., self-injury and multiple problem behaviors) have become more numerous.
- Generally, typical and atypical intervention agents are about equally likely to conduct PBS intervention in research reports. Also, although atypical intervention settings (e.g., segregated schools and medical clinics) are more likely to be the venue for intervention, the trend toward the use of typical settings is on the upswing.
- There has been a dramatic upward trend in the use of functional assessment prior to planning intervention.
- Both formal functional analysis and informal functional assessments have become more numerous.
- Repeated assessments have remained uncommon; however, when they do occur, they are more likely to be carried out by typical intervention agents in typical settings.
- Stimulus-based intervention has gradually become more common than reinforcement-based intervention.
- Interventions combining stimulus-based and reinforcement-based strategies do not show an increasing trend; however, when they do occur, they are more likely to be carried out by typical intervention agents in typical settings.
- With respect to systems change, significant others (parents, teachers, job coaches, etc.) are increasingly likely to alter their behavior as part of the intervention. No trend is seen, however, for environmental reorganization, a critical aspect of systems change.

(continued)

- Intervention in all relevant contexts does not show a trend; however, when it does occur, it is most likely to be done by typical intervention agents in typical settings.
- There is an upward trend in outcomes associated with short-term maintenance (five months or less) but none for longer-term maintenance.
- Outcomes associated with generalization (the degree to which intervention effects transfer to other situations), life-long change, and social validity (determined by parents, teachers, and job coaches) show no trends and are few.

How effective is PBS?

- Modest to substantial increases in positive behavior are typically observed following the application of PBS intervention.
- With respect to reduction in problem behavior, about one-half the reported cases (using criterion of 90 percent or more decrease in problem behavior from baseline) to two-thirds (using an 80% reduction criterion) are successful.
- Typically, the success rate does not change as a function of whether stimulus-based intervention and reinforcement-based intervention are used alone or in combination with one another, nor does it change when non-PBS interventions are added.
- With respect to the degree that intervention effects were documented to last over time (maintenance), about two-thirds of the outcomes are successes (using a 90 percent reduction criterion). However, the database is small and gets smaller as the duration of follow-up is lengthened.
- There are demonstrations of successful lifestyle change and good social validity (where parents, teachers, and job coaches perceive the intervention and its effects to be worthwhile). However, these data are reported only for a small minority of outcomes.
- PBS works just as effectively with individuals with multiple disabilities as compared to those with a single disability.
- PBS is just as effective for individuals with complex disabilities as compared to those with less complicated disabilities.

What factors modulate the effectiveness of PBS?

- Interventions for combinations of problem behavior were associated with lower success rates than intervention for single types of problem behavior.
- The success rate (using a 90 percent reduction criterion) for interventions based on a prior functional assessment was almost twice that obtained for when this type of assessment was not conducted.
- The success rate (90 percent criterion) was greater following interventions that involved systems change such as environmental reorganization and change in the behavior of those typically involved with the individual with a disability.
- The success rate (90 percent criterion) associated with those typically involved with the individual with a disability was higher than that obtained with those who do not have ongoing relations with the individual.

How responsive is the PBS literature to the needs of consumers (nonresearchers)?

- Comprehensive lifetime support is a major goal of families, but the database rarely addressed this issue.
- Families are most concerned with long-term behavior change. The database, in a minority of cases,

demonstrated such change. However, no outcomes involved follow-up of longer than two years, whereas most families think of maintenance in terms of decades rather than months.

- Consumers (e.g., parents and teachers) judge interventions in terms of their practicality and relevance, and are concerned with how well intervention plans mesh with the realities of the complex social systems in which the consumers must function.
- Consumers are concerned with obtaining support for themselves in addition to support for people with disabilities. This topic was not a focus of systematic research in the studies included in the database.

Recommendations

Below are brief recommendations for advancing the field of PBS, looking at the areas of research priorities, service provision, social policy, and government action.

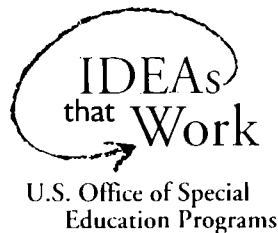
Researchers: Researchers need a new applied science. For a truly applied science to develop, researchers should address consumer needs more systematically and frequently. A robust applied science will require changes in assessment and intervention practices, a redefinition of what constitutes a significant outcome, and measurement procedures that address these new priorities.

Service providers: Service providers must fix problem contexts, not problem behavior. That is, whenever problem behavior is identified, service providers should structure intervention to reflect a knowledge (from functional assessment) of what is wrong with the individual's environment and skill repertoire. Then, redesigning the environment and enhancing the individual's adaptive skill repertoire will strengthen positive behavior while decreasing problem behavior.

Social policy: Regulations that define quality of services need to mandate standards of best practice. These standards include repeated functional assessments that identify the environmental and behavioral deficiencies; linkage between functional assessments and the design of interventions; consideration of the long-term perspectives of consumers; and definition of outcome goals in terms of comprehensive lifestyle change and support, not just reduction of problem behavior.

Government: Resources should be invested to ensure the continued development and evaluation of a truly applied science of PBS that is sensitive to consumer needs. Also, government can develop grant competitions, create a nationally accessible database on PBS, and convene periodic conferences on PBS.

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REGIONAL INTERVENTION PROGRAM (RIP)

Introduction

Aggressive and problem behavior in children can cause great distress on the part of parents, caregivers, teachers, and other adults who live and work with such children. Physical aggression, destruction of property, lying and defiance evoke frustration and anguish. Left untreated, symptoms of problem and aggressive behaviors appearing in early childhood are often associated with later juvenile delinquency, gang membership and adult incarceration.

Children with severe problem behavior are not only the perpetrators but also the victims of their own behavior. Such children may be rejected by their peers, receive frequent punishment by the adults in their lives, suffer from unpleasant and dysfunctional family relationships, and experience failure in school. Moreover, if such behaviors continue into adolescence, these children are much more likely than others to drop out of school, to abuse drugs and alcohol, and to become involved in juvenile delinquency. When they reach adulthood, they are at higher risk of fatal accidents, alcoholism, drug addiction, unemployment, divorce, incarceration, psychiatric illness, and early death.

Research shows that aggression in young children tends to persist strongly over time unless successful intervention takes place before the end of third grade. Early intervention, focused on changing parent-child interaction patterns, has been found to be an effective strategy for resolving these early behavioral problems.

The Regional Intervention Program

The Regional Intervention Program (RIP) is a parent-implemented program for families with concerns about their young child's behavior. The program trains family members to work directly with their own children.

Parents are taught to:

- Carefully monitor their child's activities
- Ignore problem behavior and reward desired behaviors
- Help their child to set self-management goals
- Work with other meaningful adults in the child's life to reinforce new styles of interaction
- Enlist support from family and community for the child and themselves

Strategies for Parents:

- State expectations in advance
- Catch your child being good

(over)

- Present limited, reasonable choices
 - Say “when” (state the behavior the child is expected to complete and the privilege that will be earned when completed - avoid begging, bribing or threatening)
 - Stay in control (of yourself)
 - Wait for neutral time
- Parents learn through repeated direct practice and feedback. They also participate by supporting new parents as they join the program.
 - A classroom component teaches children appropriate behavior for success in school.
 - A social skills component teaches children to get along with others.
 - Childcare and preschool staff may also receive consultation for dealing with problem behaviors.

The RIP Adult Follow-up Study

Researchers are in the final stages of a long-term study to evaluate the effects of the strategies used in the RIP program. Findings to date indicate that these strategies are effective and enduring in altering the behavior of children with problem and aggressive behavior as well as in changing the nature of interactions between parents and children.

As preschoolers, the children in this study had exhibited severe and prolonged tantrums, continual opposition to adults' requests and commands, and physical aggression toward their parents. Many of the parents were at a loss as to what to do; nothing in their ordinary repertoires of discipline seemed to work.

After completing the intervention program through RIP, these children and their families have been transformed. Now adults in their mid-twenties and early thirties, these children have by and large gone on to lead full and productive lives. All but one completed high school and a large fraction went on to college and graduate school. All but one (the same one who dropped out of high school) are currently employed. During their adolescence, one experimented with illegal drugs (marijuana) and one (the high school dropout) was involved in the justice system for theft. None of them was identified for special education or as emotionally disturbed. There were no reports of any of these children ever engaging in aggression toward parents, peers or teachers after completing the program. After 25 years, most parents reported that the program had helped improve parent-child interactions; that they had learned to use the strategies at home and in public places; that they had been able to teach them to other meaningful adults in the child's life; and that their family's needs had effectively been addressed.

The parents of most of these adult children describe them as caring, loving, and sensitive in their relationships. Many of them also report their children's increased self-confidence, lower family stress, and fewer feelings of guilt and hopelessness. They now express optimism and a positive outlook for the future.

