Effective Instruction

An Inconspicuous Strategy for Dropout Prevention

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ABSTRACT

Although researchers have clearly connected dropping out of school to prolonged low achievement, to date, effective teaching practices are largely absent from the milieu of interventions and programs that are employed by schools to address dropout prevention. As such, effective instructional design and delivery as a focus for keeping students with disabilities in school appears to be an *inconspicuous strategy* for dropout prevention. We provide an overview of dropout prevention efforts by researchers and federal, state, and local educators; a rationale for connecting effective teaching principles to the challenge of graduating students with disabilities; and a brief overview of 10 effective teaching principles and how they relate to academic success that leads to school completion. Practical strategies that teachers can use to make their instruction more effective are also included.

BETWEEN 1995–1996 AND 1999–2000, THE PERCENTage of students with disabilities dropping out of school declined from 34.1% to 29.4%. Improvement in school dropout rates took place in almost every disability category, most notably among students with speech–language impairments, specific learning disabilities, orthopedic impairments, hearing impairments, and emotional disturbance (U.S. Department of Education, 2003). Yet despite these improvements, school dropout remains one of the most serious and pervasive problems facing students with disabilities nationally.

Students with disabilities are twice as likely to drop out of school as their nondisabled peers in general education (President's Commission on Excellence in Special Education, 2002). Dropout rates among students with disabilities vary by characteristics such as ethnicity, socioeconomic status, geographic location, and type of disability. Students with emotional and behavioral disorders (51.4%) and students with learning disabilities (27.6%) experience disproportionately higher dropout rates than other students with disabilities (U.S. Department of Education, 2003).

Not only does a disproportionate percentage of students with LD drop out of school compared to the general education population, but many of these students also evidence a wide array of academic and social adjustment problems, including high rates of absenteeism, course failure, poor self-esteem, and inappropriate behaviors (Deshler et al., 2001). Furthermore, students with disabilities are at even higher risk for dropping out of school when placed in general education environments, where the specially designed instruction and supports necessary to keep up with the demands of content-area classes are often absent (Wagner & Cameto, 2004). The problems that students with disabilities face when trying to succeed in the general education classroom only exacerbate when effective instruction is not occurring in these settings. The combined effect over time leads to discouragement and disengagement from school.

High incidences of dropout among students with disabilities have placed educators at all levels under unprecedented pressure to identify reasons for dropout and to design effective interventions to reduce dropout rates. In response, schools are actively pursuing the implementation of a variety of preventive efforts, including early emphasis on reading and literacy, before- and after-school remediation programs, summer programs, increasing parental involvement, initiating mentoring and tutoring programs, alternative schools, profes-

Volume 27, Number 5, September/October 2006, Pages 301–311

sional development for teachers and staff, and funding allocations contingent on school performance. Although these programs and strategies appear beneficial, the scale of implementation remains inadequate to significantly affect dropout rates.

We offer two potential reasons for the limited impact of these programs. First, the overwhelming preponderance of literature in the area of dropout prevention for youth with disabilities consists not of original research studies, but rather of theoretical pieces, descriptions of curricula, instructional strategies, and the like (Cobb, Sample, Alwell, & Johns, 2005). Moreover, a substantial proportion of the published original research studies provides only minimal information about the description of the intervention, expected outcomes, and contexts that would enable easy translation of this research into practice. Regrettably, many schools have developed dropout prevention programs based on these theoretical pieces without establishing clear program outcomes, measurement strategies, or evaluation designs to determine the effectiveness of their efforts.

The second reason for the limited impact of dropout prevention programs may be that effective teaching practices are not incorporated into the design of the academic components of these programs. Although researchers have clearly connected dropping out of school to prolonged low achievement, and many dropout prevention programs contain academic components, to date, effective teaching practices are largely absent from the milieu of interventions and programs employed by schools to address dropout prevention. As such, effective instructional design and delivery as a focus for keeping students with disabilities in school appears to be an *inconspicuous strategy* for dropout prevention.

To make effective instruction more conspicuous as a strategy for dropout prevention, we provide in this article (a) an overview of dropout prevention efforts by researchers, educators, and policymakers; (b) a rationale for connecting effective teaching principles to the challenge of graduating students with disabilities; and (c) a brief overview of 10 effective teaching principles and their relevance for keeping students with disabilities engaged in school. These teaching principles were introduced in the technical report *Executive Summary of Research Synthesis on Effective Teaching Principles and the Design of Quality Tools for Educators* (Ellis, Worthington, & Larkin, 1994). Some practical strategies that teachers can use to make their instruction more effective are also included.

Dropout Prevention Overview

Federal and state agencies, school personnel, and researchers are making a concerted effort to reduce the number of students with disabilities who drop out of school through many different approaches and strategies. These strategies include accountability legislation and monitoring, data collection and reporting strategies, state-level initiatives, school-based programs, and research efforts.

