
Improving Outcomes for Adolescents with Learning Disabilities

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ABSTRACT

The problems faced by adolescents with disabilities or adolescents at risk for academic failure trying to succeed within the rigorous secondary curriculum are great but not insurmountable. While the “performance gap” between what students are expected to do and what they can do is depicted in this chapter, the authors outline three categories of support beyond current supports that have been found critical in helping to close the “gap.” Each category—(1) instructional supports, (2) professional learning supports, and (3) system supports—is comprised of a variety of components that necessitate effort on the part of various stakeholders within the school community to implement in a coordinated fashion, over sustained time and with fidelity.

Keywords: adolescents with disabilities, learning disability, performance gap, achievement gap, intervention, intervention framework, CLC, Content Literacy Continuum

During the past decade, a growing amount of attention has been given to adolescent learners who struggle academically. This is evidenced by the large number of special reports issued specifically addressing the unique challenges facing these students as they move into secondary schools as well as the various interventions that enable them to successfully respond to rigorous curriculum demands (e.g., Biancarosa & Snow, 2006; Carnegie Council on Adolescent Literacy, 2010; Faggella-Luby, Ware, & Capozzoli, 2009; Graham & Perin, 2007a, 2007b; Heller & Greenleaf, 2007; McPeak & Trygg, 2007; Short & Fitzsimmons, 2007; SREB, 2009). While these reports do not specifically address adolescents who have been formally identified as having a learning disability (LD), their findings and recommendations are in alignment with what much of the research done on adolescents with LD has found. Thus, frequent reference will be made to important findings from these reports that are relevant to designing effective solutions to the vexing challenges adolescents with LD face.

The purpose of this chapter is three-fold: (1) to summarize some key findings that have emerged from the empirical literature during the past decade on adolescents with LD; (2) to describe an intervention framework that has emerged from the research and development (R&D) work of the University of

Kansas Center for Research on Learning (KUCRL) since 1978 in its attempt to design and validate instructional interventions and infrastructure supports that enable adolescents with LD to dramatically improve their academic achievement, to thrive in their content classes, and to become career and/or college ready; and (3) to specify issues that should be addressed by educational leaders, practitioners, and researchers to enhance the chances of adolescents with LD being able to find success in schooling, work, and their personal lives.

SUMMARY OF RESEARCH FINDINGS ON ADOLESCENTS WITH LD

A growing number of studies have appeared in the professional literature during the past decade describing the characteristics of struggling adolescent learners and the types of interventions that result in the most favorable outcomes. This is in marked contrast to the relative paucity of studies on adolescent learners overall. A summary of research findings in the areas of reading, writing, and mathematics follows.

Reading

Four major research syntheses and meta-analyses have been recently completed describing the types of instructional interventions and instruc-

tional procedures that have been found to have the greatest effects on enhancing outcomes for students who struggle (Edmonds, Vaughn, Wexler, Reutebuch, Cable, Klingler-Tackett, et al., 2009; Faggella-Luby & Deshler, 2008; Scruggs, Mastropieri, Berkley, & Graetz, 2010; Wanzek, Wexler, Vaughn, & Ciullo, 2010). These reviews all point to a converging evidence base that has emerged regarding adolescent reading comprehension instruction. Specifically, these reviews indicate that reading comprehension for both students with LD and those at risk for failure was improved when instruction mirrored what good readers do. That is, comprehension improved when readers learned to identify narrative and expository text structures, discover word meaning, tap prior knowledge, and use cognitive strategies. Reading comprehension instruction embodied a host of approaches including: teaching how to recognize and navigate various text structures (e.g., narrative, expository), teaching cognitive strategies (e.g., self-questioning, visual imagery), and teaching students how to participate in cooperative learning to increase their task engagement. The specific cognitive strategies that were found to be remembered best and used most frequently in post intervention included self-monitoring, summarizing, and story grammar self-questioning. Of particular note was the repeated finding that strategy instruction that was overt and explicit resulted in the greatest effect size.

Additionally, in a large descriptive study, Hock, Brasseur, Deshler, Catts, Marquis, Mark, and Stribling (2009) found that in all component areas of reading (i.e., alphabets, fluency, vocabulary, and comprehension), struggling adolescent readers were found to perform statistically lower than their proficient reader counterparts. By and large, the struggling readers scored approximately one standard deviation below the mean in each reading area and 20 to 25 or more standard score points lower than the proficient reader group. While the areas of greatest deficit were in fluency and comprehension, many poor readers showed significant deficits

at the word level as well (word attack, decoding, word recognition, and rate). Of particular note is the finding that the profiles of students with disabilities were similar across component areas; however, the size of the deficit was greater in Alphabets and Fluency (10.56 points and 6.65 points lower respectively).

Writing

The National Assessment of Educational Progress (NAEP) 2007 writing exam measured the writing skills of 8th and 12th graders and translated their scores into three levels of proficiency: Basic, Proficient, or Advanced (Salah-Din, Persky, & Miller, 2008). One sobering finding was that only 33% of eighth graders and 24% of twelfth graders performed at or above the Proficient level across the grades, and very few were found to write at the Advanced level (Salah-Din et. al., 2008). Very troubling was the fact that high proportions of students, two thirds of eighth graders and three quarters of twelfth graders, were found to be at or below the Basic level. Unfortunately, while scores for adolescents with disabilities were somewhat better in 2007 than 2002 or 1998, the greatest number scored below Basic in both the 8th and 12th grade samples. Over the past three administrations, the percentages of eighth grade students identified with disabilities scoring below Basic were 45, 53, and 57 percent respectively (NAEP Writing Data, 2007). For the same three years, percentages of students with disabilities in twelfth grade scoring below Basic were 56, 70 and 67 percent respectively. These results clearly underscore the importance of large numbers of adolescents receiving interventions to help them become better writers, and employing interventions that will help teachers improve the writing skills of students with disabilities is imperative.

