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A Consultation Model to Facilitate Reading Success

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Poor reading ability is associated with numerous negative consequences. School psychologists should provide teachers with resources and support to improve student reading ability and prevent these negative outcomes. This paper offers a guide for school psychologists to use in the consultation process when working with teachers to address students' reading difficulties. The paper delineates the important facets of instructional consultation and considerations to take into account including: entering the consultation relationship, effectively identifying the problem and underlying cause, identification of the appropriate intervention, monitoring implementation integrity, and the termination of the consultation relationship. Specific intervention strategies and resources are also provided to offer the school psychologist potential resources.

KEYWORDS: Consultation, Reading, Instruction, Intervention

As a key that allows access to many forms of knowledge and information, reading literacy is perhaps the skill most critical to learning. –2007 Nation's Reading Report Card

Reading is a core academic skill that not only lays the foundation for educational achievement, but also provides the groundwork necessary for life-long success. Unfortunately, adequate reading skills are not the norm. According to the 2007 Nation's Report Card, many students are experiencing significant reading difficulties (Lee, Grigg, & Donahue, 2007). The Nation's Report Card details the results of the National Assessment of Educational Progress (NAEP), a biennial assessment that evaluates student performance in general academic subjects. In terms of reading abilities, the skills assessed include: comprehension, interpretation, connecting information from the text to personal experience, and critical evaluation of text. These reading skills are evaluated through literature, informational reading, and reading involved in completing a task (e.g., bus schedules, maps, directions). Reading skills are reported in the categories of advanced, proficient, basic, or below basic in terms of reading performance for the skills that should be mastered at the given grade level (Lee et al., 2007).

The NAEP has periodically collected national data for over three decades, providing comparative data on national, state, and local levels. The most recent 2007 National Report Card highlights gains in reading scores, noting that reading performance is on an upward trend when compared to 1992. However, these results can be deceiving, as a large portion of the nation's students are still performing below what is considered a basic level of skill for their grade (Lee et al., 2007). The results of the NAEP reveal that nationally 34% of fourth grade students are reading below a basic level of skill for their grade, and 34% perform at a basic level. In eighth grade, 27% performed below the basic level, while 43% exhibited basic reading skills.

In comparison to national levels of reading skills, students in California are under-performing. Forty-seven percent of fourth grade students in California performed at a below basic reading level, and 30% are performing at the basic level. In the eighth grade, 38% were reported to be performing at the below basic

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level and 41% exhibited a basic reading skill levels. Overall, California is the fourth lowest performing state for reading in fourth grade, and the third lowest for eighth grade (Lee, et. al., 2007).

Low reading performance is a cause for concern. Literacy is not only an academic milestone, but also a growing societal demand (Meredith, Steele & Dawson, 1997). For children to succeed academically it is essential that they develop the foundational reading skills that will allow them to obtain knowledge fluidly through text and increased opportunities for learning (Joseph, 2006). Curriculum in elementary years and beyond assumes that children are literate and can accumulate critical knowledge via reading. If children struggle with reading skills, they will consequently struggle with other academic areas.

In terms of reading development, early literacy is a crucial component for future reading advances and academic success. Early literacy skills predict later reading and writing fluency as well as more extensive language development (Bowman et al., 2000; Lonigan, 2006). Early literacy is essential in that early school experiences situate the academic achievement trajectory, as academic success has been found to stabilize after the first grade (Entwisle & Hayduk, 1988). If a student is considered a poor reader by the end of first grade, it is likely that he/she may never catch up to peers who are able to read fluently (Torgesen & Burgess, 1998) and the achievement gap widens as children progress through their education.

There are several additional negative implications of poor reading abilities that underscore the importance of reading performance. Children who struggle in early reading often develop a negative attitude toward reading and tend to avoid the "unpleasant" task. The developed negative attitude leads to fewer attempts to practice and decreases the likelihood of the student developing essential reading skills (Lonigan, 2006). Furthermore, children who demonstrate early academic difficulties are more likely to display later academic difficulties. Academic difficulties are then associated with emotional distress and social problems, and it should be noted that links between academic difficulty, childhood aggression and behavior problems have been well established (Ackerman, Izard, Kobak, Brown, & Smith, 2007). Children who struggle in school are at a higher risk for school failure, and exhibit higher dropout rates (Lynch, 2004; Walker & Shinn, 2002). The inability to read not only leads to missed educational opportunities, but missed social and vocational opportunities as well (Nelson, Benner, & Gonzalez, 2005). These missed opportunities can result in unemployment and lead to substantial financial burden later in life (Walker & Shinn, 2002).