School completion rates provide evidence of the extent to which schools engage students in the educational process and, as such, have become measures of school performance. The recent passage of the No Child Left Behind Act (NCLB) of 2001 has focused attention on the problem of dropout and has been a driving force in efforts to increase rates of school completion. Accountability measures in NCLB require schools to monitor the progress of all students using indicators of adequate yearly progress (AYP) and measures of academic performance and rates of dropout and graduation. NCLB also places emphasis on the use of scientifically validated teaching methods to improve educational outcomes for all children.

Similarly, the 1997 and 2004 amendments to the Individuals with Disabilities Education Act (IDEA) require states to establish performance goals and indicators related to student progress in the general education curriculum and to reducing dropout rates among children with disabilities. Among other requirements, states must develop performance plans, including performance goals and indicators, compare dropout and graduation rates with students in general education, analyze trend data in dropout rates, explain reasons for slippage or progress in achieving indicators, and plan future activities to decrease dropout and increase rates of school completion for students with disabilities. States are also required to annually report progress toward these goals and indicators.

The U.S. Department of Education Office of Special Education Programs (OSEP) provided funding to determine effective interventions that decrease dropout rates for students with disabilities and established the National Dropout Prevention Center for Students with Disabilities (NDPC-SD), a technical assistance and dissemination center, to synthesize and disseminate effective research and practice in dropout prevention. The NDPC-SD also provides assistance to states in implementing dropout prevention programs. Because of IDEA and NCLB requirements, school completion and dropout rates are becoming national measures of school performance and providing evidence of the extent to which schools successfully engage students in the educational process.

In addition to federal legislation and monitoring efforts, states are beginning to establish accountability systems for reducing dropout rates among students with disabilities. These efforts include public reporting of dropout data, rewards and sanctions based on dropout rates, and focused technical assistance to districts reporting high dropout rates (Abt Associates, 2004). About 20% and 28%, respectively, of middle and high school administrators reported current implementation of formal dropout prevention programs in response to these rates (Abt Associates, 2004).

Although formal dropout prevention programs are not common occurrences in most schools, many school administrators often allocate other vital resources (e.g., fiscal and

staff) to address the problem of students' dropping out of school. These additional resources support programs or initiatives to (a) develop critical early literacy skills, (b) target students who are prone to dropping out of school, (c) provide individualized tutoring and support, (d) improve school attendance, (e) increase community-based work experiences and career and technical education programs, and (f) monitor indicators of risk to guide interventions (Abt Associates, 2004; Blackorby & Wagner, 1996).

Expanding on the efforts undertaken by federal, state, and local education agencies, researchers are refocusing their work from identifying causal and predictive factors associated with high dropout rates to identifying approaches and strategies for the design and implementation of effective dropout prevention programs. Whereas the research on dropout rates among students with disabilities is still emerging (Dunn, Chambers, & Rabren, 2004; Grayson, 1998), five general conclusions from the literature on dropout rates and students with disabilities may help the development of effective dropout prevention programs:

Conclusion 1

Students with disabilities drop out of school for a variety of reasons. To explain why students with disabilities drop out of school, researchers cite numerous reasons, such as high absenteeism; poor academic performance, poor grades, course failure, and retention; high-stakes testing requirements; behavior problems leading to excessive discipline problems, suspension, and sometimes expulsion; poor teaching and apathetic teachers; low expectations; and social isolation (Abt Associates, 2004; Finn, 1993; Martin, Tobin, & Sugai, 2002; Thurlow, Sinclair, & Johnson, 2002; Wagner, Blackorby, & Hebbeler, 1993). Understanding factors that explain why students with disabilities drop out of school may provide useful insight into developing more effective prevention programs and strategies.

Conclusion 2

Dropping out is a multifaceted process with direct links to disengagement from school and not a single impulsive action. Complex interrelationships exist between factors associated with dropout in the context of home, school, community, and the student (Christenson, Sinclair, Lehr, & Hurley, 2000). For example, as early as in the elementary grades, many students who eventually drop out of school begin to express characteristics (e.g., stomach aches, absences, behavior problems, low reading skills) that are symptomatic of dropping out in later years. McPartland (1994) identified opportunities for success in schoolwork, a caring and supportive environment, clear communication of the relevance of education to future endeavors, and addressing students' personal problems as four broad intervention components essential to school engagement. Thurlow et al. (2002) went further, identifying a multidimensional construct for engagement involving four components with associated indicators influenced by school, home, and peers. These four components are as follows:

1. academic engagement, including on-task behavior, active participation in course activities, and passing grades;
2. psychological engagement, indicating identification with the school and fitting into the school environment;
3. cognitive engagement to allow information processing, self-determination, and effective problem solving; and
4. behavioral engagement related to regular school attendance and appropriate social interactions.