Graham and his colleagues have recently completed several research syntheses and meta-analyses on writing instruction for adolescents (Graham, 2008; Graham & Hebert, 2010; Graham & Perin, 2007a, 2007b; Rogers & Graham, 2008). The follow-

ing encapsulate the findings with the largest effects that emerged from these reviews: (1) teach students how to plan (draft) both narrative and expository text; (2) directly teach grammar skills and usage (i.e., capitalization, subject/verb agreements, incomplete sentences, etc.); (3) teach students how to set clear and specific goals for increasing their writing productivity and quality; (4) teach students specific strategies for editing their written products for meaning, capitalization, punctuation, spelling, and overall appearance; (5) facilitate access to and usage of word processing software; (6) reinforce students for their writing quality and productivity (i.e., number of words, variety of words, new words, variety of sentence structures, etc.); (7) engage students in pre-writing activities for gathering and organizing ideas in advance of writing; (8) instruct students how to construct complex sentences (i.e., compound, complex, compound-complex sentences); and (9) teach students strategies for constructing different types of paragraphs (i.e., descriptive, expository).

Mathematics

Some research has suggested that as many as 5-8% of school-aged students experience some sort of mathematics LD (Geary, 2004). Students with LD tend to commit procedural errors, have difficulty organizing information, and evidence working and long-term memory deficits when performing mathematical tasks. Additionally, they frequently have difficulty with basic computation and problem-solving curricular demands (Geary, 2004; Miller & Mercer, 1997). A study by Montague and Applegate (2000) found that students with LD perceived math problems to be more difficult. They also found that these students required more time to complete problems and evidenced fewer strategies than their peers without disabilities.

Maccini and her colleagues (Maccini, Mulcahy, & Wilson, 2007; Maccini, Strickland, Gagnon, & Malmirgren, 2008) have conducted literature reviews to determine the nature and focus of math interventions that are effective for assisting adoles-

cents with LD. Their reviews of the empirical literature found that the practices resulting in the largest effect sizes included: (1) mnemonic strategy instruction (i.e., use of mnemonics to help students remember each step in a problem-solving strategy); (2) graduated instructional approach (i.e., employing a three-phase instructional process involving concrete instruction to introduce students to concepts via manipulatives, semi-concrete or representational instruction using pictures to represent objects, and abstract instruction using numbers and symbols); (3) cognitive strategy instruction involving planning (i.e., using self-monitoring while solving the math problem, focusing while solving the problem, addressing and using various data to solve problems, and solving the math problem in a specific order); and (4) schema-based instruction (i.e., explicit instruction that focuses on helping learners understand the structure of math word problems such as proportion or comparison). Across these various approaches they found a common thread of effective instruction (Rosenshine & Stevens, 1986) including components of direct and explicit instruction such as: modeling, guided practice, independent practice, monitoring student performance, and corrective feedback.

In sum, adolescents with LD face substantial academic challenges that can prevent them from being successful in being college or career ready.

AN INTEGRATED INTERVENTION FRAMEWORK FOR STRUGGLING ADOLESCENT LEARNERS

The problems that adolescents with LD face when trying to succeed within the rigorous general education curriculum are significant. Unless students have the necessary skills and strategies to respond to the heavy curriculum demands, they will encounter failure and frustration. Figure 1 illustrates the dilemma faced by teachers and students with LD in secondary schools. The straight solid line represents both the path of normal acquisition of skills, strategies, or knowledge by students performing

on grade-level and the demands of the curriculum. That is, these demands increase with each succeeding year that students are in school. Hence, at the end of one year, students should have gained a year's worth of knowledge, as signified by the distance between point A and point B. To the degree that students acquire the skills, strategies, and knowledge that are expected of students at their grade level, they will be in a position to successfully respond to the demands of the curriculum. For students with disabilities or who fail to acquire skills, strategies and knowledge at the typical rate of achievement, the performance trajectory from one year to the next would not follow the same path but instead, on average, be similar to the curved, dotted line with a year's worth of progress indicated by the distance between point A¹ and point B¹ (Warner, Schumaker, Alley, & Deshler, 1980). As these students continue to struggle in school, the gap between their academic proficiency and the demands placed on them by the curriculum continues to grow. To complicate this situation, some research has shown that the ac-

quisition of skills and strategies for adolescents with LD tends to plateau at about the 5th or 6th grade level (Warner et al., 1980). The National Center for Learning Disabilities reported that on average, 23% of students with LD lag by one grade level, almost half (45% in reading and 44% in math) test more than three grade levels behind, and at least one fifth are five or more grade levels behind the grade in which they are enrolled (Cortiella, 2011). Inasmuch as the demands continue to increase, the size of the gap gets larger with each succeeding year that students are in school and may contribute to the high drop-out rate among students with LD.

Given this dynamic, it is easy to understand why adolescents who struggle in learning may get discouraged, may begin to act out, or may give up trying altogether because of the size of the gap between where they are and where they are expected to be. Researchers and developers at the KUCRL and their partners in hundreds of schools have been designing and testing a broad array of interventions to find ones that will have an impact on narrowing the size of this gap and put adolescents with LD in a position to be successful in school. Our research has shown that no one intervention or element is sufficiently powerful to close the gap. Rather, significant progress occurs when multiple components are implemented with fidelity, in a coordinated fashion, and over a sustained period of time.

The addition of three categories of supports to the current supports has been found to be critical in helping to close the achievement gap: (1) Instructional supports, (2) Professional learning supports, and (3) System supports. Each category consists of several components given that current supports are not sufficiently powerful to change the trajectory of student achievement. In the following paragraphs, each category and its components will be described. There are three overriding goals of this instructional model: (1) dramatically improve academic achievement, (2) thrive in content classes, and (3) become college and/or career ready.