The prevalence rates and long-term implications of reading difficulties make this a particularly important issue for school psychologists. According to a national survey of school psychologists, reading difficulties were the most common reason for academic referrals (Bramlett, Murphy, Johnson, Wallingsford, & Hall, 2002). The high referral rate for reading problems may be related to inadequate preparation of teachers to teach groups of students with diverse reading difficulties (Moats, 1994; Snow, Burns, & Griffin, 1998). On average, teachers take only three semester hours of training on how to teach reading, which does not leave teachers with the confidence that they are appropriately prepared to teach students with reading difficulties (Bos, Mather, Dickson, Podhajski, & Chard, 2001; Educational Testing Service, 1999). This lack of training is unfortunate, as evidence shows that properly trained teachers who employ proven teaching methods can teach all but 2-5% of students to read, a far cry from the roughly third of students in the nation who currently read below a basic level (Fletcher & Lyon, 1998; Lee et al., 2007). The National Reading Panel (NRP) found that teachers may need formal training in comprehension instructional techniques to teach comprehension effectively. Furthermore, the NRP concluded that teacher training and support was related to teacher use of effective instructional strategies in reading and subsequent higher student achievement in reading (NRP, 2000). While individual states and teacher education programs are in the process of modifying teacher training to address these needs, school psychologists are already in a position to collaborate with current teachers on empirically based reading instructional methods. In the current era of Response-to-Intervention (RtI) following the 2004 re-authorization of the Individuals with Disabilities Education Improvement Act (IDEIA, 2004), instructional consultation is particularly important (see for instance Jimerson, Burns, & VanDerHeyden, 2007 for a review of contemporary scholarship related to RtI).

This paper is designed to act as a guide for school psychologists to use in the consultation process when working with teachers regarding reading and intervening with students experiencing reading difficulties. The following details considerations to take into account when entering a consultation relationship including: how to enter the consultation relationship, how to effectively identify the problem at hand and underlying cause, how to identify the appropriate intervention and implement interventions with fidelity, and finally how

and when to terminate the consultation relationship. Additionally, a consultation checklist is provided as a quick and simple step-by-step reference to ensure proper use of the consultation process (see appendix A). Moreover, Tables 1 and 2 provide a comprehensive list of resources to consult when determining appropriate reading interventions to implement.

CONSULTATION MODEL

Effective consultation in the classroom must follow a well-developed and systematic approach (Dougherty, 2008; McKenna, 2005; Rosenfield, 2002). Rosenfield's (1987) instructional consultation model is a valuable guide to consultation in the school setting, as it places an ecological emphasis on collaboration as the driving force behind creating change. Unlike the traditional medical model of consultation that focuses on individual student deficits, the instructional consultation model takes a collaborative systems-based approach to both diagnosing a problem and seeking to make improvements. Thus, if the task at hand is improving a student's reading performance, the problem-solving elements involve studying classroom and instructional variables in addition to individual factors, such as skill level and student background. The consulting relationship between the school psychologist and teacher is seen as non-hierarchical and collaborative throughout this model (Rosenfield, 1987). The instructional consultation model can also extend beyond the school psychologist-teacher relationship and include other key players, such as other teachers in both general and special education, classroom aids, the principal, and parents. As the problem is identified and strategies are developed to intervene, additional people can be brought into the consultation and intervention process.

The term "instructional consultation" was coined by Bergan and Schnaps (1983), who likened the model to behavioral consultation, which is targeted at changing teachers' behavior rather than students' behavior. Rosenfield (1987) later refined the model into specific consultation stages. Throughout these stages, the consultant and consultee work together to build a collaborative relationship through good communication and interpersonal skills. School psychologists can build working collaborative relationships with teachers throughout this process. It should be noted that in order to be most effective, these stages of consultation should be followed in a subsequent order, where one does not move to the next stage without successful completion of the former. The following provides a step-by-step guide delineating the important facets of instructional consultation both in general and geared toward consulting regarding reading problems.

