Three-Tier Models of Reading and Behavior

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Abstract

This paper provides a description of three-tier intervention models for reading and behavior. Although there is scientific evidence that the implementation of interventions at one or more levels of these models leads to improved reading or behavior performance, there is a paucity of research detailing the integration of three-tiered reading and behavior models. A future direction in the area of reading and behavior intervention models should be the integration of these models. This future direction is briefly discussed.
Keywords: Gating, Model of reading intervention, model of behavioral intervention.

Students must learn to read to be successful in our educational system and society as a whole. Kame'enui, Carnine, Dixon, Simmons, and Coyne (2002) noted, "reading opens up the world for children and is the doorway to learning. Unlike any other ability, the capacity to read allows children access to the collective knowledge, history, and experiences of our shared symbolic humanity" (p. 54). Even though reading is one of the most valued skills in the nation, many students continue to struggle learning to read. When students can't read, precious resources in schools are devoted to remediating the skills of struggling readers, which is estimated to be as high as 70% of older students (Biancarosa & Snow, 2004). Additionally, 80 to 85% of students identified with learning disabilities have reading as their primary area of difficulty (Kame'enui et al., 2002). Deficits in reading achievement are associated with a host of negative outcomes including below grade level performance across the curriculum, grade retention, and failure to graduate (U. S. Department of Education, 2003). It is no wonder why reading has been the focus of instruction in the classroom, especially since the *No Child Left Behind Act* was passed.

As with reading difficulties, student behavior problems remain a primary concern to the general public and teachers. Not only is the proportion of individual students with severe behavior problems continuing to grow, but the severity and frequency of the antisocial behaviors displayed by these students continues to erode school climate and slow progress toward boosting academic achievement (Department of Health and Human Services, 1999; Walker, Ramsey, & Gresham, 2004). Effective methods for managing and responding to student misbehavior are critical. Walker, Ramsey, and Gresham (2003) noted, "aggression, disruptive, and defiant behavior wastes teaching time, disrupts the learning of all students, threatens safety, overwhelms teachers – and ruins their own chances for successful schooling and a successful life" (p. 6). Without the use of effective management programs, schools can expect to observe more than 20% of their students exhibiting problem behaviors (Scott, 2001). Additionally, Walker et al. (2003) noted, "schools can do a lot to minimize bad behavior – and in doing so, they help not only antisocial children, they greatly advance their central goal of educating children" (p. 6).

The purpose of this paper is to describe three-tiered models under which reading and behavior programs are designed. Additionally, the need to integrate reading and behavior models will be discussed.

Reading

There is an urgency in schools to eliminate or to prevent reading failure using research-validated programs. Torgesen (2000) noted, "children who become adults with low levels of

literacy are at an increasing disadvantage in a society that is creating ever higher demands for effective reading skills in the workplace" (p. 55). To aid in the elimination or prevention of reading failure, Vaughn and Linan-Thompson (2003) discussed the three-tier reading model. The authors noted that "to optimize learning opportunities for students, instruction at each level (primary, secondary, and tertiary) is more intense and explicit and the instructional group is reduced" (p. 144). Progress monitoring is an essential component of this model. This monitoring ensures students are making adequate progress and mastering concepts of newly learned skills.

The three-tier reading model, comprised of Tiers I (primary), II (secondary), and III (tertiary), uses explicit and systematic instruction to address or to prevent reading difficulties and to bridge the gap between students who struggle with reading and those who are successful. It should be noted that the three-tier model is a continuum where students enter and exit levels as needed. The primary goal is for students to succeed in reading and to be reading by third grade, which has become the national conversation about beginning reading instruction and intervention (Coyne, Kame'enui, & Simmons, 2004).