Figure 1

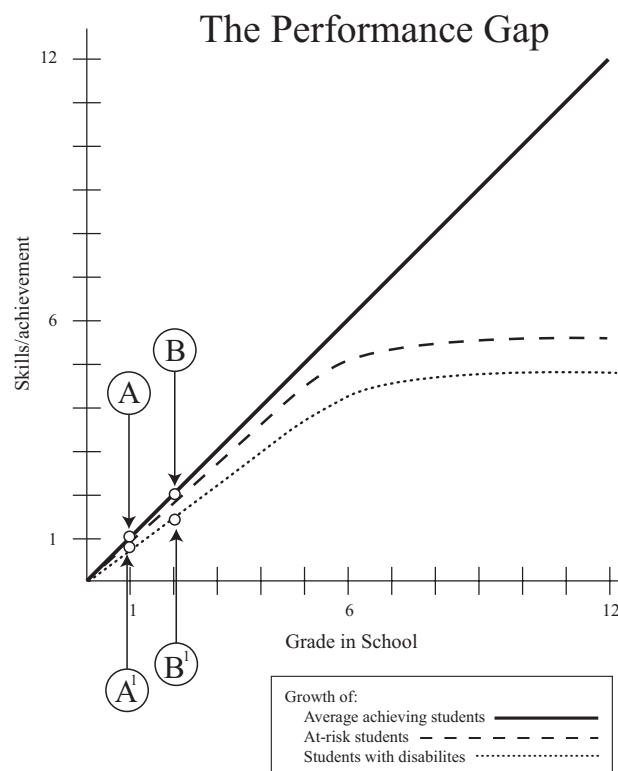
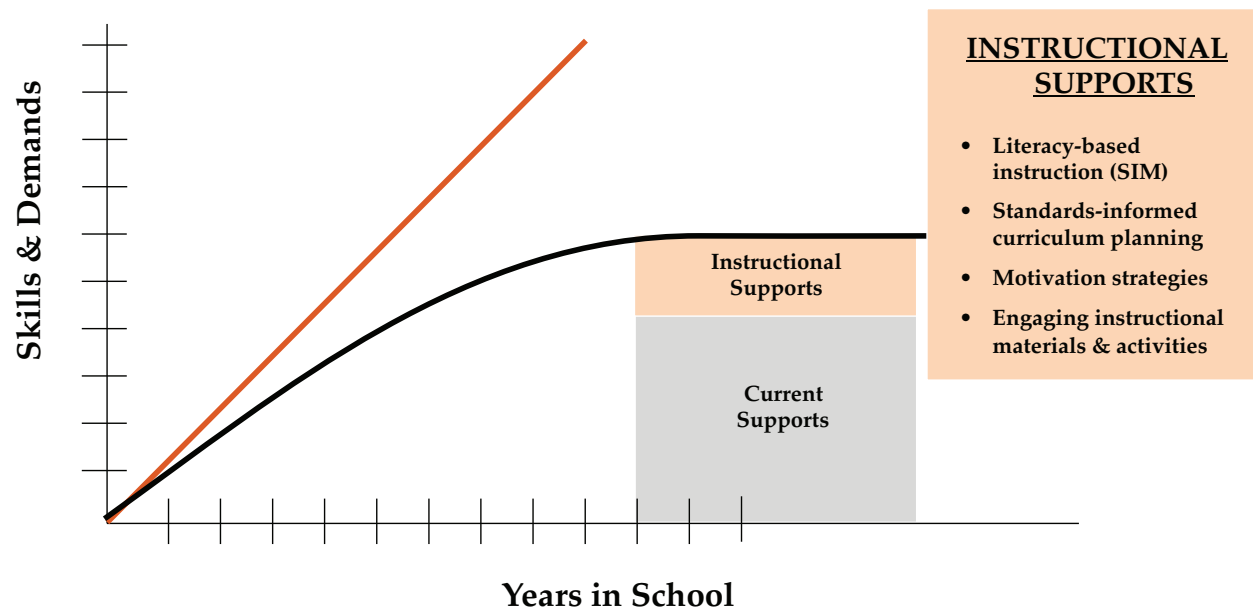


Figure 2



Instructional supports

Instructional supports are those actions, procedures, structures, or strategies that are used to improve the academic achievement of struggling adolescent learners. High quality instruction is foundational to bringing about any changes in the performance of students. Too frequently, emphasis is placed on factors other than instruction. Elmore (2004) has argued that most efforts to improve a school's focus are on aspects that are *not* central to the instructional process or what he refers to as the "core of educational practice." This core he defined as the standard solutions of "... how teachers understand the nature of knowledge and the students' role in learning, and how ideas about knowledge and learning are manifested in teaching and class-work" (p. 8). Included as well is the grouping of students for instruction, the time allocated to content, and the assessment of student work, which in Elmore's perspective have changed little and change only fractionally. Interventions or innovations that require substantive change in the core educational practices do not typically breach the practice barrier of most schools.

Instructional supports embody components that relate to what should be taught, how instruc-

tion should be provided, and what should be done to engage and motivate students (see Figure 2).

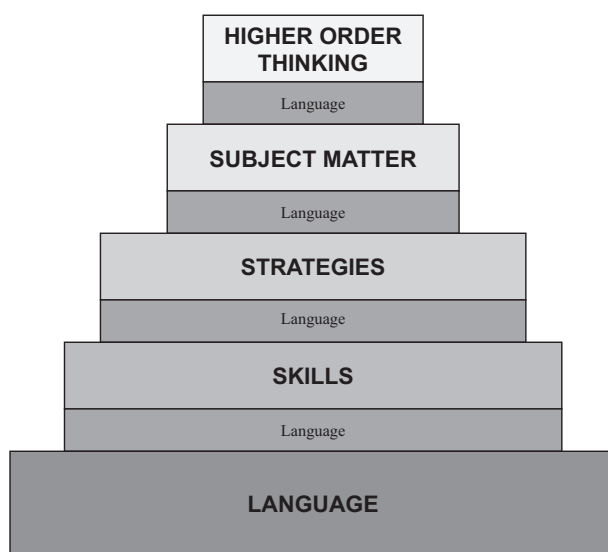
Literacy-based instruction. Most adolescents with LD struggle with language-based learning problems. Because of this, they have difficulty responding to and navigating rigorous curriculum demands that they encounter in middle and high school settings. In order to be good problem solvers and to be able to engage in higher order thinking, students must have a solid foundation of language and skills.