Entry and Contracting

Typically during the entry stage in the instructional consultation model, a teacher requests assistance or support from the school psychologist. This differs from the medical model of consultation in which a student is referred for individual deficits; referrals for instructional consultation request assistance for the teacher to handle a student problem. School psychologists can design a simple referral slip that asks for general information, including the student's name, a brief description of the identified concern(s), and a convenient time and place to meet and discuss the issue in person.

During the initial meeting, the school psychologist and the teacher discuss their individual perspectives on the problem, expectations of each other, and issues on which to focus (Cherniss, 1993). During this time the school psychologist should begin to evaluate the reading problem in terms of the nature of the referral, the data used to make a decision to refer, interventions and instructional strategies currently in place, and next steps. This is crucial for the establishment of a collaborative relationship.

Additionally, as part of the initial meeting process, it is important to collaborate to develop a working contract, which outlines the process of problem solving and sets boundaries for the consultee-consultant relationship (Dougherty, 2008). Contracts may be formal (written), or informal (verbal) in nature. However, they should include the following components: (a) explanation of the problem-solving stages, (b) introduction of the instructional triangle (explained later in this article), (c) clarification of roles and collaborative nature of relationship, (d) time involvement, (e) explanation of data collection, and (f) limits of confidentiality (Conoley & Conoley, 1992; Dougherty, 2008). Contracts serve as a guiding document for the working relationship that can be returned to throughout the course of the consultation process, as well as a method for obtaining informed consent.

The initial meeting should conclude with a decision to continue or discontinue consultation. It has been suggested to consider six important issues when making this decision (Cherniss, 1993; Dougherty, 2008). The first one relates to the congruence between the school psychologist and the teacher. For instance, whether both the teacher and the school psychologist support empirically based reading interventions will likely influence the consultation process. The second issue deals with resources, their availability, and who provides them. Questions to address include when and for how long will each team member need to devote to the interventions? Will aides or other school staff be involved in the interventions? Third, both the teacher's and the school psychologist's characteristics should be considered. It may be important to evaluate the compatibility of both team members' personality traits and work styles.

The fourth issue to be considered is the teacher's perception of the actual need for change, as this will influence the perceived importance of the consultation relationship. For instance, is the teacher slightly resistant to change in the classroom? If so, what specific variable is he or she resistant to change, and can consultation be done effectively around this? How will the school psychologist's role be affected by this? Fifth, both parties should share their expectations for the consultation process. For example, the teacher and the school psychologist should discuss each of their roles in the process as well as the involvement of any other individuals. Finally, the teacher and school psychologist should agree on the specific population with whom the psychologist will be working. For instance, the teacher and school psychologist may determine that the school psychologist consult regarding two students experiencing reading difficulties as opposed to consulting regarding class-wide instruction. Each of these six issues should be carefully addressed, as a failure to do so can result in both ineffective consultation and unnecessary conflicts during the process. If a decision to proceed with consultation is made, the team can proceed to the problem identification and analysis stage.

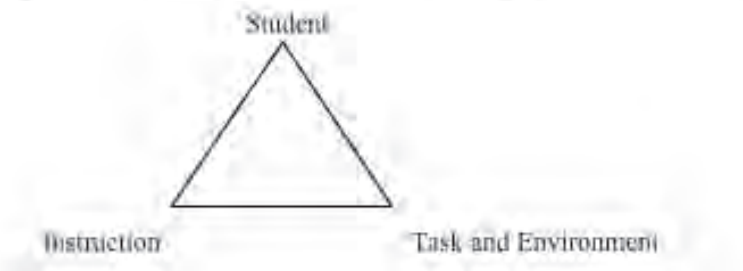
Problem Identification and Analysis

Although both the teacher and school psychologist may enter the consultation relationship with preconceived notions about the problem at hand, it is important to identify the problem collaboratively through both data analysis and discussion. The process of examining the reading problem should be comprised of a balance between personal perspectives of the problem and objective information gathered from baseline data.