Tier I is the core reading program and is designed for all students in the school. This level does not exclude any student based on his or her reading skill. Further, Coyne et al. (2004) noted that a school-wide Tier I prevention program developed for all students in the school can optimize the individual reading outcomes for students with disabilities. Instruction using the core reading program is conducted by the classroom teacher in the general education classroom (Vaughn & Linan-Thompson, 2003). The core program must be researched-based and target phonemic awareness, phonics, fluency, vocabulary, and comprehension (Coyne et al., 2004). Further, progress monitoring is conducted using a benchmark test three times per year. For example, the *Dynamic Indicators of Basic Early Literacy Skills* (*DIBELS*) is an effective assessment system that is easy to administer and is sensitive to growth (Coyne et al., 2004). These tests are administered to kindergarten through third-grade students in the fall, winter, and spring. The core program should result in approximately 70-80% of the students meeting *DIBELS* benchmarks (Good, Kame'enui, Simmons, & Chard, 2005; Vaughn Gross Center for Reading and Language Arts, 2005). Those students who continue to struggle with reading and do not demonstrate adequate progress will move to Tier II.

At Tier II, supplemental reading instruction is provided to students who are not making progress in their core reading program. These students account for 20-30% of the school population (Coyne et al., 2004; Vaughn Gross Center for Reading and Language Arts, 2005). Furthermore, Coyne et al. noted that "schools also need supplemental and intervention programs and materials to support and reinforce the core program. Because one size does not fit all in beginning reading instruction, schools need to offer a continuum of instructional programs" (p. 238). Supplemental instruction to the core reading program is used such as double dosing the core reading program or using research-validated strategies including graphic organizers, repeated reading, and/or reciprocal teaching, to help students become successful and fluent readers. Tutoring may also be provided to small groups of students for 20-40 min per day (Vaughn & Linan-Thompson, 2003). The intent is that through small group instruction the students will "catch up" with their grade-level peers and exit Tier II. Those who need additional reading instruction move to Tier III.

Tier III is for students (5-10%) who did not make progress during Tier II instruction (Vaughn Gross Center for Reading and Language Arts, 2005). Often students are already failing in school (e.g., students with learning disabilities) or are seriously at-risk for reading failure. Early intervention is critical to bring students to grade level. Further, progress is monitored weekly and instruction changes if needed (Coyne et al., 2004; Vaughn & Linan-Thompson,

2003). Reading instruction can be provided in small groups and/or one-on-one, and lessons are conducted for longer periods of time (60 min or more).

To ensure the success of a three-tiered reading model, five stages must be accomplished (Kame'enui & Simmons, 1998). Stage I assesses student performance using dynamic indicators of "big ideas" (e.g., phonemic awareness, alphabetic understanding, and automaticity with the code). Kame'enui et al. (2002) noted, "we use big ideas in reading to refer to a set of unifying curriculum activities necessary for successful beginning reading" (p. 57). The purpose of this stage is to identify students at-risk for reading difficulties. All children grades K-3 are screened with measures corresponding to the big ideas of reading.

Stage II analyzes individual performance and plans instructional groups. Using each student's individual performance, teachers can identify those children who are at the greatest risk ("Intensive care" students), are at some risk ("Strategic" students), or are making adequate progress ("Benchmark" students). Children are grouped according to reading performance for strategic intervention.

Stage III sets ambitious instructional goals and monitors formatively. Ideally, assessment should take place on a weekly basis for the intensive care group and monthly for students in the strategic group. Using each student's individual performance teachers should set 4-week and long-term instructional goals.

Stage IV analyzes intervention contexts and prioritizes intervention dimensions. Kame'enui and Simmons noted, "Stage IV activity focuses on the multiple contexts that must be considered when designing intervention and the importance of instructional fit with the host environment" (p. 19). Dimensions of intervention models include: setting (school and classroom), teacher situation organizer, and curriculum materials.

Finally, Stage V is comprised of evaluating interventions formatively and making instructional adjustments. During this stage teachers evaluate student progress toward established goals and determine if an instructional change is needed.