Figure 3 depicts the relationship between higher order thinking and the acquisition of critical subject matter, strategies, skills, and language. We refer to these elements as the "building blocks of content literacy." That is, underlying the ability to be a good problem solver and higher order thinker in various content disciplines (science, mathematics, history, literature, etc.) are four building blocks: (1) *Language*: foundational to any academic success is strong language skill. When students fail to acquire a strong language base in their pre-K years that includes facility with language structures as well as a rich vocabulary, future learning is markedly impaired (Risley & Hart, 1995). Hence, language is the foundational block in this structure. Language is shown

at the base of each of the additional building blocks because it plays a central role in each and students must learn how to use and navigate the unique and increased language structures at each level. (2) *Skills*: these are automatic procedures that do not require thought, interpretations or choice. Skills are observable behaviors and are acquired through repeated practice until they become habitual responses to particular tasks. In the case of reading, one example would involve the fluent, automatic application of phonemic skills in decoding words. (3) *Strategies*: these are conscious plans and actions under the control of the learner that are used before, during, and after the performance of a task. Strategies are process-oriented, cognitive operations used by students to purposefully navigate curricular demands. (4) *Subject matter*: each curriculum content area (e.g., history, biology, algebra, literature) has a body of information consisting of core concepts and underlying details that are structured in unique ways (e.g., hierarchies, taxonomies). The acquisition of critical subject matter content enables learners to problem solve and engage in higher order thinking.

Understanding the building blocks of content literacy helps to determine which particular building block or blocks require attention to properly equip struggling learners to be successful in school.

Figure 3



Regardless of the focus of *what* is taught during the instructional process, *how* that instruction is offered is very important. Among the defining features of effective instruction that have emerged from our research (Bulgren, Deshler, & Lenz, 2007; Deshler & Lenz, 1989; Ellis, Deshler, Lenz, Schumaker, & Clark, 1991; Schumaker & Deshler, 2006) are the following: (1) the purpose and benefits of learning a strategy should be explained to students; (2) the physical and mental actions embedded within a strategy should be fully described to students; (3) students should participate in goal setting to promote and guide learning; (4) multiple models of the strategy should be provided by the teacher; (5) the key steps of the strategy should be memorized so it can be used fluently in multiple settings and situations; (6) practice should begin with controlled and guided practice and ultimately conclude with advanced independent practice; (7) a measurement system should provide ongoing information that will demonstrate to the student and teacher that the strategy is being learned and used; and (8) while generalization should be prompted throughout the strategy acquisition process, specific efforts to promote generalization should follow strategy acquisition.

Standards informed curriculum planning. Increasingly, schools are attempting to orient their instructional planning and delivery to a set of standards defined by an external educational entity, such as a state department of education. Since 2009, the vast majority of states have adopted the Common Core State Standards (CCSS) (<http://www.corestandards.org/>). The CCSS is a state-led effort coordinated by the National Governors Association Center for Best Practices (NGA Center) and the Council of Chief State School Officers (CCSSO). The standards were developed in collaboration with teachers, school administrators, and experts to provide a clear and consistent framework to prepare children for college and the workforce. The instruction provided to adolescents with LD needs to be informed by and in alignment with these kinds of

standards if students are to acquire the kinds of skills, dispositions, and knowledge that will equip them to successfully compete in post-school environments.

An important step in successfully aligning instruction with external standards is carefully assessing the specific demands of the curriculum to understand the expectations that students must meet from a literacy perspective. As students move into the secondary grades, literacy demands change markedly in the following areas: texts become longer (i.e., more sophisticated learning strategies are required to complete assignments), word complexity increases (i.e., the density of technical and subject-matter specific vocabulary increases thus requiring instruction in segmenting and pronunciation), sentence complexity increases (i.e., longer sentences must be parsed automatically for fluency and cohesive devices and connective words must be effectively used to understand relationships), structural complexity increases (i.e., interrelationships among and across text sections is not always apparent), increased importance of graphics to comprehend content (i.e., graphics are critical to understand ideas and to synthesize information across sections), conceptual challenges increase (i.e., relationships across a conceptual domains must be built since the acquisition of new knowledge is dependent sophisticated knowledge of previously learned concepts), and texts vary widely across subject-matter area (i.e., each content area demands a different approach to reading, thinking, and writing) (Carnegie, 2010). When literacy demands are understood and when the subject matter and associated skills to successfully access that content is the basis of the instructional planning process, teaching becomes focused and goal directed.

Motivation strategies. By the time adolescents with learning disabilities reach the secondary grades, they probably will have encountered a great deal of academic failure. Their willingness to continue to enthusiastically engage in the schooling process is greatly diminished. In some instances,

their hopes and dreams for the future have been shattered and the future they face is filled with much uncertainty. Their emotional reaction may be one of fear or anxiety as a result of the gap that they sense existing between how they perform as learners and what they see their peers doing. On the other hand, some have given up altogether or are very reluctant to try yet one other thing or one more time.

While learning skills and strategies are critical to academic success, if students lack the motivation to engage in learning, growth will be limited (Guthrie & Wigfield, 1999). Guthrie and Wigfield have defined reading motivation as an “individual’s personal goals, values, and beliefs with regard to the topics, processes, and outcomes of reading” (p. 405). This construct of motivation assumes that reading motivation is likely to differ from individual to individual. Additionally, they contend that motivation to learn can be affected by the context within which learning occurs (e.g., which class setting), the type of text (e.g., science, history), or who is serving as the student’s teacher or tutor. In short, motivation to learn is a multifaceted and very complex construct. Considering the level of student motivation is important when planning an instructional program.

Extrinsically motivated students act for reasons outside of themselves; that is, to gain a reward or to avoid a punishment. Multiple studies have shown a positive relationship between the amount of reading completed and extrinsic motivation (e.g., Guthrie, Wigfield, Metsala, & Cox, 1999). However, they have found that *both* extrinsic *and* intrinsic motivational strategies explain increases in the amount of learning more than each construct alone. In spite of that finding, research has shown that middle and high school teachers use practices that emphasize extrinsic motivation more than intrinsic motivation. Because we are interested in students’ long-term success and their ability to learn and perform independently, our work has emphasized intrinsic motivational strategies.