Reading problems, as well as other academic and/or behavioral challenges, occur within a dynamic and multidimensional school context. It is thus important for school psychologists to consider the environmental influences placed on students, rather than solely focusing on student deficiencies as the reason for the problem (McKee & Witt, 1990). This multilayered relationship is best displayed by the Instructional Triangle developed by Gravois, Rosenfield, and Gickling (1999) see Figure 1.

FIGURE 1

The instructional triangle (adapted from Gravois, Rosenfield, & Gickling, 1999)



According to the instructional triangle, the student is viewed as one part of a three-way relationship between student, instructional method, and the task and environment. The problem-solving stage focuses on

altering the different variables within the instructional triangle. Thus, when evaluating a student for reading difficulties, discussion should be directed toward malleable variables such as skill level, rather than those variables commonly believed to be stable across time (e.g., intelligence).

The second point in the triangle, refers to the environmental demands placed on the child, such as reading a certain number of chapters in a book or answering comprehension questions. Teachers often evaluate students' progress in reading and language arts based on their performance and completion of these tasks. When consulting about a student's reading problem, the school psychologist and the teacher should examine the match between the student's skill level and the instructional task. Oftentimes, a discrepancy between these two factors may result in poor performance and student frustration (Rosenfield, 2002).

Finally, the reading problem should also be examined by assessing the instructional strategies used. Researchers have demonstrated the positive impact of instructional factors (e.g., setting appropriate academic goals for students and engaging in ongoing progress monitoring through data collection) on academic achievement (Fuchs, Deno, & Mirkin, 1984; Lentz & Shapiro, 1986; Rosenfield, 2002). Thus, it is essential to examine instructional strategies as a third point in the triangle. Considering all three factors included in the instructional triangle is important as it can lead to a more accurate assessment of the reading problem and can help avoid reliance on subjective inference.

Problem identification must be data-driven. The consultation team should first define the problem in descriptive, observable, and measurable terms, such as a discrepancy between a student's current reading level and expected reading level (e.g., does the reading problem involve fluency? The inability to blend sounds? How far below the expected standard is the student currently performing?).

A data collection method should be established, including the reading probes to be used, how often reading probes are administered, and how progress is measured. Baseline measurements should be taken, and short- and long-term goals should be set. As instructional consultation does not merely focus on individual student behavior, a functional analysis will also identify any other classroom variables that may be contributing to the problem. The teacher and school psychologist should then determine if instructional tasks match the student's baseline reading level through curriculum-based assessment. Data from these observations are subsequently charted or graphed.

There are several methods to gather data including record and document inspection, observation (e.g., antecedent-behavior-consequence data), questionnaires and surveys, and interviews. The method chosen largely depends on the nature of the problem. In regard to reading difficulties, record and document inspection, as well as reading assessments may be preferred. For example, the school psychologist can examine students' academic tests, past reading assessments, or even vision exams, as these may reveal important information concerning the problem (Dougherty, 2008). Another way in which a school psychologist can obtain information about reading difficulties is through curriculum based measures (CBM) (Shinn & Bamonto, 1998). Such assessments can provide an accurate measurement of a student's reading ability within his or her current academic curriculum. Moreover, CBM measures provide useful information, such as overall reading ability, reading fluency, and blending ability, which can be used to conceptualize the expected and current performance discrepancy.

Intervention Planning

After operationally defining the problem and collecting data on it, the school psychologist and the teacher are ready to develop goals. As with problem definition, goals need to be clearly stated, specific, and measurable. For example, "improving reading fluency to adequate levels" is not an adequate goal, since neither improvement nor adequate reading fluency is defined. Instead, defining improvement in terms of reading a specific amount of words per minute by a given date may be a more desirable goal. Seven key steps should be taken when developing goals (Locke & Latham, 1984): (a) specify the task or objective, (b) specify how the task or objective will be measured, (c) specify the target or standard to be reached, (d) specify the time span involved, (e) prioritize possible goals, (f) rate goals with respect to difficulty and importance, and (g) determine necessary coordination requirements. Finally, effective goals should be measurable, cost-effective, and appropriate for the specific classroom of the teacher (e.g., culturally sensitive).