Earlier Findings on RIP Clients

When these same adults were only 3 to 9 years away from intervention, home observations indicated that as children they:

(continued)

- complied with parental requests 82 percent of the time
- interacted positively with their parents 97 percent of the time

In-school observations, grades 2-8, showed that former RIP participants:

- were appropriately engaged an average of 90 percent of unstructured time
- were appropriately engaged in class work an average of 85 percent of structured time
- responded positively to teachers' requests 89 percent of the time
- behaved in a fashion that could not be distinguished from class peers with no problem history.

In general, the earlier children enrolled in RIP, the more positive was the impact on behavior, both in school and at home. Results did not seem to be influenced by the child's sex, race, birth order, number of siblings, family income, mother's education, or years away from RIP.

Regional Intervention Program (RIP)

3411 Belmont Blvd.

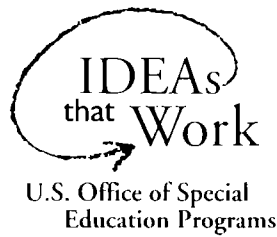
Nashville, TN 37215

615-963-1177 phone

615-963-1178 fax

RIPExp@aol.com email

<http://members.aol.com/RIPNASHTN/RIP.htm> web site



OSEP CENTER ON POSITIVE BEHAVIORAL INTERVENTIONS & SUPPORTS

Effective School-Wide Interventions

Purpose

The Center was established by the Office of Special Education Programs, U.S. Department of Education to give schools capacity-building information and technical assistance for identifying, adapting, and sustaining effective schoolwide behavioral practices. The Center has two main areas of focus:

- To spread the word to schools, families, and communities about schoolwide positive behavioral interventions and support.
- To demonstrate at the level of individual students, schools, districts, and states that schoolwide positive behavioral interventions and support are feasible and effective.

Objectives

By addressing this purpose, the Center expects to:

- Enhance schools' capacity to address a diverse range of behavioral challenges.
- Diminish disruptions that impede teaching and learning.
- Create teaching - learning communities that establish and sustain positive school climates.
- Reclaim instructional time previously lost to behavioral disruptions.
- Maximize use of time and learning opportunities.
- Enhance the quality and efficiency of instruction.

Content

The Center identifies and disseminates schoolwide disciplinary practices and systems shown by research to foster positive learning and teaching environments. A sample of this content includes:

- Schoolwide discipline systems
- Classroom management
- Non-classroom behavior management (e.g., hallways, buses, etc.)
- Individual student behavior management

(over)

- Use of functional assessments
- Behavior support planning
- Social skills self-management instruction
- Monitoring and maintaining change
- Safe schools
- Family, school, and community partnerships

Activities

The Center engages in a full range of dissemination, development, and demonstration activities:

- Dissemination (research reviews, training modules, program/practices descriptions, experts network, etc.)
- Development and Demonstration (technical assistance, consultation, experts network, site development, etc.)

The Center is providing technical assistance and working with over 400 schools in Arizona, California, Florida, Hawaii, Illinois, Kansas, Kentucky, Maryland, Missouri, Nebraska, Oregon, and Pennsylvania.

Organization

The Center is funded by a grant from the U.S. Department of Education, Office of Special Education Programs, with additional funding from Office for Safe and Drug Free Schools and is administered from the University of Oregon in Eugene. Four additional partners are involved: University of Kansas, University of Kentucky, University of Missouri and University of South Florida.

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POSITIVE BEHAVIOR SUPPORT AS AN APPROACH FOR DEALING WITH PROBLEM BEHAVIOR IN PEOPLE WITH DEVELOPMENTAL DISABILITIES: A RESEARCH SYNTHESIS

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EXECUTIVE SUMMARY

Background and Purpose

Problem behaviors (aggression, self-injury, tantrums, property destruction, etc..) have long been barriers to successful education, socialization, employment, and community adaptation. Positive behavior support (PBS) involves applying behavioral principles within community norms to reduce problem behaviors and build appropriate behaviors that result in durable behavioral changes and, just as important, an improved lifestyle. The key to PBS is that, to remedy problem behavior, it is necessary first to remedy deficient contexts.

There are two kinds of deficient contexts: environmental conditions and behavior repertoires. Deficient environmental conditions include lack of choice, inadequate teaching strategies, poorly selected daily routines, among others. Deficient behavior repertoires include inadequate or absent skills in communication, self-management, socialization, and other

functional skills. There has been much recent discussion of the strong association between these two types of deficiencies, leading to the conclusion that problem behavior can be effectively addressed by focusing on the assessment and remedying of contexts.

Since all strategies for remedying deficient environmental conditions involve manipulating stimuli (e.g., curriculum materials and daily living routines), they are referred to as stimulus-based interventions. Likewise, since all strategies for improving deficient behavior repertoires involve a systematic and targeted application of reinforcement, they are referred to as reinforcement-based interventions.

The purpose of this report is to synthesize the research on PBS between 1985 and 1996. The research synthesis provides an analysis of the existing PBS research database (109 published articles, with data on 230 participants, met the criteria for inclusion); compares that database with current clinical needs in the field; and suggests future directions for research, practice, and policy. The focus is on the application of behavior support for people with developmental disabilities and autism from early childhood to adulthood.

FINDINGS

There were five research questions posed as the core of this review of the literature on PBS research. Those questions, and the key findings associated with each, follow.

How widely applicable is PBS?

- The approach is widely applicable to people with severe disabilities (e.g., mental retardation and autism) who exhibit severe behavior problems (e.g., aggression and self-injury) as well as those with mild to moderate disabilities.
- The approach can be applied by typical intervention agents (those persons who would normally be the primary support people or caregivers in a community, such as parents, teachers, and job coaches) in typical settings (homes, community, and integrated schools). Its use is not restricted to involvement of highly trained

professionals, such as psychologists and researchers (atypical intervention agents), even though that is often still the case.

In what ways is the field evolving?

- PBS is not merely a passing fad. It has been showing steady and dramatic growth, especially during the 12-year period reviewed.
- Outcomes involving the most severe problem behavior (e.g., self-injury and multiple problem behaviors) have become more numerous.
- Generally, typical and atypical intervention agents are about equally likely to conduct PBS intervention. Also, although atypical intervention settings (e.g., segregated schools and medical clinics) are more likely to be the venue for intervention, the trend toward the use of typical settings is on the upswing.
- There has been a dramatic upward trend in the use of functional assessment prior to planning intervention.
- Both formal functional analysis and informal functional assessments have become more numerous.
- There is an increasing focus on escape-motivated problem behavior as well as on problem behaviors with multiple motivations.
- Repeated assessments have remained uncommon; however, when they do occur, they are more likely to be carried out by typical intervention agents in typical settings.
- Stimulus-based intervention has gradually become more common than reinforcement-based intervention.
- Interventions combining stimulus-based and reinforcement-based strategies do not show an increasing trend; however, when they do occur, they are more likely to be carried out by typical intervention agents in typical settings.
- With respect to systems change, significant others (parents, teachers, job coaches, etc.) are increasingly likely to alter their behavior as part of the intervention. No trend is seen, however, for environmental reorganization, a critical aspect of systems change.
- Intervention in all relevant contexts does not show a trend; however, when it does occur, it is most likely to be done by typical intervention agents in typical settings.
- There is an upward trend in outcomes associated with short-term maintenance (five months or less) but none for longer-term maintenance.

- Outcomes associated with generalization (the degree to which intervention effects transfer to other situations), life-long change, and social validity (determined by parents, teachers, and job coaches) show no trends and are few.

How effective is PBS?

- Modest to substantial increases in positive behavior are typically observed following the application of PBS intervention.
- With respect to reduction in problem behavior, about one-half to two-thirds of the outcomes are successes (using a criterion of 90 percent or more versus 80 percent or more decrease, respectively, in problem behavior from baseline).
- Typically, the success rate does not change as a function of whether stimulus-based intervention and reinforcement-based intervention are used alone or in combination with one another, nor does it change when non-PBS interventions are added.
- With respect to the degree that intervention effects were documented to last over time (maintenance), about two-thirds of the outcomes are successes (using a 90 percent reduction criterion). However, the database is small and gets smaller as the duration of follow-up is lengthened.
- There are demonstrations of successful lifestyle change and good social validity (where parents, teachers, and job coaches perceive the intervention and its effects to be worthwhile). However, these data are reported only for a small minority of outcomes.
- PBS works just as effectively with individuals with multiple disabilities as compared to those with a single disability.
- PBS is just as effective for individuals with complex disabilities as compared to those with less complicated disabilities.

What factors modulate the effectiveness of PBS?