One of the approaches that the KUCRL has taken to enhancing the academic motivation and commit-

ment of adolescents with LD is to use the construct of “possible selves.” Possible selves are ideas about what one might become in the future (Markus & Nurius, 1986). Markus and her colleagues reported that ideas about one’s self in the future can be very motivating. That is, individuals with clear ideas and goals about what they want to do, be and be like seem more willing to put forth the effort needed to attain these hoped-for ideals. Similarly, Markus has reported that some individuals will work just as hard to avoid the possible selves that they fear.

Based on this foundational research, Hock, Deshler, and Schumaker (2006) developed the Possible Selves Program. This program is designed to be used with students to increase their motivation by having students examine their future and think about goals that are important to them. Specifically, students participating in the program with their teacher think about and describe their hoped-for possible selves (selves they would like very much to create, a wish or a dream), expected possible selves (selves they are fairly sure they can create), and feared possible selves (selves they wish to avoid). Once students describe their possible selves, they create a Possible Selves Tree (Borkowski, Day, Saenz, Dietmeyer, Estrada, & Groteluschen, 1992; Day, Borkowski, Dietmeyer, Howsepian, & Saenz, 1994), a drawn picture of a tree that has branches and other elements representing their possible selves. The tree is used as a metaphor to help students examine the key roles they will assume in life, their hopes, expectations, and fears for the future, and the overall condition of their “tree.” In effect, students examine their personal tree and are challenged to evaluate and take action to nurture their tree so it can become a strong, well-balanced, beautiful tree. Finally, they set goals related to the actions they need to take to nurture their trees, make plans for reaching the goals, and then work toward those goals.

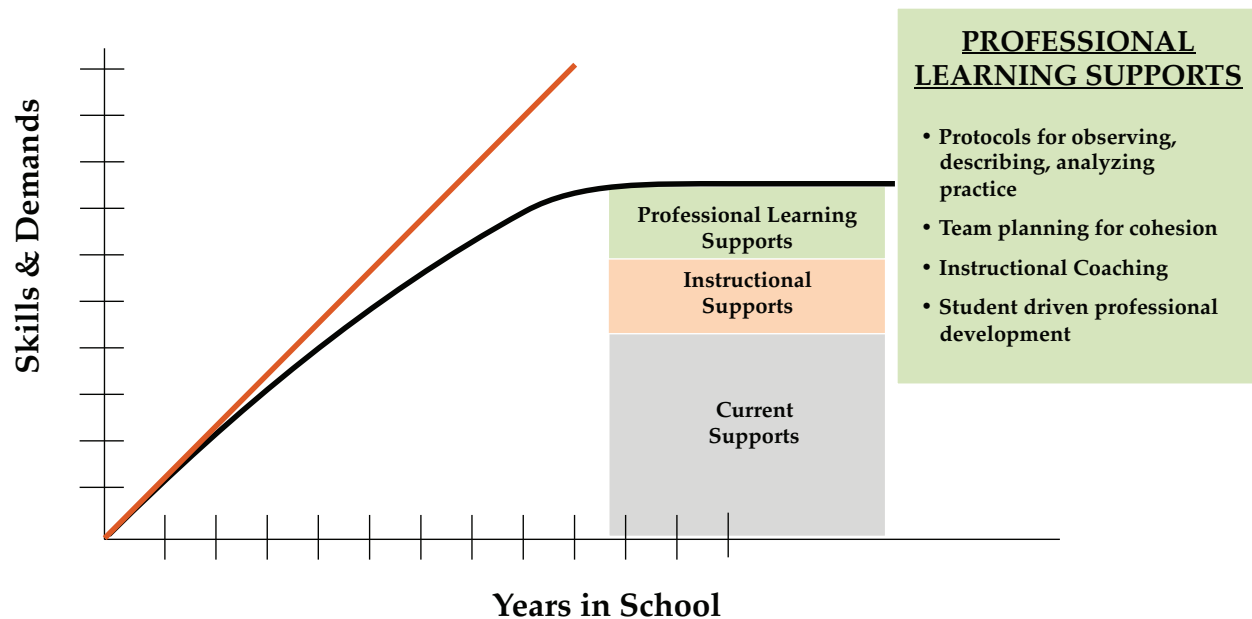
Engaging instructional materials and activities. As situations of failure continue to mount, struggling learners often acquire an aversion to most

kinds of texts. One of the top instructional priorities is to reengage students in the learning process. One of the best ways to do this is to make highly engaging reading materials available to them. Too frequently students become very frustrated when they are expected to read books that are too difficult for them to decode and understand. Students need access to reading materials that are below their frustration level; however, they need to be of high interest to the students. Some authors (e.g., Biancarosa & Snow, 2006) have used the term “diverse texts” to mean that the materials should represent *both* a wide range of difficulty levels as well as a wide range of topics. Topical diversity provides students more choices for self-selecting their learning. Biancarosa and Snow believe that “.... students should be able to find representatives of themselves as well as others about whom they wish to learn or even become.” School librarians can be an excellent resource for assisting teachers and students in identifying books and other reading materials to get and keep students engaged in reading in such a way that the volume of what they read increases as well as the vocabulary, background knowledge, and critical concepts that they are requiring (Neuman, 2002).

Professional Learning Supports

Professional learning supports (see Figure 4) are those mechanisms and practices that enable teachers and school leaders, on an ongoing basis, to improve and refine their craft so they are better able to understand and meet the learning needs of all students including those with disabilities. Providing meaningful, high quality, effective instruction for all adolescents in academically diverse classes is extraordinarily challenging. Professionals require multiple, job-embedded learning opportunities to critically analyze, discuss, and refine their instructional practices. Many studies have underscored the power of teacher effects on student achievement in reading and mathematics (e.g., Rowan, Correnti, & Miller, 2002). In light of these findings, it is important that attention be given to supporting the

Figure 4



professional learning and growth of all teachers and school leaders. Professional learning supports embody components that relate to protocols for studying and talking about instruction, planning to ensure coordination across the curriculum, instructional coaching, and strategies for designing professional development in light of student needs.