Once goals are set, the teacher and school psychologist can develop interventions based on the specific deficit in reading. Oftentimes, when the reading problem has been conceptualized as a component of a specific learning disability, special education may seem like the appropriate answer for the general education teacher. However, if the reading problem has been defined as a specific and measurable deficit in reading performance, teachers can typically generate a wealth of interventions that may help boost performance in that specific skill. The school psychologist and the teacher should examine any interventions implemented in the past, evaluate interventions currently in place, and consider new empirically based interventions (Dougherty, 2008). The interventions used should be supported by research, and tailored to the specific instructional demands of the classroom. A specific plan should include who will implement the intervention, how often and when they will implement it, what other materials are required, what data collection methods will be used, and when progress will be measured.

Daly, Witt, Martens, and Dool (1997) provide a model for directly testing possible causes of poor academic performance for individual children in classrooms. Functional analysis may be performed to test common causes of poor academic performance for individual children. Daly and colleagues provide common causes of poor performance that can be directly tested, including: (a) students have not had enough practice to perform the skill correctly, (b) students are not sufficiently motivated to perform the skill correctly, (c) students have not had enough help to correctly perform the skill, (d) students have never been asked to perform the skill in that way before, or the task is too hard. In this article each potential cause is linked to an intervention that makes sense (e.g., if the child has not had enough practice performing the skill, provide extra practice). Each of these possible causes of poor performance may be tested by providing the intervention and measuring the child's response. See Table 1 for potential causes and proposed interventions provided by Daly and colleagues.

TABLE 1

Suggested Interventions (Adapted from Daly et al., 1997)

Possible Causes	*Proposed Interventions*
Student is not motivated	Provide incentives, use naturalistic instructional strategies as much as possible when teaching the skill (i.e., conduct training in context where performance "matters" to the student), provide the student choices in activities.
Student is not actively responding	Estimate current rate and increase student responding by using structured tasks, quickly paced instruction, allocating enough time for instruction, intervening at the correct task difficulty level so that the student can respond successfully and gradually increase task difficulty as student skill improves, providing immediate feedback, and setting criteria and reinforcing faster and more accurate (i.e., fluent) performances.
Not enough prompting and feedback active responding	Use response cards, choral responding, flashcards with praise/correction, peer tutoring.
Student shows poor accuracy in skill	Increase modeling and error corrections (read to student, practice with error correction use cover-copy-compare).
Student shows poor fluency in skill	Increase practice and provide incentives for the student "beating their score."
Student does not generalize the skill	Teach multiple examples, teach skill in natural setting, self-monitoring, use natural incentives.
Materials do not match curricular objective	State objective, and identify related lessons that promote the use of the skill in natural context.
Skill is too hard for the student	Identify student accuracy and fluency and use materials that encourage a high rate of responding.

Reading interventions may need to be considered in multiple levels. The first level to consider is in the area of core instruction.

Core Instruction

The first step when consulting with teachers on reading is to ensure a research-based core curriculum is being implemented. Instructional skills have been linked to student progress in reading skill development.

Research indicates that explicit instruction in phonics, phonemic awareness, fluency, vocabulary, and comprehension are essential aspects of a core curriculum, and including these components leads to improved student learning (NRP, 2000). Using a quality core curriculum and effective instructional practices can potentially rule out poor instructional techniques as a cause for student reading issues. When providing reading instruction to students at-risk for reading failure, it is extremely important that the instruction be delivered in a planned and explicit manner that integrates early literacy research and learning principles (Manset-Williamson & Nelson, 2005).

A Sound Instructional Environment

Schools that provide effective core reading instruction as well as additional intensive instruction to students at-risk have seen significant growth in student achievement. Torgesen (2002) reviews the results from a school in Florida where over the course of 5 years the number of students performing below the 25th percentile in reading by implementing effective reading instruction was reduced. Torgesen (2002) reported some effective instructional strategies including: explicit teaching, phonemic awareness, phonemic decoding, fluency in reading and comprehension, oral vocabulary, spelling, and writing.