- Intervention for combinations of problem behavior produces lower success rates than intervention for single types of problem behavior.
- The success rate (using a 90 percent reduction criterion) for interventions based on a prior functional assessment was almost twice that obtained for when this type of assessment was not conducted.
- The success rate (90 percent criterion) was greater following interventions that involved systems change such as environmental reorganization and change in the behavior of those typically involved with the individual with a disability.

- The success rate (90 percent criterion) associated with those typically involved with the individual with a disability was higher than that obtained with those who do not have ongoing relations with the individual.

How responsive is the PBS literature to the needs of consumers (nonresearchers)?

- Comprehensive lifetime support is a major goal of families, but the database rarely addressed this issue.
- Families are most concerned with long-term behavior change. The database, in a minority of cases, demonstrated such change. However, no outcomes involved follow-up of longer than two years, whereas most families think of maintenance in terms of decades rather than months.
- Consumers (e.g., parents and teachers) judge interventions in terms of their practicality and relevance, and are concerned with how well intervention plans mesh with the realities of the complex social systems in which the consumers must function.
- Consumers are concerned with obtaining support for themselves in addition to support for people with disabilities. This topic was not a focus of systematic research in the studies included in the database.

RECOMMENDATIONS

Below are brief recommendations for advancing the field of PBS, looking at the areas of research priorities, service provision, social policy, and government action.

Researchers: Researchers need a new applied science. For a truly applied science to develop, researchers should address consumer needs more systematically and frequently. A robust applied science will require changes in assessment and intervention practices, a redefinition of what constitutes a significant outcome, and measurement procedures that address these new priorities.

Service providers: Service providers must fix problem contexts, not problem behavior. That is, whenever problem behavior is identified, service providers should structure intervention to reflect a knowledge (from functional assessment) of what is wrong with the individual's

environment and skill repertoire. Then, redesigning the environment and enhancing the individual's adaptive skill repertoire will strengthen positive behavior while decreasing problem behavior.

Social policy: Regulations that define quality of services need to mandate standards of best practice. These standards include repeated functional assessments that identify the environmental and behavioral deficiencies; linkage between functional assessments and the design of interventions; consideration of the long-term perspectives of consumers; and definition of outcome goals in terms of comprehensive lifestyle change and support, not just reduction of problem behavior.

Government: Resources should be invested to ensure the continued development and evaluation of a truly applied science of PBS that is sensitive to consumer needs. Also, government can develop grant competitions, create a nationally accessible database on PBS, and convene periodic conferences on PBS.

Guidelines for Revisions to the “Literacy of American Adults with Diverse Language Backgrounds” Report

Changes to this report need to be done efficiently and effectively. In order to foster these, I have devised a list of changes that need to be made throughout. Individual changes to the chapters will be given to you in hard copy form by David Rhodes, Elizabeth Greenberg, Dan Sherman, or myself. Consistency throughout the report is critical. Graphs, tables, etc. NEED to have the same format throughout.

ENJOY!

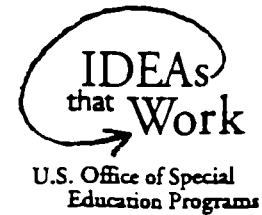
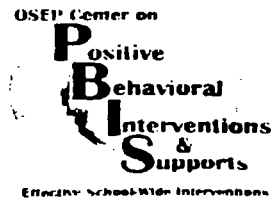
- Lation/os needs to be changed to Hispanic/s throughout the text and the tables and figures.
- In the tables in the chapters and the appendices, “N” needs to be changed to “Sample Size”
- In the tables in the chapters and the appendices, “Weighted N/1000” needs to be changed to “Population/1000”
- Hyphenation; eg. non-Hispanic (not non hispanic or non-hispanic; monoliterate not mono-literate)
- When referring to race, NCES does not capitalize Black, White (double check with the guideline that this is the case and follow through)
- In appendix B, tables 4.1 to 4.10 need to be deleted. We are dropping this chapter thus the tables are no longer needed. Because we are dropping tables 4.1 to 4.10, tables 5.1 to 5.5 need to be renumbered.
- In the appendices there should be NO footnotes under the tables (see Table B5.3 for example). All information should be place under the table.
- Text under the tables need to have the same font size throughout. Currently, in Appendix B, the text under the tables varies in font size (see Table B.3.22 and Table B5.4 for an example of the inconsistency).
- Numbers in the tables need to be right justified throughout.

- Make sure indentation is consistent
- On page A-13, there is an article entitled "Face-off: Getting ...". Can this be made larger? In its present form, it is illegible.
- On page A-27, the "Availability of Deposits" form is jumbled. Can this be cleaned up?
- On Page A-30, the bus schedule is very small. Can this be enlarged?
- Throughout the appendices, the subheadings are gray. Can they be made black? I remember this was an issue before and I am not sure if it can be done.
- The bars on the graphs must be consistent across chapters. In order to achieve this I have created the following "shading" list:

Bar 1	Horizontal stripes
Bar 2	White
Bar 3	Cross hatch
Bar 4	Black
Bar 5	Polka dotted

For graphs it may be good to print out just a couple of them first to see before full implementation. The patterns need to be distinguishable for one another.

- Delete the Preface.



Applying Positive Behavioral Support and Functional Behavioral Assessment in Schools

Publication of the OSEP Center on Positive
Behavioral Interventions and Supports

Technical Assistance Guide #1 – 1999

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To obtain copies of this Technical Assistance Guide or more information about the OSEP Center on Positive Behavioral Interventions and Supports, go to <http://pbis.org>.

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Opinions expressed herein are those of the authors and do not necessarily reflect the position of the US Department of Education, and such endorsements should not be inferred. The OSEP Center on Positive Behavioral Interventions and Supports is an equal opportunity and affirmative action organization.

Preface

This Technical Assistance Guide was developed to provide educators, parents, policymakers, community agents, and others with guidance on two important concepts that are significant to the education of children with disabilities: (a) *Positive Behavioral Interventions and Supports* (PBIS) and (b) *Functional Behavioral Assessment* (FBA). Although both concepts have a long history of research and application, they were introduced formally to the education mainstream in 1997 when amendments to the Education with Disabilities Education Act (IDEA 97) became law (P.L. 105-17).

Although PBIS and FBA are associated specifically with IDEA 97, this technical assistance guide provides definitions and guidelines within the context of a full continuum of positive behavior support for all students, staff, parents, and school settings. As such, consideration is given to implementation of positive behavior support at three basic levels: (a) school-wide (universal interventions), (b) small group (targeted interventions) and individual student (specialized, high intensity interventions).

This Technical Assistance Guide is organized into 6 main sections:

- Introduction to Positive Behavior Supports
- Context for Positive Behavior Supports
- Definition and Features of Positive Behavioral Support in Schools
- Functional Behavior Assessment-Based Behavior Support Planning
- Conclusion
- Supporting References

Introduction

On June 4, 1997, amendments to the Individuals with Disabilities Education Act (IDEA) became law (P.L. 105-17). These amendments introduced a number of new concepts, two of which are particularly important to the education of children whose behaviors violate school codes of conduct and/or are outside personal or interpersonal norms of acceptable social behavior: (a) positive behavioral support (PBS) and (b) functional behavioral assessment (FBA). Section 614 (d)(3)(B)(i) of P.L. 105-17 states that “in the case of a child whose behavior impedes his or her learning or that of others, the child’s IEP team must consider, when appropriate, strategies, including positive behavioral intervention strategies and supports, to address that behavior.” Section 615 (k)(1)(B)(i) of the law states, “if the local educational agency did not conduct a functional behavioral assessment and implement a behavioral intervention plan for such child before the behavior that resulted in the suspension described in subparagraph (A), the agency shall convene an IEP meeting to develop an assessment plan to address that behavior.” In addition, “if the child already has a behavioral intervention plan, the IEP Team shall review the plan and modify it, as necessary, to address the behavior” [Section 615(k)(1)(B)(ii)]. (FBA and BIP are not required in all cases of discipline but, instead, are required only some clearly specified circumstances. For more information on these matters, refer to Technical Assistance Guideline #2.)

Positive behavioral support and FBA are not new. However, in the context of

IDEA, they represent an important effort to improve the quality of behavioral interventions and behavioral support planning. As schools organize to meet these requirements and to build their capacity to meet the behavioral needs of all students, especially students with disabilities, attention must be given to the definitions, features, and uses of PBS and FBA. The purpose of this paper is to describe what is meant by “PBS” and “FBA.”

Context

Schools are important environments in which children, families, educators, and community members have opportunities to learn, teach, and grow. For nearly 180 days each year and six hours each day, educators strive to provide students learning environments that are stable, positive, and predictable. These environments have the potential to provide positive adult and peer role models, multiple and regular opportunities to experience academic and social success, and social exchanges that foster enduring peer and adult relationships.