Protocols for observing, describing, and analyzing practice. Teaching and leading in schools is often a very solitary, isolated experience. Educators seldom have the opportunity to work together, to observe each other practice their craft and to dialogue with each other for the purpose of improving and refining their practice. However, instructional improvement requires continuous learning (Elmore, 2004). Fullan (2008) has said that three elements must be present in schools to improve the quality of instruction: (a) transparency of instruction (i.e., all teachers must be open to having their instruction observed because it will serve as the basis of dialogue among staff in their collective attempt to improve their craft of teaching), (b) non-judgmentalism (i.e., to have open, candid analysis and dialoguing about instructional practices, professionals must work to create an environment of psychological safety and

support in which professional practice is the focus of interactions and not individuals), and (c) instructional coaching (i.e., foundational to improving any complex behavior is high quality coaching that provides the necessary support, problem solving, and feedback – instructional coaching is described in greater detail below).

Team planning for cohesion. Students are more likely to learn and remember critical content and skills/strategies if they are taught in a systematic, scaffolded, and related fashion in which the various elements of content and skills/strategies are deliberately linked together so new knowledge can be built upon and reinforce that which was previously learned. All students learn best when their instruction is characterized accordingly; however, for adolescents with LD, this type of instruction is imperative. When instruction of critical content and skills/strategies is sporadic, fragmented, and not carefully linked, little learning occurs. Inherent to the structure of secondary schools in which students have as many as six or seven teachers across the course of a school day and from one semester (or year) to the next is fragmentation. That is, unless teachers deliberately plan and work toward a cohesive instructional plan,

what transpires in one class will seldom carry over or be reinforced in other classes. From a content knowledge standpoint, this is critical because what is taught in a lower level class should provide students with the necessary background knowledge, vocabulary, and habits of mind (Costa & Kallick, 2008) required to succeed in higher-level courses. Similarly, in order to build into students the necessary skills and learning strategies to successfully access and navigate the curriculum, teachers must deliberately plan for ways to build and reinforce one skill/strategy on top of previously learned ones as well as to systematically program into instruction across classes and teachers ways for students to use and generalize their application of various skills and strategies. This only occurs when efforts are made at team planning to ensure cohesive instruction.

Instructional coaching. Instructional coaching is a process in which professional development supports are provided to educators on how to use proven teaching methods (Knight, 2008). Instructional coaches employ a variety of professional development procedures to foster widespread, high-quality implementation of interventions, providing “on-the-job learning.” An emerging approach to the instructional coaching practice that has effectively engaged teachers to employ evidence based practices in their instruction of students with LD is an approach developed at the KUCRL based on a partnership approach in which instructional coaches respect teachers’ professionalism and focus their efforts on conversations that lead to creative, practical application of research-based practices.

Instructional coaches see themselves as equal partners with teachers in the complex and richly rewarding work of teaching students. More than anything else, instructional coaches work in partnerships to accelerate teachers’ professional learning through mutually enriching, healthy relationships. Instructional coaches are colleagues, friends, and confidantes who listen with care and share valuable information with teachers at the time when teachers most need it.

Student driven professional development.

Professional development generally refers to ongoing learning opportunities available to teachers and other education personnel through their schools and districts. Effective professional development is often seen as vital to school success and teacher satisfaction, but it has also been criticized for its cost, often vaguely determined goals, and for the lack of data on resulting teacher and school improvement that characterizes many efforts. However, with schools today facing an array of complex challenges—from working with an increasingly diverse population of students, to integrating new technology in the classroom, to meeting rigorous academic standards and goals—observers continue to stress the need for teachers to be able to enhance and build on their instructional knowledge (Gallimore, Ermeling, & Goldenberg, 2009).

Given the cost and vital role that professional development can potentially play in improving the quality of schooling, it is imperative that the vast majority of any professional development experiences be directly tied to the needs of students. Too frequently, as school districts, or even schools, make professional development decisions and plans, they do not take into account the breadth of academic diversity in their districts, schools, and classrooms. By not doing so, there is a high likelihood that the needs of students who are in minority (e.g., students with disabilities, English language learners, etc.) will not be sufficiently factored into overall plans for professional development and the subsequent follow up instructional coaching supports to ensure improved student outcomes. In short, professional development plans should *begin with* a very thorough and careful assessment of student needs and staff competencies in relation to those needs.

System Supports

System supports (see Figure 5) are those mechanisms and practices that create and maintain the kind of environment in schools that enables teachers to provide effective instruction and for students