Foorman, Francis, and Fletcher (1998) studied three instructional strategies (i.e., direct, embedded, or implicit) to determine which strategy resulted in the greatest and most rapid student gains in reading. Students received one of three different instructional interventions and their growth was measured. Direct instruction explicitly taught the target skill of decoding phonemes the letter-sound association was explicitly trained. Embedded instruction included the skill of decoding phonemes by providing instruction on sound-spelling relationships. The letter-sound association was less explicitly taught by embedding the letter-sound association within a more naturalistic task in the classroom. Implicit instruction included the skill of decoding phonemes by providing instruction in the alphabetic code while reading connected text. In this condition, the letter-sound association was not explicitly taught and students were required to generalize training knowledge to successfully make the association. Results indicated that students who received direct instruction of letter-sounds in decodable text increased their word reading skills significantly faster than children taught with the other two intervention types. This study revealed that when selecting reading interventions for students at-risk for reading failure, direct instruction is more effective than embedded or implicit instruction. The consultant should ensure the teacher is trained to implement reading interventions in an explicit and highly structured manner. Overall it is suggested that reading interventions for students at-risk should be designed using direct instruction and implementation of interventions should be observed by staff to ensure treatment integrity (Foorman et al., 1998).

Students who do not make adequate progress in reading despite quality instruction and evidence-based curricula may need to receive more intensive instruction. Several studies have shown that participating in small-group remedial instruction leads to increased student learning and prevented further reading difficulties from developing.

Intensive Intervention

After steps have been made to ensure that the instructional environment is sound, and it has been determined that a student still does not meet academic expectations as compared to his/her peers, more intensive intervention may be needed. Once the problem is identified, school professionals may explore various intervention options and evaluate the interventions' effect on the student's learning. If the "causes" of the behaviors are identified (i.e., the task is too difficult), intervention may be linked to this identified cause. Throughout this process assessment can be used to identify and direct interventions. In other words, assessment will inform the intervention and each plan will be based on the data obtained. Instructional or environmental variables may be altered to promote the success of the student. For example, the intervention could require that the teacher provide more corrective feedback or praise during instruction. To ensure positive outcomes, research-validated interventions should be used. Furthermore, schools should have a variety of interventions available to address the full range of performance problems that are typically presented by students. Table 2 provides valuable resources that can act as a good starting place when exploring various interventions.

TABLE 2

1. *Intervention Central*
www.interventioncentral.org/
Description: This site provides free resources, strategies, and tools to support positive classroom behaviors for effective learning. Publications of effective research-based practices are also available to download .

2. *The savvy teacher: Reading interventions that really work* (Wright, 2001).
http://www.jimwrightonline.com/pdfdocs/brouge/rdngManual.PDF
Description: This manual is compilation of evidenced-based classroom-friendly reading interventions cited from the National Reading Panel. Interventions are inclusive and creative. The manual provides techniques, tips, and worksheets needed to design an effective reading intervention plan.

3. *Beginning Reading What Works Clearinghouse—Institute of Education Sciences*
http://ies.ed.gov/ncee/wwc/reports/beginning_reading/
Description: Reviews the effectiveness of beginning reading programs in alphabetics (phonemic awareness, phonological awareness, letter recognition, print awareness, and phonics), reading fluency, comprehension, and general reading. A valuable resource to use to determine what interventions best promotes beginning reading in each of these categories.

4. School wide strategies for managing reading
http://www.jimwrightonline.com/php/interventionista/interventionista_intv_list.php?prob_type=reading
Description: This site provides strategies for managing reading interventions at a school wide level and how to implement interventions. The interventions are research based and links provide step-by-step instructions for implementing various intervention strategies.

5. *Building, implementing, and sustaining a beginning reading improvement model: Lessons learned school by school* (Simmons et al., 2002)
Description: This chapter outlines how to create and implement a beginning reading intervention model within a school system. The model outlines stages of intervention and how to effectively implement the intervention plan and sustain results considering the complexities of the school.

6. *Reading and Math Intervention Protocols*
www.gosbr.net
Description: This site provides links to numerous scientifically based interventions including reading interventions and progress monitoring. The site provides tools and guidelines needed to implement the interventions.