Despite these positive attributes, teachers, students, families, and community members face significant contemporary challenges (Figure 1). Every year schools are being asked to do more with fewer resources. New initiatives to improve literacy, enhance character, accommodate rapidly advancing technologies, and facilitate school-to-work transitions are added to the educator’s workday. Schools are being asked to achieve new and more results, yet seldom are allowed to cease work on the growing list of initiatives.

- A suburban high school with 1400 students reported over 2000 office referrals from September to February of one school year.
- An urban middle school with 600 students reported over 2000 discipline referrals to the office from September to May.
- A rural middle school with 530 students reported over 2600 office referrals. 304 students had at least one referral, 136 students had at least 5 referrals, 34 students had more than 20 referrals, and one student had 87 office referrals (Taylor-Greene et al., 1997).
- In one state, expulsions increased from 426 to 2088 and suspensions went from 53,374 to 66,914 over a four year period (Juvenile Justice Fact Sheet).
- In another state, expulsions increased from 855 to 1180 between the 1994-95 and 1995-96 school year (a 200% increase from 1991-92 school year) (Juvenile Justice Fact Sheet).
- Being suspended or expelled school is reported by students is one of the top three school-related reasons for leaving school (National Association of Child Advocates, 1998).
- In one state, 10.7% of students who had been suspended or expelled also were found in the state's Department of Juvenile Justice Database; 5.4% of suspended students were arrested while on suspension; and 18.7% were arrested while on expulsion (National Association of Child Advocates, 1998).
- 36% of general public school parents fear for the physical safety of their oldest child at school, and 31% fear for the physical safety of their oldest child while playing in their neighborhood (Gallup, Elam, & Rose, 1998).
- The general public rated fighting/violence/gangs, lack of discipline, lack of funding, and use of drugs/dope as the top four biggest problems facing local schools. These same four have been in the top 4 for over 15 years (Gallup, Elam, & Rose, 1998).

Figure 1. Impact of changes.

Educators also are being asked to educate an increasingly heterogeneous population of students. An increasing number of students in our schools have English as a second language, limited family supports, significant learning and/or behavioral problems, families who face financial barriers, and a great

need for mental health, social welfare, medical, and vocational assistance (Knitzer, 1993; Knitzer, Steinberg, & Fleisch, 1990; Stevens & Price, 1992). Although most attention has focused on students with externalizing problem behavior (e.g., aggressive, antisocial, destructive), students with internalizing

problem behavior (e.g., social withdrawal, depression) also represent an important concern of families, schools, and communities (Kauffman, 1997).

In addition, the challenges associated with educating students with severe problem behavior are increasing (Biglan, 1995; Kauffman, 1997; Sprague, Sugai, & Walker, 1998; Sugai & Horner, 1994; Walker, Colvin, & Ramsey, 1995). Although these students represent only 1 to 5% of a school enrollment, often they can account for more than 50% of the behavioral incidents handled by office personnel, and consume significant amounts of educator and administrator time (Taylor-Greene et al., 1997; Sugai, Sprague, Horner, & Walker, in press). Many of these students require comprehensive behavioral supports that involve family, school, and community participation (Eber, 1996; Eber & Nelson, 1997; Epstein et al., 1993; Walker et al., 1995; Walker et al., 1996).

Many schools lack the capacity to identify, adopt, and sustain policies, practices and systems that effectively and efficiently meet the needs of all students (Mayer, 1995; Sugai & Horner, 1994, 1999; Taylor-Greene et al., 1997; Walker et al., 1996). Schools often rely on outside behavioral expertise because local personnel lack specialized skills to educate students with significant problem behaviors. School morale is often low because on-going staff support is limited. Although many students have significant social skill needs, social skill instruction is not a conspicuous and systemic component of the school-wide curriculum. Behavioral interventions are not based on information obtained from assessments. In general, systems for the identification, adoption, and sustained

use of research-validated practices are lacking.

In sum, the challenges facing educators are significant and persistent. If not addressed, their impact on students, school personnel, families, and community members can be dramatic. However, the problem is not that schools lack procedures and practices to address these challenges. Procedures and practices have been defined and growing over the past 30 years (Mayer, 1995; Peacock Hill Working Group, 1992; Sugai, 1998; Walker, 1995; Walker et al., 1998). The greater problem has been that we have been unable to create and sustain the "contextual fit" between what our procedures and practices and the features of the environments (e.g., classroom, workplace, home, neighborhood, playground) in which the student displays problem behavior (Albin, Lucyshyn, Horner, & Flannery, 1996). The systemic solution is to create effective "host environments" that support the use of preferred and effective practices (Sugai & Horner, 1994; 1999; Zins & Ponti, 1990). Effective host environments have policies (e.g., proactive discipline handbooks, procedural handbooks), structures (e.g., behavioral support teams), and routines (e.g., opportunities for students to learn expected behavior, staff development, data-based decision making) that promote the identification, adoption, implementation, and monitoring of research-validated practices.

As a society, we are looking to schools to be or become settings where our children learn the skills for successful adulthood (e.g., IDEA, Goals 200, Improving America's Schools Act) in the context of an increasingly heterogeneous general student body and

students with intense patterns of chronic problem behavior. The growing expectation is that schools will deliver socially acceptable, effective, and efficient interventions to ensure safe, productive environments where norm-violating behavior is minimized and prosocial behavior is promoted. Positive behavioral support and FBA represent important efforts toward achieving these goals.

Increasingly, efforts to establish school-linked service arrangements for children and families are appearing around the country (Sailor, 1996). These models have been tested and described in numerous schools (Adelman & Taylor, 1997; Dryfoos, 1997; Kagan, Goffin, Golub, & Pritchard, 1996; Schorr, 1997). In Kentucky, for example, efforts have been made to establish school-linked services in the context of state-wide school reform (Illback, Nelson, & Sanders, 1998; Kearns, Kleinert, Farmer, Warlick, Lewis, & Williams, in press; Kleinert, Kearns, & Kennedy, in press). More recently, these school, family, and community partnerships have been described under the "community schools" rubric (Benson & Harkavy, 1996; Lawson & Briar-Lawson, 1998).

These comprehensive systems-change initiatives are designed to create a seamless web of supports and services that "wrap around" children and families and to bring an end to the current fragmentation and categorical separation of school agency directed programs. These systems-change efforts create a gateway through which to integrate PBS methods into the culture of the school and to extend effective and coordinated participation in the behavioral support plan to family members and community

agency personnel (Sailor, 1996; in press).

Definition and Features of Positive Behavioral Support in Schools

Optimizing the capacity of schools to address school-wide, classroom, and individual problem behavior is possible in the face of current challenges, but only if working policies, structures, and routines emphasize the identification, adoption, and sustained use of research-validated practices. In recent years, PBS has been emerging as an approach to enable schools to define and operationalize these structures and procedures. New journals (e.g., *Journal of Positive Behavioral Intervention*), technical assistance centers (e.g., Beach Center, Center on Positive Behavioral Interventions and Supports), and personnel preparation programs have established PBS as the focus of their purpose and activities.

Definition

Positive behavioral support is a general term that refers to the application of positive behavioral interventions and systems to achieve socially important behavior change. PBS was developed initially as an alternative to aversive interventions used with students with significant disabilities who engaged in extreme forms of self-injury and aggression (Durand & Carr, 1985; Meyer & Evans, 1989). More recently, the technology has been applied successfully with a wide range of students, in a wide range of contexts (Carr et al., 1999; Horner, Albin, & Sprague, & Todd, 1999), and extended from an intervention approach for individual students to an intervention approach for entire schools (Colvin, Sugai, Good, &

Lee, 1996; Colvin, Kame'enui & Sugai, 1993; Lewis, Colvin, & Sugai, in press; Lewis, Sugai & Colvin, 1998; Taylor-Greene, et al., 1997; Todd, Horner, Sugai & Sprague, 1999).

Positive behavioral support is not a new intervention package, nor a new theory of behavior, but an application of a behaviorally-based systems approach to enhancing the capacity of schools, families, and communities to design effective environments that improve the fit or link between research-validated practices and the environments in which teaching and learning occurs. Attention is focused on creating and sustaining school environments that improve lifestyle results (personal, health, social, family, work, recreation, etc.) for all children and youth by making problem behavior less effective, efficient, and relevant, and desired behavior more functional. In addition, the use of culturally appropriate interventions is emphasized. Haring and De Vault (1996) indicate that PBS is comprised of (a) "interventions that consider the contexts within which the behavior occurs," (b) "interventions that address the functionality of the problem behavior," (c) "interventions that can be justified by the outcomes," and (d) "outcomes that are acceptable to the individual, the family, and the supportive community" (p. 116).

Features

At the core, PBS is the integration of (a) behavioral science, (b) practical interventions, (c) social values, and (d) a systems perspective (Figure 2).