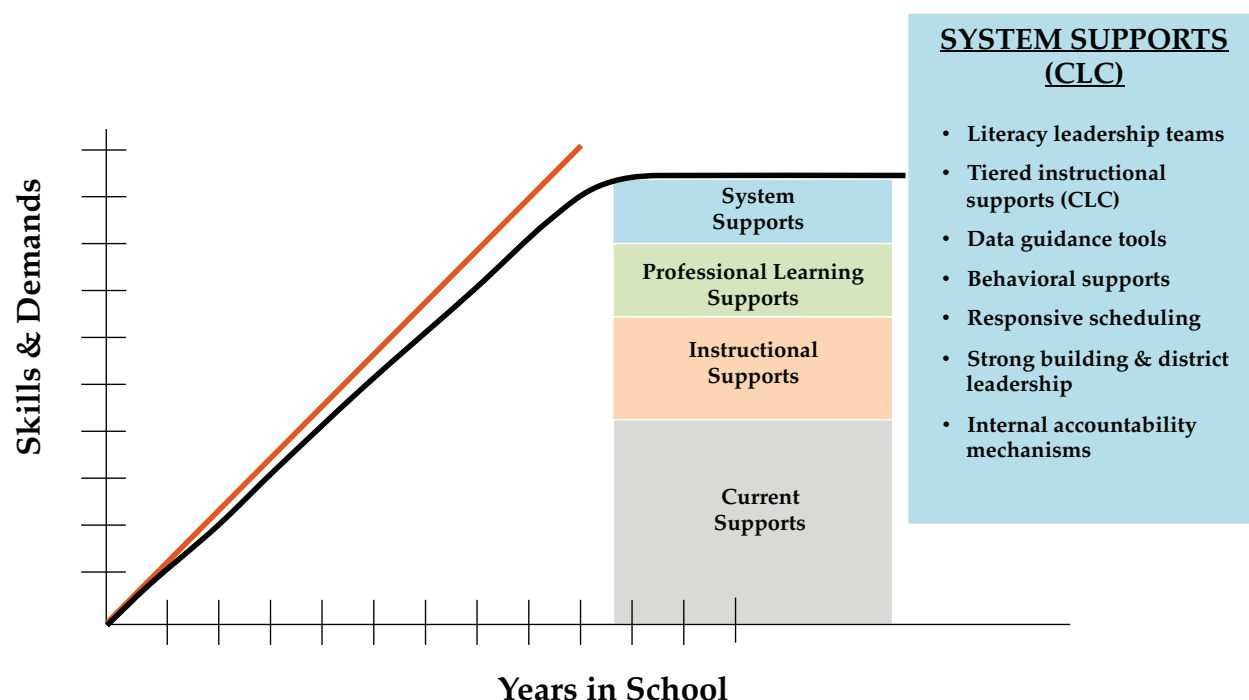
to learn in safe and civil settings where optimal growth and learning can occur. As a result, the most important work that influences student achievement is directly tied to the quality of instruction that takes place within individual classrooms. However, unless a broad array of system supports are designed and thoughtfully implemented, the overall quality of instruction provided within these classrooms will be compromised and/or diminished. Thus, how teachers come together to work with one another to solve problems around issues of curriculum, assessment of student learning, and instruction are of paramount importance. System supports embody components that relate to how instruction should be planned and implemented in a coordinated manner, how accountability mechanisms should be conceptualized and data gathered to monitor student growth, and how school schedules should be designed to provide teachers with optimal flexibility to organize instruction to meet student needs.

Literacy leadership teams. Every secondary school needs a mechanism that enables teachers and administrators to come together on a regular basis

(at least monthly) for the purpose of explicitly examining student data relative to literacy outcomes and assessing the degree to which student needs are being met under current instructional offerings and practices. One such mechanism is a literacy leadership team (LLT). A LLT is composed of teachers from various academic departments (not necessarily the department leader), administrators, and support personnel (e.g., counselors, special educators). The LLT team is responsible for driving literacy improvement initiatives within a school – not only from an advocacy and leadership standpoint, but also to ensure that instruction is organized and delivered in an effective manner and that all members of a secondary school faculty assume ownership for and play a role in improving literacy outcomes.

Tiered instructional supports. The needs of struggling adolescent learners (including those with LD) vary considerably. Some of these student's needs can be met within the general education setting; whereas, the needs of other students can only be met if marked changes are made in the nature and intensity of instruction that is provided. Re-

Figure 5



sponsiveness to intervention (RTI) is a multi-level prevention system that includes several levels of intensity of instruction. The primary prevention level includes high quality core instruction. The next level includes evidence-based intervention(s) of moderate intensity. The final levels include individualized intervention(s) of increased intensity for students who show minimal response to previous levels of instructional intensity. At all levels, attention should be given to the fidelity of implementation.

A model that has been specifically designed for application in secondary schools is called the Content Literacy Continuum (CLC) (Ehren, Deshler, & Graner, 2010; Lenz, Ehren, & Deshler, 2005). CLC is a whole school tiered model of supports in which literacy instruction is woven across the curriculum into all subject-matter areas, giving students the tools necessary to learn and master course content while providing a relevant context for developing and applying their literacy skills. Ben-Hanania Lenz and Bulgren (2011) conceptualize CLC in which tier 1 involves teacher-directed content learning interventions, tier 2 involves classroom-assisted content learning interventions, and tier 3 involves support class content learning interventions. Tier 1 instructional approaches could involve: (a) the use of content enhancement routines (e.g., Bulgren, Deshler, & Lenz, 2007) such as a routine for learning critical concepts (Bulgren, Schumaker, & Deshler, 1988) or one for exploring guiding questions in a unit of instruction (Bulgren, Marquis, Lenz, Deshler, & Schumaker, 2011); (b) the use of individual accommodations as embodied in universal design for learning (UDL) principles (Rose & Meyer, 2002); or (c) direct learning strategy instruction as a part of content-area instruction in which the content teacher provides multiple models of discipline specific learning strategies that are unique to a specific content area (Shanahan & Shanahan, 2008).

Ben-Hanania Lenz and Bulgren (2011) conceptualize tier 2 interventions (classroom assisted content learning interventions) as including (a) peer-assisted learning structures (e.g., peer tutoring, student

learning teams, and cooperative learning) in which students are expected to help each other learn content or complete tasks with the teacher planning for and monitoring these activities; or (b) adult-assisted learning structures in which adults provide intensive support to enable content learning to occur. One model with some empirical support is *Strategic Tutoring* (Hock, Pulver, Deshler, & Schumaker, 2001) in which the tutor teaches students strategies in how to learn the content as the tutor helps the student master the content that must be learned for a specific content-area class.

Finally, the greatest level of intervention support and intensity is offered in tier 3. In these situations, students may be provided intensive interventions on targeted skill and/or strategy deficits. Because the size of the gap is so large, the amount of time afforded in a supplemental class in which intensive skill/strategy instruction can be offered on a daily basis can be advantageous (e.g., Ehren et. al., 2010). Some of the defining features of supplemental classes are: the establishment of classroom management procedures to ensure the optimal use of class time, the use of goal setting procedures by students so their engagement and learning of literacy competencies can be directly tied to life goals they wish to achieve, the use of highly engaging reading and instructional materials/assignments, the teaching of high-leverage learning strategies taught in an integrated fashion, and explicit generalization of newly learned strategies to their subject matter classes.