School-based teams can easily and rapidly identify students who are at-risk for reading failure by assessing phonics, letter-sound understanding, and vocabulary. By measuring student progress frequently, students who are at-risk can be identified early and be provided with intensive instruction (Torgesen, 2002). When intervention is required it is important to clarify the term intensive intervention. Although many studies imply that one-on-one intervention is more intensive than group intervention other researchers have not found significantly greater effects. Elbaum, Vaughn, Hughes, and Moody (2000) conducted a meta-analysis in which results indicated that when comparing individual interventions with small-group instruction there did not appear to be an advantage to individual-intervention programs.

Ideally, intensive instruction provides more daily academic engaged time focused on reading instruction and practice for students who are at-risk. Peer strategies such as class-wide peer tutoring and peer-assisted learning have been found to improve the reading skills of students who are at-risk. Small-group instruction and individual instruction provided in addition to core reading instruction time has been found effective in improving the skills of at-risk students. Torgesen (2002) suggests that instruction must be provided incrementally with guidance. Specifically, the learner should be instructed slowly and deliberately with support from the teacher. In this context, the teacher guides the lesson and the student responds frequently while being assisted by the teacher in creating his/her answer.

Some students may require certain elements of an intervention package, while other might require multiple intervention components. Begeny and Silber (2006) conducted a study to examine four group-based treatment packages containing two or more interventions: repeated reading, listening passage preview, and practicing difficult words in isolation. Findings suggested that the combination of all three components was most effective for those particular students.

Although special education may be considered the most intensive intervention, it is important to try to meet the child's need within general education first to provide the child with the least restrictive instructional environment. Lennon and Slesinski (1999) investigated whether special education placement could be prevented by identifying students at-risk via a letter-naming task and intervening using a ratio of 1 teacher to 2 students in a tutoring model with kindergarten students. Classroom teachers were also provided training in research-based reading instructional techniques at the onset of the study and on a monthly basis. Pairs of students were assigned, but pairs were changed when one participant was making more progress than the other. Tutors conducted the daily 30-minute tutoring sessions with students for 10 weeks. Results indicated that students who received the tutoring grew faster than control group students. Middle-performing students who received tutoring grew faster than low-performing students who received tutoring. In addition, many middle-performing students performed the same as high-performing students by the end of the intervention sessions, at the 10-week assessment period. A two-year follow-up of the tutored cohort determined lower special education placement rates compared to previous cohorts. This implies that daily 30-minute sessions of tutoring focusing on reading and writing instruction with at-risk kindergarten students, can produce significant student gains in beginning reading skills.

McMaster, Fuchs, Fuchs, and Compton, (2005) studied the improvement of reading performance of first grade students not responding to a class-wide reading intervention called Peer Assisted Learning Strategies (PALS). Students who did not respond to this particular intervention received one of three interventions: (a) additional PALS, (b) modified PALS or (c) tutoring by an adult. Modified PALS had the same components as PALS but involved the introduction of fewer words and sounds per session, and more modeling and practice opportunities. Results indicated that tutoring for students who did not respond to class-wide interventions was probably the most effective intervention compared to providing the student with other in-class interventions. Although results were not statistically significant for this intervention, results were stronger compared to the other interventions implemented with students classified as non-responders.

Intervention Implementation

Just as it has been an important component throughout this model thus far, collaboration and the use of data play a key role during the intervention implementation stage. Barnett, Daly, Jones, and Lentz (2004) provided a model for using single-case designs to aid in making decisions about reading interventions for students. Within a multi-tiered model, single case designs that focus on the intensity of the intervention and the student's response to the intervention should be used. Two types of variables were measured as part of the assessment: (a) a meaningful outcome variable that can be measured frequently across time; and (b) measure to assess the intensity of the intervention. School psychologists can look at the times per day the intervention occurs and the length of the intervention. In addition, if an intervention was reward based, the percentage of times the behavior occurred can be calculated (e.g., the number of times a teacher praised a student for appropriate behavior).