In a review of literature by Stewart, Martella, Marchand-Martella, and Benner (2005), five investigations that targeted only reading interventions as part of a three-tier model were analyzed (i.e., Coyne, Kame'enui, Simmons, & Harn, 2004; Gunn, Smolkowski, Biglan, & Black, 2002; Nelson, Benner, & Gonzalez, 2005; O'Connor, 2000; Vaughn, Linan-Thompson, & Hickman, 2003). Findings included the following. All five studies were conducted at the elementary level. Disability classifications included learning disabled, at-risk (i.e., reading disabilities, qualified for free and reduced lunch, and/or emotional disturbance), and high-risk (identified for special services). Three of the five studies implemented Tier II reading programs; one investigation examined the effects of using a Tier III intervention; the remaining study addressed all tier levels. Reading interventions consisted of explicit programs including: *Open Court, Read Well, Reading Mastery, Write Well, Stepping Stones to Literacy, Harcourt, and Ladders to Literacy*. Overall, the three-tier reading model demonstrated impressive results regarding reading improvement (e.g., comprehension, word attack, oral reading fluency, and rapid naming skills) across all five investigations.

Behavior

Underachievement often produces social functioning difficulties and is associated with behavior problems (Bower, 1995; Walker, Colvin, & Ramsey, 1995). Therefore, schools need to

develop and maintain a school-wide positive behavioral intervention and support program to create a safe environment and maximize student learning (Martella, Nelson, & Marchand-Martella, 2003). By implementing a school-wide program, schools can decrease the number of problem behaviors exhibited by students and provide a clear focus for intervention on the students with the greatest support needs (Scott, 2001). Gresham (2004) noted, "Schools are unique because they are the one place that teachers and students spend a significant amount of time together in both structured and unstructured contexts thereby creating numerous intervention-related opportunities" (p. 326). Additionally, Eber, Sugai, Smith, and Scott (2002) noted, "consensus is growing that prevention and early intervention must be prioritized, agencies must collaborate, and family-school partnerships must be improved so that effective interventions are actually implemented" (p. 171). It is crucial that all staff in the school is "on board" with a school-wide behavior management program. Commitment and consistency is essential for a successful program.

Therefore, it seems likely that implementing a school-wide behavior intervention and support program is critical to successful behavior management. As with reading, the three-tier intervention model for behavior addresses school-wide and individual student behavior problems. The three-tier model for behavior includes: Tier I (primary/universal), Tier II (secondary/selected), and Tier III (tertiary/targeted or intensive) (Walker et al., 2003). This model has also been referred to as the "three-tier prevention model" consisting of students without chronic behavior problems (primary prevention), those students at-risk for problem behavior (secondary prevention), and students with intensive behavioral needs (tertiary prevention) (Eber et al., 2002).

Tier I implements behavioral procedures for all students (Gresham, 2004; Walker et al., 2003). These procedures usually include a well-enforced school discipline code, school-wide discipline plans, district-wide bully prevention programs, and social skills training in the general education classroom (Gresham, 2004; Walker et al., 2003). Approximately 80-90% of students will respond to these procedures (Sugai, Sprague, Horner & Walker, 2000). These students do not exhibit any chronic problem behaviors. Students who are at risk for more severe problem behaviors are provided Tier II (secondary) interventions. These interventions are designed for students who are unresponsive to universal approaches (Eber et al., 2002; Sugai, Horner, & Gresham, 2002). At the Tier II level, behavioral interventions are implemented in small groups. Interventions such as behavior contracts, social skills training in a group, self-management strategies, and token systems can be used at this level (Gresham, 2004; Martella et al., 2003; Sugai et al., 2002; Walker, 2004). Students in the secondary level comprise 5-10% of the school population and are considered "at-risk" for future behavioral problems (Sugai et al., 2002). There may be some students who still do not respond to these behavioral interventions and will need to proceed to Tier III interventions.

Approximately 1-5% of students (treatment resisters) will need Tier III interventions and exhibit chronic patterns of violent, disruptive, or destructive behavior (Gresham, 2004; Sugai et al., 2002). Gresham stated, "the most intense level of intervention focuses on students that are the most recalcitrant to change and who exhibit chronic academic and/or behavioral difficulties" (p. 330). The use of functional behavioral assessments and implementation of behavior plans are often required at the Tier III level. Students need to be taught positive behaviors that replace the unwanted behavior being exhibited. Any behavioral interventions implemented at this level are highly individualized. Additionally, Walker et al. (2003) indicated that interventions need to be "family focused, with participation and support from mental health, juvenile justice, and social services agencies, as well as schools" (p. 13). Furthermore, it is imperative students at the tertiary

level receive effective interventions because they are responsible for 40-50% of all behavior disruptions in the school (Sugai et al., 2002).