Behavioral Science

An existing science of human behavior links the behavioral, cognitive, bio-physical, developmental, and physical-environmental factors that influence how a person behaves (Baer,

Wolf, & Risley, 1968; Bijou & Baer, 1978; Schwartz, 1989; Wolery, Bailey, & Sugai, 1988). Of particular interest are factors that affect the development and durability of disruptive and dangerous behaviors (Biglan, 1995; Kauffman, 1997; Mayer, 1995; Patterson, Reid, & Dishion, 1992; Walker et al., 1995). To a great extent, when these behaviors are observed in our schools, they can be traced to unintentional behavioral student, peer, and/or teacher exchanges (Gunter, Denny, Jack, Shores, & Nelson, 1993; Sasso, Peck, Garrison-Harrell, 1998; Shores, Gunter, & Jack, 1993; Shores, Jack, Gunter, Ellis, DeBriere, & Wehby, 1993).

Although learning and teaching processes are complex and continuous and some behavior initially is not learned (e.g., bio-behavioral), key messages from this science are that much of human behavior is learned, comes under the control of environmental factors, and can be changed. The strength of the science is that problem behaviors become more understandable, and as our understanding grows, so does our ability to teach more socially appropriate and functional behavior. The PBS approach is founded on this science of human behavior. Different procedures and strategies are applied at different levels, but the fundamental principles of behavior are the same.

Practical Interventions

The science of human behavior has led to the development of practical strategies for preventing and reducing problem behavior (e.g., Alberto & Troutman, 1999; Cooper, Heron, & Heward, 1987; Kerr & Nelson, 1998; Koegel, Koegel, & Dunlap, 1996; Reichle & Wacker, 1993; Wolery, Bailey, & Sugai, 1988).

Behavioral Science	Practical Interventions	Lifestyle Outcomes	Systems Perspective
• Human behavior is affected by behavioral, bio-behavioral, social, and physical environmental factors. • Much of human behavior is associated with unintentional learning opportunities. • Human behavior is learned and can be changed.	• Functional behavioral assessments are used to develop behavior support plans. • Interventions emphasize environmental redesign, curriculum redesign, & removing rewards that inadvertently maintain problem behavior. • Teaching is a central behavior change tool. • Research-validated practices are emphasized. • Intervention decisions are data-based.	• Behavior change must be socially significant, comprehensive, durable, & relevant. • The goal of PBS is enhancement of living and learning options. • PBS procedures are socially and culturally appropriate. Applications occur in least restrictive natural settings. • The fit between procedures and values of students, families, educators must be contextually appropriate. • Non-aversive interventions (no pain, tissue damage, or humiliation) are used.	• The quality & durability of supports are related directly to the level of support provided by the host environment. • The implementation of practices and decisions are policy-driven. • Emphasis is placed on prevention & the sustained use of effective practices. • A team-based approach to problem solving is used. • Active administrative involvement is emphasized. • Multi-systems (district, school-wide, nonclassroom, classroom, individual student, family, community) are considered. • A continuum of behavior supports is emphasized.

Figure 2. Foundations and features of positive behavioral support.

Although implementation details vary across age groups, contexts, and behavior, PBS interventions have common features. Foremost among these features is the application of FBA, but equally important are emphases on environmental redesign (changing aspects of the setting), curriculum redesign (teaching new skills), modification of behavior (teaching and changing student and adult behavior), and removing rewards that maintain problem behaviors (Carr et al., 1994; Luiselli & Cameron, 1998; O'Neill et al., 1997).

Positive behavioral support procedures emphasize assessment prior to intervention, manipulation of antecedent conditions to reduce or prevent the likelihood that a problem behavior will occur, development of new social and communication skills that make problem behaviors irrelevant, and careful redesign of consequences to eliminate factors that maintain problem behaviors and to encourage more acceptable replacement social skills and behaviors. Positive behavioral support is an approach that emphasizes teaching as a central behavior change tool, and focuses on replacing coercion with environmental redesign to achieve durable and meaningful change in the behavior of students. As such, attention is focused on adjusting adult behavior (e.g., routines, responses, instructional routines) and improving learning environments (e.g., curricular accommodations, social networks).

Educators, parents, and community agents must “work smarter” (Kameenui & Carnine, 1998) by using time more efficiently and strategically selecting instructional and behavioral strategies for which clear evidence of their effectiveness exists. Working smarter

means using what works for all students, not just those with learning and behavioral difficulties (Delpit, 1995).

The PBS approach emphasizes the identification, adoption, and sustained use of practices that have been research-validated. For students with serious antisocial behaviors, a number of recent meta-analyses and descriptive literature reviews support the use of strategies that can be applied by educators in school environments, especially, (a) contextually-targeted social skills instruction, (b) academic and curricular restructuring, and (c) behaviorally-based interventions (Gottfredson & Gottfredson, 1996; Lipsey, 1991, 1992; Lipsey & Wilson, 1993; Tolan & Guerra, 1994). Other more specific research-validated practices include FBAs, direct instruction, and other applied behavior analytic strategies (Carr et al., 1999).

Finally, the PBS approach emphasizes the use of data collection and analysis to inform decision making (e.g., direct behavioral observations, curriculum-based measurement). A variety of data sources (e.g., office discipline referrals, attendance and tardy reports, and academic progress) are collected through a range of methods (e.g., archival review, interviews, direct observations) and from multiple sources (i.e., students, family members, educators, community members). In addition to behavioral factors, assessments consider cognitive, bio-physical, developmental, and physical-environmental factors to assist in understanding problem behavior and in guiding the development of comprehensive behavioral support plans. Collectively, these data can be used to determine the student's current level of functioning, the impact of the

intervention on problem behavior, and/or improvements in other lifestyle results (e.g., family, work, recreation). With ongoing data collection, intervention and instructional modifications can be made in a timely manner.

Social Values

Positive behavioral support emphasizes consideration of social values in both the results expected from behavioral interventions and the strategies employed in delivering the interventions. A central PBS tenet is that behavior change needs to be socially significant. Behavior change should be (a) *comprehensive* in that all relevant parts of a student's day (before, during, and after school) and important social contexts (home, school, neighborhood, and community) are affected, (b) *durable* in that the change lasts for long time periods, and (c) *relevant* in that the reduction of problem behaviors and increases in prosocial behaviors affect living and learning opportunities (academic, family, social, work). The goal of PBS is more than the control of problem behavior; it also includes the enhancement of the living and learning options available to the student and to his or her peers and family (Risley, 1996; Turnbull & Turnbull, 1996).

Social values are also important in defining acceptable types of intervention procedures. Positive behavioral support emphasizes the importance of procedures that are socially and culturally appropriate. The contextual fit between intervention strategies and the values of families, teachers, schools, support personnel, and community agency personnel may affect the quality and durability of support efforts (Albin, 1998; Sailor, 1996). No intervention should cause pain, tissue damage, or humiliation to children and their

families. Finally, careful consideration is given to lifestyle outcomes that go beyond simple behavior reduction and enhancement. The development of behavioral support plans and the evaluation of their effects consider the student's current and future quality of life in all settings and circumstances. Koegel, Koegel, and Dunlap (1996, p. xiv) add that "interventions should strive to enhance a person's competencies and access to desirable environments, social circumstances, and activities" and "all people should be treated with respect and dignity and that interventions must therefore refrain from interactions that are degrading, humiliating, or pain inducing."

Systems Impact

PBS is of particular importance for schools given the emphasis on behavioral "systems" as well as individual children. A systems perspective provides support for the adoption and sustained use of effective school practices (Sugai & Horner, 1994, 1999). Without a systems approach, identification of practices is limited, adoptions are incomplete, and attention to school initiatives to address discipline is episodic and short term (e.g., 18-24 months) (Sugai & Horner, 1999; Zins & Ponti, 1990).