Data guidance tools. It is imperative to carefully monitor the effectiveness of instructional decisions and subsequent practices on student growth relative to critical learning targets. One of the most powerful learning procedures is data-based decision making. Using data to make decisions about policies, programs, and individual students is a hallmark of schools that want to stay on the path of continuous improvement. These schools have incorporated thoughtful data collection, analysis, and use into their improvement plans. Teachers and administrators in these schools know how to use the feedback

provided to pinpoint areas in need of improvement, get to the root cause of problems, guide resource allocation, and communicate with stakeholders as needed. Although the exact nature of data collection, analysis, and use may vary from school to school, the key elements of an effective data program include (1) purposeful data collection and analysis; (2) designated resources and other supports, such as time and an appropriate data management system; and (3) strategies for communicating about the process of data collection and use as well as the findings.

Behavioral supports. In order for learning to occur, students must feel safe and secure. Additionally, an orderly, productive environment must exist in each classroom. Regardless of how powerful or effective the academic strategies are that are being used, their impact on students achievement will be thwarted in the absence of a learning environment that is under control. During the past three decades, an impressive database has emerged on a system known as positive behavioral interventions and supports (PBIS) that demonstrates the impact that a system of behavioral supports can have on student achievement (pbis.org). PBIS is an empirically validated, function-based approach to eliminate challenging behaviors and replace them with prosocial skills. Use of PBIS decreases the need for more intrusive or aversive interventions (i.e., punishment or suspension) and can lead to both systemic as well as individualized change.

PBIS targets an individual student or an entire school, as it does not focus exclusively on the student, but also includes changing environmental variables such as the physical setting, task demands, curriculum, instructional pace and individualized reinforcement. Thus it is successful with a wide range of students, in a wide range of contexts, with a wide range of behaviors. Blending behavioral science, empirically validated procedures, durable systems change and an emphasis on socially important outcomes, PBIS always involves data-based decision making using functional behavioral assessment and ongoing monitoring of intervention impact.

Responsive scheduling. One of the greatest barriers to implementing instructional interventions and systems in secondary schools is the rigid structure presented by class periods and overall school schedule. This problem is compounded further by the requirement to fulfill certain credit hour requirements (e.g., Carnegie Units). In order to fully implement a tiered model of academic supports, it is imperative that school leaders critically examine their school schedule and determine ways to creatively increase flexibility for student placement and movement across classes and teachers. Scheduling includes ensuring that students with disabilities have sufficient time to learn (dosage) specific strategies/skills essential to success in their school careers, and teachers have sufficient time to instruct students in research and evidence-based tools with fidelity.

Strong building and district leadership. The important role that the school principal plays in instructional leadership has been broadly discussed and empirically demonstrated. For example, in describing nearly two decades of data analysis from school reform in the Chicago Public Schools, Bryk and his colleagues (2010) describe a theory of action in which the school principal is the “driver for change.” In the absence of a school leadership team that possesses the vision and the proper set of routines for implementing that vision (e.g., use of data-based decision making, internal accountability systems, etc.) school wide achievement gains are unlikely. However, Marzano and Waters (2009) in a meta-analysis of research on the effects of district leadership on student achievement concluded effective district-level leadership *can* impact student achievement by as much as 9.5 percentile points. The critical leverage points of change that can be addressed from a district level are the following: (a) collaborative goal setting, (b) non-negotiable goals for achievement and instruction, (c) board alignment with and support of district goals, (d) monitoring achievement and instruction goals, and (e) tying resources to achievement and instruction.

Internal accountability mechanisms. In an era

of school improvement, much of the accountability for that improvement is “external” in nature – that is, it comes from agencies outside of individual schools (i.e., district office or state department of education). While there is a role for this kind of accountability, when taken to the extreme or used as a sole strategy, it may convey a lack of trust to those being held accountable. “Internal” accountability, on the other hand, is a system of self-imposed standards by teachers and administrators that are designed to improve outcomes through individual goal setting, progress monitoring, to accomplish socially significant outcomes. In short, ultimate responsibility for change resides with the individual professional who is a member of a team pursuing shared goals of improved student outcomes.

Summary

The successful implementation of the integrated intervention framework described in the previous section requires significant, focused efforts over sustained periods of time. The prevailing assumption underlying this model is the following: the *only way* the gap closes in literacy outcomes for struggling adolescent readers is through an *integrated, school-wide approach* in which *everyone owns* part of the problem and *believes* substantial changes in achievement can happen.

FUTURE DIRECTIONS

According to the U.S. Department of Education (2010), 79% of students with disabilities are enrolled in general education classes for at least 40% of their day. Given the diversity of the population entering the school, this information should be of critical concern to not only special educators but also to content teachers who find themselves accountable for the outcomes of these students via federal legislation such as NCLB (2001) and IDEA (2004). Certainly, whether a district subscribes to Responsiveness to Intervention (RTI) or Multi-Tiered Systems of Support (MTSS), points of service delivery for all students begins in the general education classroom.

The most recent initiative, Common Core State Standards (CCSS) (2010) presented as a route for providing clear, consistent understanding of what students in American schools are expected to learn while building a foundation for success in college and for career readiness is inclusive of all students.

A variety of factors have contributed to the achievement/performance gap discussed in this chapter. Hence a variety of efforts are necessary to change the current standard. While this chapter first suggests three categories of supports that will be challenging for any school to implement, the authors would also suggest issues encompassed in this work to be tackled in the future. For instance, where do, or do the “new” literacies such as disciplinary literacy (Shanahan & Shanahan, 2008), socially just/ social justice pedagogy (Moje, 2007) or out of school literacy spaces (Moje, 2004) fit into the schema presented here? Another issue to tackle is the application of technology supports for teachers via the latest hardware, apps and software available for use in the classroom. And, of course, each support suggested should be examined from a Universal Design for Learning (UDL) perspective to ensure that all individuals have equal opportunities to learn.

Finally, if using data to make decisions about what and how to teach enhances outcomes for students, a wide-open area for examination, especially at the high school level, is new ways to conceptualize and measure fidelity of implementation and determine appropriate dosage. Development of such tools that are valid, reliable, and easy to use and interpret would make the job of data-based decision making more palatable.

Until these issues are tackled, however, continuing to draw upon the empirical base and teachers and systems willing to implement instructional practices well can position students and teachers to be uniquely successful academically. Concerted effort to employ an integrated intervention framework can place a successful future within reach for adolescents who struggle.

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