A key to making this model work in schools is the use of a multiple gating procedure. Sprague and Walker (2000) described multiple gating procedures that are used for screening and identification of middle school age students who are severely at-risk for committing juvenile offenses. Martella et al. (2003) also described multiple gating procedures as part of a school-wide program. Walker et al. (2003) noted, "multiple gating is a process in which a series of progressively more precise (and expensive) assessment or 'gates' are used to identify children who need help with their behavior" (p. 14). The screening procedure generally includes three gates. Gate 1 is comprised of teacher nominations. During this first screening, teachers nominate students who match each of two patterns of behavior. The two patterns of behavior include externalizing (e.g., aggression, tantrums, violent outbursts) and internalizing (e.g., depression, lack of social skills, and/or extreme shyness). (Note: the two sets of lists will rarely have any overlap of students.) In Gate 2, teachers rank the students based on their externalizing and internalizing behavior patterns. Walker et al. (2003) noted that teachers could use rating scales that measure the frequency of adaptive and maladaptive behaviors. For example, one rating scale assesses whether students have exhibited any of 35 externalizing and internalizing behaviors within the past 6 months. Two to three top-ranked students move to Gate 3. During Gate 3, school psychologists, guidance counselors, or social workers observe and record the classroom and playground behavior of these students. If students are determined to be in need of specialized support, they are provided a Tier III program. Implementing a multiple gating procedure is critical for the early identification of students who exhibit problem behaviors (e.g., antisocial and violence).

In the review by Stewart et al. (2005), eight investigations that targeted only behavior interventions as part of a three-tier model were analyzed (i.e., Colvin & Fernandez, 2000; Eber, Lewis-Palmer, & Pacchiano, 2002; Lewis, Sugai, & Colvin, 1998; Nelson, 1996; Scott, 2001; Sprague et al., 2001; Sugai et al., 2000; Turnbull et al., 2002). Findings included the following. The level of schooling targeted across investigations included: elementary (n = 4), middle school (n = 1), elementary and middle school (n = 2), and all levels including high school (n = 1). Classification of disability included at-risk (i.e., free and/or reduced price lunch, behavioral difficulties, receiving specialized services, disadvantaged students, and antisocial), high-risk (i.e., severe behavior problems and acts of aggression and violence), autistic, and emotional behavioral disordered. Six of the eight investigations implemented a school-wide (Tier I) prevention or intervention strategy, and the remaining two investigations addressed all three-tier levels. There were a variety of behavioral interventions used across all eight studies including: social skills instruction, discipline plans, school rules and expectations, functional behavioral assessments, and *Second Step Violence Prevention Curriculum*. Overall, results across behavioral studies revealed a decrease in problem behaviors including office referrals, in-school suspensions, and out-of-school suspensions.

Integrated

Although most often discussed separately, reading and behavioral difficulties tend to covary (Martella et al., 2003). In other words, reading failure and behavior problems do not always occur in isolation. Often, these difficulties coexist in students and are key targets for intervention to ensure long-term success. Research findings confirm a strong link between reading failure and behavioral difficulties. For example, Gable, Hendrickson, Tonelson, and Van Acker (2002) noted that students with emotional and behavioral disorders exhibit a wide range of academic and behavioral problems. Additionally, they emphasized the growing support for

integrating instruction to address both reading and behavior problems. Further, Malmgren and Leone (2000) found "a disproportionate number of incarcerated youth demonstrate poor reading skills. While poor academic performance does not directly cause delinquent behavior, rates of re-offending and recidivism are highly correlated with low levels of academic achievement" (p. 239).