PBS implementations consider multiple contexts: community, family, district, school, classroom, nonclassroom (e.g., cafeteria, hallways, bus, playground, parking lot), and individual. Efforts are policy-driven to ensure accountability, maximum positive results, participation in and progress through the general curriculum, and effective and efficient communications. In addition, a proactive (positive and preventative) perspective is maintained along three levels: (a) PRIMARY:

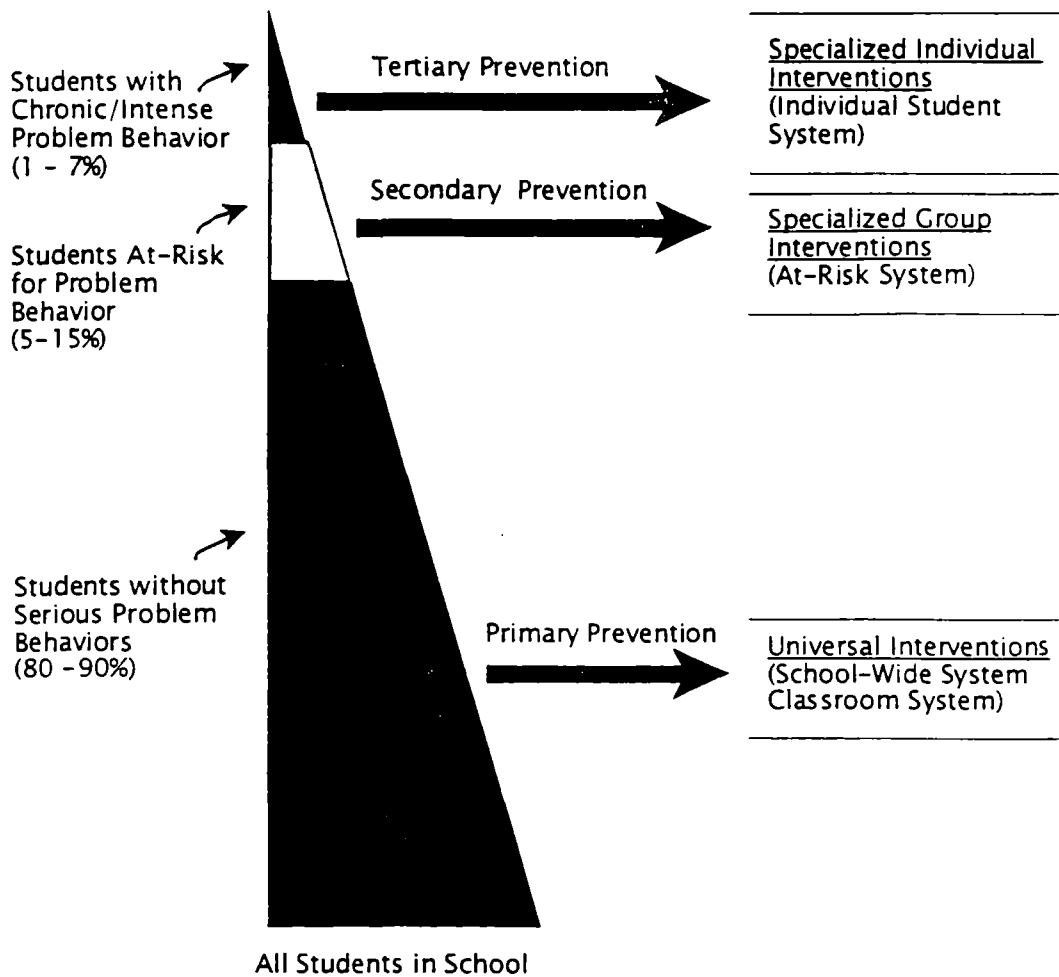


Figure 3. Continuum of behavioral support.

reducing the number of new cases of problem behavior, (b) *Secondary*: reducing the number of current cases of problem behavior, and (c) *Tertiary*: reducing the intensity and complexity of current cases (Walker et al., 1996). A team-based approach is applied to program assessment, development, and problem solving (Adelman & Taylor, 1997; Lawson & Briar-Lawson, 1997). This approach enables input from multiple sources, broader expert knowledge base, and improved sustainability over time.

At all levels in the system, active administrator support and participation are required. Without strong leadership from school administrators, program efforts often are inefficient, incomplete, and ineffective (Colvin & Sprick, 1999). Similarly, when problem behavior is chronic and intense, comprehensive linkages with other human service agencies (e.g., juvenile justice and corrections, mental/public health, child and family services) are considered (Eber, 1996; Eber & Nelson, 1997; Epstein et al., 1993; Walker et al., 1995; Walker et al., 1996).

Taken as a whole, a systems perspective to PBS provides a continuum of behavioral support (Figure 3) in which prevention is emphasized and intensity of problem behavior and context is considered. As a continuum, four change elements characterize PBS: (a) change of systems (policies, structures, routines), (b) change of environments, (c) change of student and adult (parent, teacher, staff) behavior, and (d) change in appreciation of appropriate behavior in all involved individuals (student, staff, family, etc.).

Functional Behavior Assessment-Based Behavior Support Planning

Among the most important changes in applied behavioral analysis in the past 20 years has been the development of FBA (special issue, *Journal of Applied Behavior Analysis*, 1994). The development of positive behavioral interventions and plans that are guided by FBA is the foundation on which the PBS approach is delivered. A central message from this advancement is that the design of successful behavior change interventions requires identification of the events that reliably predict and maintain problem behaviors (Carr, 1994; Horner, 1994; O'Neill et al., 1997; Repp, 1994; Sugai, Lewis-Palmer, & Hagan, 1998). Historically, problem behaviors have been viewed as residing within a child, and the diagnostic emphasis has been on the type of problem behavior or the link with disability type (i.e., within the individual). Although all types of information may be useful in the design of effective support, the current emphasis is on careful documentation of the predicting and maintaining events associated with problem behaviors.

Although useful in guiding decision making at all levels, the FBA approach is the cornerstone of systems that address the educational programming of students who display the most significant and challenging problem behavior. These students require behavior support plans that are specialized, individualized, and high intensity. Such plans must be based on information about the nature of the problem behavior and the environmental context in which the problem behavior is observed. The FBA approach provides a systematic and informed means by which targeted interventions can be developed and monitored.

Functional assessment is not new for it can be found in a variety of disciplines (e.g., vocational education, physical therapy, chemistry, physics). However, in education, in particular, special education, functional assessment had its beginning in the 1960's in applied behavior analysis (Bijou & Baer, 1961; 1978; Bijou, Peterson, & Ault, 1968; Bijou et al., 1969). Initially, research studies and applied applications of the functional assessment technology demonstrated the value of defining variables maintaining a problem behavior prior to constructing an intervention (Carr, 1977; Carr & Durand, 1985; Iwata, et al., 1982; Repp & Horner, 1999; Touchette, MacDonand, & Langer, 1985). Although most of this work has been conducted with individuals with severe developmental and intellectual disabilities (Blakeslee, Sugai, & Gruba, 1993; Lohrman-O'Rourke et al., 1999), a growing body of research and applications focuses on individuals with normal intellectual functioning (e.g., emotional and behavioral disorders, learning disabilities) (e.g., Broussard &

Northrup, 1995; Dunlap, Kern-Dunlap, Clarke, and Robbins, 1991; Dunlap et al., 1993; Dunlap et al., 1996; Kern et al., 1994; Lewis & Sugai, 1993, 1996a, 1996b; Umbreit, 1995; Volmer & Northrup, 1996).

In this section, we provide an overview of FBA, including definition and outcomes, defining features, and major steps, especially in relation to behavior support development and planning.

Definition and Results

We define FBA as a systematic process of identifying problem behaviors and the events that (a) reliably predict occurrences and non-occurrence of those behaviors and (b) maintain the behaviors across time. The purpose of gathering this information is to improve the effectiveness, relevance, and efficiency of behavior support plans (Carr et al., 1997; Foster-Johnson & Dunlap, 1993; Horner, 1994; O'Neill et al., 1997; Sugai, Horner, & Sprague, 1999; Sugai, Lewis-Palmer, & Hagan, 1998; Tilly et al., 1998). Specifically, if we can identify the conditions under which problem behavior is likely to occur (triggering antecedents and maintaining consequences), we can arrange environments in ways that occurrences of problem behavior can be reduced and teach and encourage behaviors that can replace problem behavior.

A number of procedures exist for conducting a FBA (Center for Effective Collaboration and Practice, 1998), but we maintain that any professionally appropriate assessment, at minimum, should conclude with three main results. The first is hypothesis statements that include three key features: (a) operational definitions of the problem behavior(s), (b) descriptions of the antecedent events that reliably predict

occurrence and nonoccurrence of the problem behavior, and (c) descriptions of the consequence events that maintain the problem behavior(s). The second is direct observation data supporting these hypotheses. The third FBA result is a behavior support plan. The importance of the link between hypotheses that are derived from FBAs and the development of comprehensive behavior support plans must be emphasized. Behavior support plans provide a summary of intervention manipulations in four areas: (a) setting event strategies, (b) antecedent strategies, (c) behavior teaching strategies, and (d) consequence strategies. In addition, a comprehensive behavior support plan provides implementation scripts that detail (a) who does what strategies when, where, how often, and why; (b) how emergency or crisis situations will be handled; and (c) how implementation and effectiveness will be monitored.

In sum, FBA is not a set of forms or static products. It is a process of understanding behavior in the context in which it is observed and of guiding the development of positive behavioral interventions that are relevant, effective, and efficient. FBA is a best and preferred practice for all challenging behavior, not just for behavioral events that result in suspensions or other disciplinary actions.