With regard to intensity, interventions are considered more intensive if they require more adult supervision or an increased amount of modifications to the curriculum. Intervention components can be added or subtracted to find the most effective, but least intrusive intervention. There are two designs that can be used to determine if an intervention is working and what the student needs. Increasing intensity designs are used when the intensity of treatments can be increased by extending, adding, or altering intervention components. The least intrusive intervention is used and components are added (as needed) until the objective of the intervention is accomplished. A decreasing intensity design can be used when students are engaging in high-risk behaviors, or when a student with intensive services is being reintroduced into general education. It begins with a multi-faceted effective intervention, and facets of the intervention are systematically removed to see if the intervention effect is maintained. Overall, it is suggested that evidence-based interventions must be used and control conditions should be applied (getting baseline information, or briefly withdrawing the intervention to document the effects; Barnett et al., 2004).

Intervention Integrity

Perhaps the most serious threat to attaining the results that are possible with use of empirically based interventions is the degree to which correct implementation occurs. Interventions should be implemented as designed and the process with which they were chosen and students identified should be implemented as intended. Intervention integrity is the degree to which interventions have been correctly implemented as planned (Gresham, 1989).

It is important to directly monitor intervention integrity. Intervention integrity needs to be assessed to know if behavior change is a result of the intervention. A prevalent mistake on the part of school professionals is to conclude that an intervention has not been successful in the absence of intervention integrity information, and then to provide a more complicated or intensive intervention to replace the first intervention. Intervention integrity should always be measured prior to concluding that an intervention has not been successful.

Gresham (1989) wrote a foundational article that enumerated serious concerns about intervention integrity for students. This article discussed two empirical studies conducted by Gresham and colleagues and questioned the practice of monitoring only outcomes in research and practice when the implementation of the intervention was ignored. Gresham reported five factors that weaken intervention integrity: (a) treatments that are too complex, (b) treatments that require too much time, (c) treatments that require materials that are not easily accessible, (d) treatments that are not perceived to be effective by those who must implement the treatment, and (e) intervention implementer is not motivated to use the treatment.

When creating a written intervention plan, the plan should describe each step of the intervention in observable terms. The plan should be given to the interventionist and used by the observer to assess integrity. School psychologists should review: (a) intervention implementation data and (b) intervention effects with interventionists on a frequent basis. Direct observations of the intervention must be conducted. Self-report data concerning treatment integrity have not been determined to be reliable nor sensitive indicators of actual treatment integrity at this time. In fact, several follow-up studies have found that classroom teachers tend to overestimate integrity of intervention implementation (Gresham, 1989).

Mortenson and Witt (1998) reiterated that treatment integrity is critical to pre-referral intervention effectiveness, but also challenging to ensure. Previous research has demonstrated the effectiveness of performance feedback when provided on a daily basis. Performance feedback is defined as systematically measuring the percentage of correctly implemented intervention steps in a protocol and providing information to the teacher (usually verbally via the consultant) about the degree to which the intervention was correctly implemented. In addition, discussing correct implementation is used to ensure adequate integrity (e.g., re-training the teacher, providing new materials). Performance feedback is delivered in a supportive manner or tone, but the content of the feedback is specific and determined by direct measurement (i.e., steps implemented correctly and strategies for enchasing integrity).

Resolution and Termination

If the student's reading performance has improved to a satisfactory level, then the problem has been successfully addressed. Procedures for involving the school psychologist as a consultant again can be outlined in the event that problems resurface or in the event that a similar problem occurs with another student.

If reading performance has not improved, then the school psychologist and teacher may need to revisit the stages and revise the original plan. Perhaps the method of measurement was not accurate enough to detect improvement, or perhaps the potential cause of the reading problem was identified incorrectly. Additionally, it may be beneficial to include other team members in future problem-solving efforts, such as after-school tutors or parents.

The school psychologist and teacher should document all actions taken throughout the intervention, including the concern, relevant assessment results, description of the intervention, intervention integrity data, and the intervention results. The school psychologist need not write a formal report, but a brief summary of the problem-solving process can suffice for student records, and it can also be helpful information for the student's future teachers.

CONCLUDING REMARKS

As it has been noted throughout this paper, unaddressed reading difficulties are a serious issue that carries the negative consequence of impeded student performance in school and throughout life. School psychologists should consult with teachers to provide resources and support to thwart these negative outcomes. The use of a comprehensive model in the consultation process is efficient and ensures that all questions are asked and all steps are covered. The consultation model outlined in this paper can act as a valuable resource for school psychologists to use in the consultation process when working with teachers to help improve student reading performance.

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