In the past, reading and behavior have been viewed within separate three-tier models. However, an integrated three-tier model addressing both issues is needed due to the coexisting relationship between reading and behavior problems. Many students enter school without the needed social or academic skills to attain success in our educational system. Horner, Sugai, Todd, and Lewis-Palmer (2005) noted, "The basic message is that academic and behavioral supports must be intertwined. Children will not learn to read by being taught social skills, but they also will not learn to read if a good curriculum is delivered in a classroom that is disruptive and disorganized" (p. 382). Thus, O'Shaughnessy, Lane, Gresham, and Beebe-Frankenberger (2003) posed the following question: "How can schools better assist children who enter school without the necessary knowledge, skills, or attitudes they need to be successful?" (p. 27). An integrated three-tiered reading and behavior model would target those students who lack the necessary academic and behavioral resources for a successful education. Additionally, Horner et al. (2005) noted, "Combining behavior support and effective instruction may be an important theme for school reform in the United States" (p. 382).

Gable et al. (2002) discussed integrating academic and non-academic instruction for students with emotional/behavioral disorders (E/BD). The authors proposed implementing an integrated planning model for students with E/BD. Using the three-step planning model teachers can identify and prioritize group or individual instruction for these students. This model would include: a Classroom Diversity Profile Form (teachers record information related to student academic functioning), a Class Profile and Management Form (teachers summarize information on strategies regarding classwide interventions, targeted interventions for subgroups of students at-risk, and student-specific interventions for students with special needs), and an Individual Instructional Plan Form (allows school staff to identify strategies that are aligned with individual student academic and non-academic needs). The overall purpose of this model is to integrate instruction to address both academic and behavioral deficits. Further, Gable et al. noted, "we have attempted to draw a parallel between what defines academic and non-academic success and to blur distinctions regarding planning to address common learning versus behavior problems of students with E/BD" (p. 464).

Based on a review of the literature by Stewart et al. (2005), there were only five investigations found that targeted both reading and behavioral difficulties as part of a three-tier model (i.e., Fulk, 2003; Lane & Menzies, 2003; Lane, O'Shaughnessy, Lambros, Gresham, & Beebe-Frankenberger, 2001; Lane et al., 2002; Nelson, Martella, & Marchand-Martella, 2002). However, it should be noted that two of the five integrated studies used only a reading intervention to reduce reading and behavioral difficulties (i.e., Lane et al., 2001; Lane et al., 2002). The level of schooling across investigations included elementary (n = 4) and high school (n = 1). Participants were classified as at-risk (i.e., learning difficulties, behavioral problems, antisocial behavior, high transience rates, and free and/or reduced price lunch). Intervention levels included Tier I (n = 1), Tier II (n = 2), Tiers I and II (n = 1), and all tier levels (n = 1). Interventions implemented included: tutoring, smaller homeroom classes, explicit phonics programs, *Sound Partners*, *Talk It Out*, *SOS! Help for Parents*, and *Think Time*. Results of implementing an integrated multi-level system revealed an increase in reading skills and a decrease in disruptive classroom behavior. Additionally, results indicated positive effects on social adjustment and academic performance among participants.

Future Direction

Overall, the goals of three-tiered reading and behavior models are to provide prevention and intervention simultaneously. The level of intensity increases as students move from Tier I to Tier III. A student's response to the provided intervention will correspond to entering or exiting various tier levels. However, there is a need to integrate reading and behavior into a cohesive model given the strong correlation between low academic achievement and behavior problems (Heward, 2006). For example, approximately 67% of students with behavior problems cannot pass competency exams for their grade level and have the lowest GPAs (Heward). Additionally, approximately 75% of individuals in prison are poor readers (Kamps, Wills, Greenwood, & Thorne, 2003).

Unfortunately, an integrated model of reading and behavior is not being conducted on a large scale. As previously stated, only five investigations were found that integrated reading and behavior as part of a three-tier model. Two of the five investigations only focused on reading interventions and assessed corresponding changes in both reading and behavior.

Reading and behavior experts need to combine their expertise to form a three-tiered integrated model to reach students who are having significant difficulty in both areas. Results from integrated studies show improved academic performance and the reduction of behavior problems. An integrated system would be beneficial to both administrators and teachers as it saves time, money, and has been shown to be effective. Walker et al. (2003) noted, "the fact is, academic achievement and good behavior reinforce each other: Experiencing some success academically is related to decreases in acting out; conversely, learning positive behaviors is related to doing better academically" (p. 10). Given the fact that research strongly supports a link between reading and behavioral difficulties it becomes imperative that schools address these issues simultaneously.

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