Steps of the Functional Behavioral Assessment and Behavior Support Planning Process

In this section, an overview of the six main steps involved in conducting an FBA and developing behavior support plans is provided (see Figure 4). Additional guidelines for implementing the process are available in O'Neill et al. (1997); Sugai, Lewis-Palmer, and Hagan (1998); and Tilly et al. (1998).

Step	Tools/Procedures	Outcome
1. Collect information regarding conditions under which problem behavior is & is not observed & more appropriate behavior is required.	Archival review, analysis of routines, interviews, direct observation	Descriptions of possible setting events, triggering antecedents, problem behavior response classes, maintaining consequences
2. Develop testable (manipulable) hypotheses.	Team analysis of information from Step 1	Testable hypotheses
3. Collect direct observation information.	Direct observations	Verified summary statements
4. Design behavior support plans.	Team development	Specification of (a) desired and acceptable alternative behavior, (b) antecedent strategies and manipulations, (c) consequence strategies and manipulations, (d) strategies for teaching desired and acceptable alternative behavior, & (e) setting event/establishing operation strategies and manipulations
5. Develop implementation scripts.	Team development	Scripts that specify how, when, where, etc. behavior support plan to be implemented & by whom
6. Collect information on effectiveness & efficiency of behavior support plan & redesign based on evaluation information	Team development	Data on student progress & plan implementation, & redesign/updated plan

Figure 4. Overview of functional behavioral assessment and behavioral support planning.

Step One

Using archival review, analysis of routines, interviews, and/or direct observations, information is gathered regarding the conditions under which the (a) problem behavior is and is not observed and (b) more appropriate behavior is required. Attention is focused on four primary factors: (a) **SETTING EVENTS/ESTABLISHING OPERATIONS** that make the problem behavior worse (e.g., diet, medical conditions/illness, sleep, fatigue, social conflicts), (b) **ANTECEDENT EVENTS** that predictably precede and trigger or occasion problem behavior (e.g., task demands, instruction, peer/adult requests), (c) **PROBLEM BEHAVIORS** that as a response class or set are maintained by a common function or outcome (e.g., attention, escape/avoidance), and (d) **CONSEQUENCE EVENTS** that predictably follow and maintain problem behavior (positive or negative reinforcement).

For example², when Linda's teacher requested assistance because of problem behaviors in his classroom, members of the school's behavior support team interviewed the teacher, reviewed Linda's behavioral incident records, examined her typical class and activity schedule, and consulted with other adults (e.g., parent, music teacher) who had firsthand knowledge about Linda's strengths and problem behaviors.

Step Two

The information collected in the first step is used to develop testable hypotheses which best describe the conditions under which the problem behavior is most likely to occur. A

complete testable hypothesis indicates (a) problem behavior, (b) triggering antecedent events, (c) maintaining consequence events, and (d) influential setting events/establishing operations (O'Neill et al., 1997).

For example, based on a review of interview and archival information, the behavior support team determined that when Linda's teacher asked her to redo spelling and grammar errors in her essay (antecedent), Linda verbally protested, failed to follow directions, and used profane language (problem behavior). Her teacher typically removed the essay task and turned his attention to other students (maintaining consequence). Problem behaviors also were more likely to occur and be worse in intensity when she had failed to complete her work during the prior math class or had an argument with an adult (setting event).

Step Three

After testable hypotheses are developed, direct observation information is collected to verify the accuracy or predictability of these statements. Usually, multiple observations are conducted across multiple settings and situations to determine whether problem behavior patterns occur under hypothesized conditions and contexts. These observations involve the careful documentation of antecedent and consequence variables that are present or absent when problem behaviors are and are not observed.

In cases where hypotheses are difficult to establish or where problem behavior is particularly resistant to intervention, functional "analysis" may be recommended. A functional analysis involves a systematic manipulation (i.e., removal and addition) of factors that are hypothesized as triggering or

² The details of this example have been simplified to illustrate the general features of each step.

occasioning problem behavior. These manipulations are designed to trigger problem behavior under one set of conditions and not under others. However, in educational and clinical applications, we do not recommend functional analysis without the (a) direct involvement of an experienced behavior analyst, (b) consent and collaboration by families and caregivers, and (c) structures for maintaining appropriate accountability (e.g., data collection, monitoring of implementation fidelity).

In Linda's situation, the school counselor, Linda's classroom teacher, and the special education teacher conducted direct observations during music, math, and language arts periods. They noted those antecedent and consequence events that were associated with each problem behavior displayed by Linda. They also looked for times when or situations where the problem behavior did not occur. For Linda, direct observation data confirmed the hypothesis statement generated in the previous step.

Step Four

Based on information from verified hypotheses, behavior support plans are developed that specify possible teaching strategies or manipulations for (a) desired and acceptable alternative behaviors, (b) antecedent events, (c) consequence events, and (d) setting events/establishing operations. This plan serves as the basis for defining the actual implementation of the behavioral intervention. Unlike more typical single dimension interventions that focus on reactive, consequence manipulations (e.g., timeout, behavioral contracts), behavior support plans that are based on FBAs consider intervention components that are (a) instructionally focused (i.e., teaching acceptable and desired

replacement behaviors), (b) prevention focused (e.g., neutralizing or eliminating the conditions that trigger problem behaviors or make them worse or more likely), and (c) environmentally-based (e.g., rearrangement of the problem context).

For Linda, the behavior team, which included Linda's teacher and father, developed a behavior plan that had the following general elements: (a) teach Linda to ask for help and/or indicate that the task is too difficult, and teach her to self-record at the end of the period whether she "kept her cool" (behavior teaching), (b) review correction strategies, provide an answer key, and point out what is correct about her work before asking Linda to make corrections (antecedent manipulations); (c) provide verbal praise for asking for help or indicating that work is too hard, do first 2-3 corrections with Linda, check her self-recording, and give Linda a break from the task if she appropriately begins her work (consequence manipulations); and (d) if she has had a prior conflict with an adult, provide Linda with an opportunity to problem solve the prior conflict and present her with a neutral and simple task before requesting making corrections (setting event manipulation).

Step Five

Implementation scripts are developed to specify how, when, and where the behavior support plan will be implemented and by whom. Contingency plans for responding to emergencies, training staff, and collecting data also are indicated. If necessary, resources and assistance from other support individuals or agencies (e.g., mental health, medical, vocational) are indicated.

For example, Linda's teacher agreed to implement the plan the next day and to keep track of Linda's language arts errors and corrections as a way of determining if the intervention was working. The counselor and special education teacher developed simple checklist scripts to guide Linda's teacher through the implementation of the behavior support plan. Linda's father agreed to provide positive acknowledgements at home if Linda met her goal for each day. If Linda's problem behavior escalated in intensity, the counselor would come immediately to assist the teacher.

Step Six

Information on the effectiveness and efficiency of the behavior support plan is collected regularly, and the plan is redesigned based on an evaluation of this information. A formative (direct, frequent, regular) approach is emphasized. In Linda's example, one or more members of the behavior support team met with Linda's teacher every other day during the two weeks of the implementation of the behavior support plan. This frequent support was provided to ensure that the plan was working, and to provide Linda's teacher with assistance in implementing the plan.

Conclusion

Schools can be great places for students, teachers, related services personnel, families, human service practitioners, and community members to work collaboratively to achieve meaningful results for all children and youth. However, limited resources; diverse students, families, and neighborhoods; increases in school violence; and increased social responsibilities have decreased the efficiency and effectiveness of many

schools. Although the solution is multifaceted, schools can make a significant contribution by "working smarter." This approach requires the establishment of proactive school environments (i.e., "host environments") that have the capacities to identify, adopt, and sustain the use of effective policies, systems, and practices.

Positive behavioral support represents an important approach to identifying and organizing effective school practices, especially for students who present significant problem behavior. However, many systems-level challenges remain to be addressed. First, schools need guidelines for making the adoption and sustained use of PBS practices efficient and relevant. Attention must be focused on the policies, environments, structures, and practices of PBS. For example, addressing the needs of students who present significant problem behavior requires personnel with time, highly specialized skills, access to resources, and administrative supports.

Second, balancing efforts and attention between school-wide and individual student systems is a challenge for many schools. For example, a school-wide discipline system that operates efficiently and effectively for the majority of students in a school can ease the high costs associated with addressing the intense needs of the relative small proportion of students who present the most significant problem behavior (Sugai, Horner, Sprague, & Walker, in press). However, many schools lack the capacity to maintain the efficient and on-going operation of both school-wide and individual student systems. Increasingly, partnerships that include schools, community agencies, businesses, and family members offer

new pathways for using PBS to change systems (Illback & Nelson, 1996; Sailor, 1996, in press).

Third, as the specialized nature of interventions increases with the increasing intensity of problem behavior, so does the complexity of the implementation. Schools need user-friendly ways to use PBS and FBA based behavior support planning. Consideration must be given to the unique features (e.g., cultural, geographical, demographic, physical) of a school and its students, families, teachers, and community members.

Finally, Carr et al. (1999) noted that lifestyle results were measured in less than 3% of PBS studies. Schools must develop mechanisms for determining if their efforts at the school-wide, classroom, nonclassroom, and individual student levels actually are associated with meaningful outcome improvements

for students, their families, and the school. Attention to the reduction of problem behavior is understandable; however, the impact of PBS efforts on larger lifestyle results (e.g., peer relations, family functioning, community mobility) also must be considered.

The PBS approach offers students, teachers, and family and community members a process that begins to address these systems level challenges. The process is based on an established science of human behavior, pays attention to important lifestyle results, works from a systems perspective, and gives priority to research-validated practices. The goal of PBS is to use information from FBAs to guide the design of learning and teaching environments that support and encourage adaptive behavior and lessen the usefulness of problem behavior.



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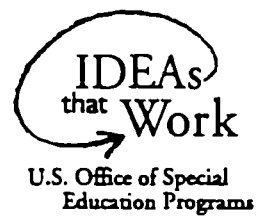
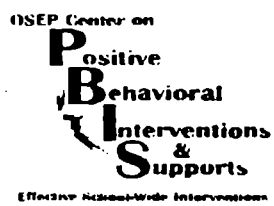
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Mission

The Center has been established by the Office of Special Education Programs, U. S. Department of Education, to give schools capacity-building technical assistance for adopting and sustaining effective school-wide disciplinary practices.

Schools Using Positive Behavioral Interventions Will Build Their Capacity To

- ✓ Address behavioral challenges.
- ✓ Diminish disruptions that impede teaching and learning.
- ✓ Create teaching and learning communities that establish and sustain positive and safe school climates.
- ✓ Reclaim instructional time lost to behavioral disruptions.

Activities/Products

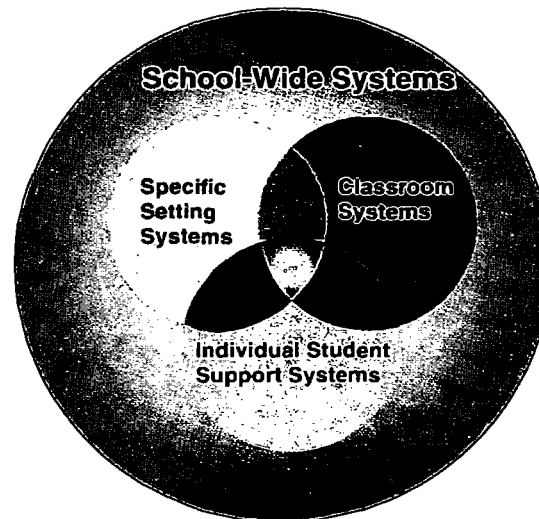
Policy Guidelines for the Design of school-wide discipline and behavior support systems.

Networks for Information exchange with administrators, educators, families, and researchers.

Research-Validated Procedures related to:

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- ✓ Classroom and nonclassroom management
- ✓ Individual student behavior management
- ✓ Functional assessment-based behavior support planning
- ✓ Social skills and self-management instruction
- ✓ Systems change and maintenance
- ✓ Safe schools
- ✓ Discipline and behavior support policy
- ✓ Family, school, and community partnerships

State, District, and School Exemplars of school-wide behavior support practices and systems.



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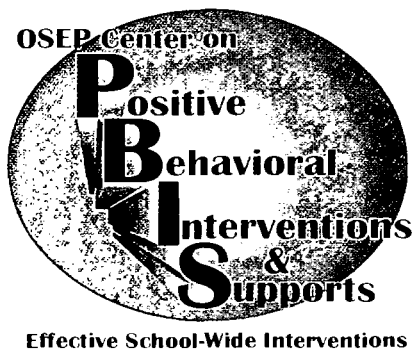
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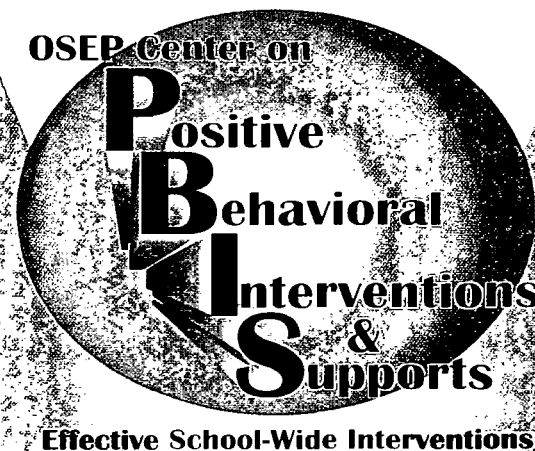
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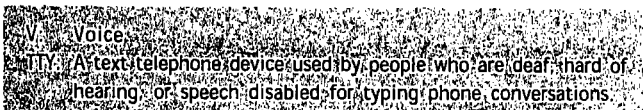
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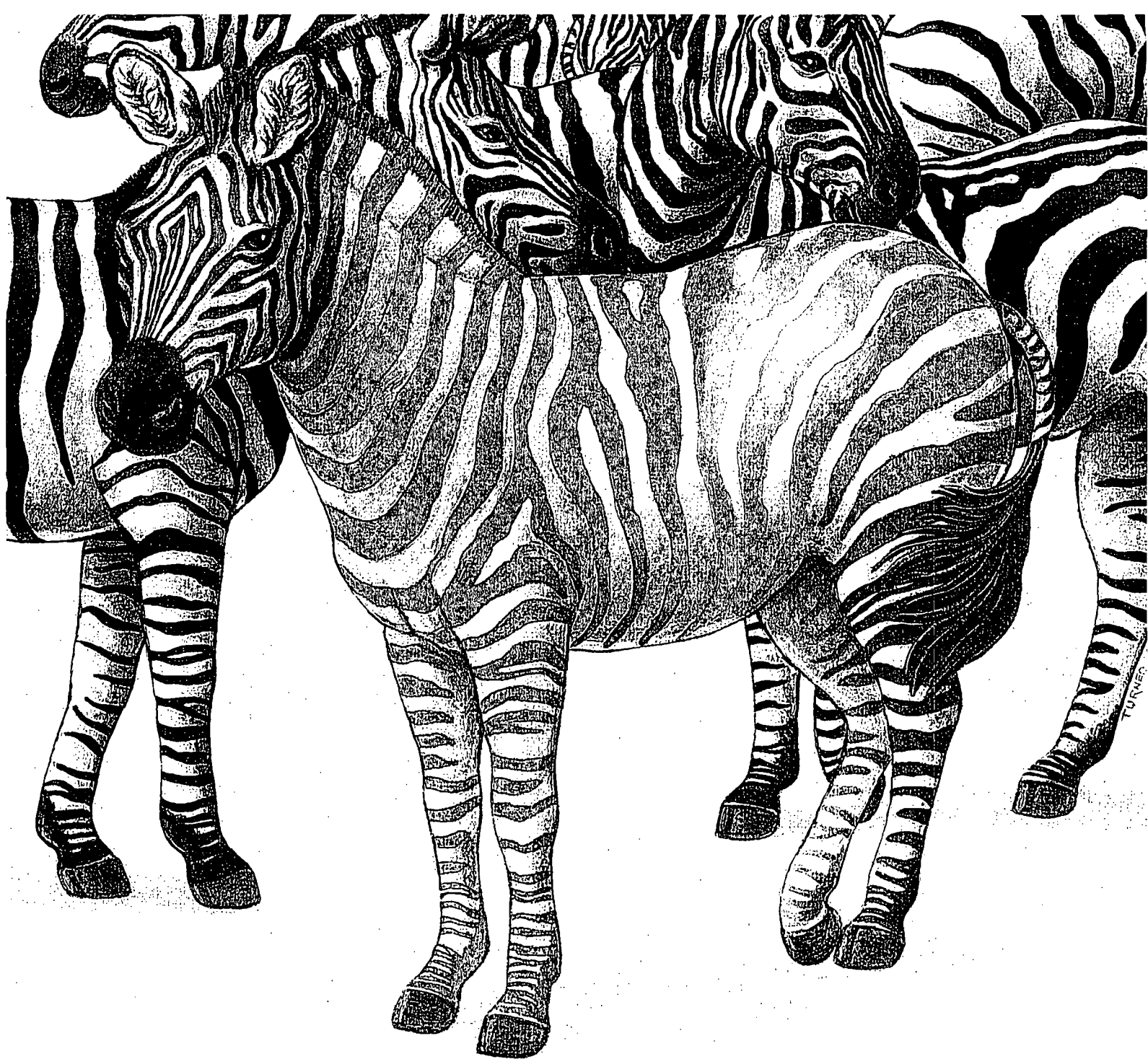
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