Conclusion 3

Factors associated with dropping out of school are numerous, and some are not amenable to interventions targeted to decrease dropout and increase school completion rates. Early school failure begins the downward cycle leading children to question their competence, to lose self-esteem, to weaken their attachment to school, and, inevitably, to drop out of school in later years (U.S. Government Accounting Office, 2002). A focus on effectively altering variables to increase school engagement would not only prevent dropout but could increase successful school completion as well (Dunn, Chambers, & Rabren, 2004; Lehr, Hansen, Sinclair, & Christenson, 2001). Thurlow et al. (2002) categorized variables related to high dropout rates into status variables and alterable variables. *Status variables* are stable and refer to demographic factors related to gender, family dynamics, ethnicity, socioeconomic status, disability, school size and type, and mobility. *Alterable variables* are amenable to intervention and refer to factors related to absenteeism, academic performance, behavior, school climate, parental involvement, school policies, attitudes, persistence/resilience, and the quality of instruction and academic engagement. Recognizing the difference between alterable and status variables is important when designing and implementing dropout prevention interventions for students with disabilities. Prevention efforts and ideas based on understanding these factors are most likely to be successful.

Conclusion 4

Dropout issues must be considered in the context of other educational reforms (e.g., accountability, high academic standards, school restructuring) and not as an iso-

lated, appended program. Dynarski and Gleason (1999) reviewed five multimillion-dollar restructuring efforts that were part of federal dropout prevention initiatives and reported three main conclusions. First, there was little consensus on the root causes of dropout within the schools, particularly as related to school factors such as teacher attitudes and behavior, grading and discipline practices, quality of instruction, and teacher turnover.

Second, administrators restructuring schools found it easier to add dropout prevention services, such as monitoring risk factors, counseling, and mentoring programs, rather than changing teaching and learning practices. However, some schools were able to change teaching and learning practices, but these changes were often fragile and easily undone by a change in school leadership.

The third and most significant conclusion of the report was that restructuring efforts that were not aligned with other school improvement strategies ultimately had no significant impact on the reduction of the number of students who dropped out of school. The conclusions of Dynarski and Gleason's (1999) analysis suggest that effective dropout prevention cannot occur in a vacuum but must be carefully viewed within the context of a major school reform activity, and school leadership plays a pivotal role in the success of initial and sustained dropout prevention efforts.

Conclusion 5

Attending to student perspectives about dropping out provides additional information to strengthen programs designed to help students with disabilities stay in school and graduate. Students with disabilities have identified various reasons for dropping out of school or pursuing alternative education options (Guterman, 1995; Kortering & Braziel, 1999; Lichtenstein, 1993). Commonly identified reasons included boring and irrelevant content, poor relationships with teachers and peers, lack of a sense of belonging, lack of personal effort, and attendance and discipline policies and practices that contributed to frequent discipline referrals and suspensions. Furthermore, students reported fear of personal safety, need to work to provide family support, and poor academic performance as other reasons for dropping out. Clearly, many of these variables directly contribute to a student's feelings of disengagement; therefore, these variables will provide insight into students' perceptions of school and the factors leading to a student's total disengagement from the school system.

Overall, these conclusions emphasize the role of school engagement in designing dropout prevention programs. These conclusions have implications for developing student-focused dropout prevention strategies to include effective transition planning (e.g., student preferences, interests, and future goals), offering relevant courses, planning and delivering instruction, and creating school practices and policies to keep students with disabilities engaged in school.

Effective Teaching Principles and School Completion

Since the early 1980s, educators have learned a great deal about the attributes of instruction that result in efficient and motivated learning. These attributes are supported by solid research evidence and have received wide dissemination through various outlets. Yet in many classrooms, effective teaching practices are not routinely used, leading to academic failure and ultimately disengaged and disinterested students who drop out of school. As a strategic intervention, the following considerations support the value of including principles of effective instruction as an integral component of dropout prevention programs. These considerations are derived from a broader reflection on the impact of research-validated practices on service delivery for students with disabilities, especially students with learning disabilities (LD) and emotional or behavioral disorders (EBD).

Consideration 1

Foundational models of effective school learning provide a conceptual framework linking effective instruction to dropout prevention. Carroll (1963) proposed a model of school learning that continues to serve as a guide for the importance of designing high-quality instructional strategies for all students, especially students with diverse needs. The model includes three factors related to the school learning process for students: (a) characteristics inherent in the learner, (b) time allocated for learning, and (c) quality of instruction. These guiding principles are foundational to effective instruction.

Carroll's (1963) model allows us to draw several strong parallels between school learning and problems associated with students with disabilities who drop out of school. For example, in today's description of students who drop out of school, the component of *characteristics inherent in the learner* corresponds to status variables. The components of *time allocated for learning* and *quality of instruction* are variables that are alterable within the classroom (Rosenthal, 1998; Rumberger, 1995). Status variables are valuable for identifying children who may or may not be at risk of dropping out of school and for providing contextual information for learning tasks. However, from an educator's perspective, status variables for the most part are difficult or unlikely to change. In other words, status variables have limited usefulness in the design of interventions or programs for reducing the rate at which students with disabilities drop out of school.

Conversely, alterable variables not only include allocated time and quality of the instructional time, but also grades, disruptive behavior, absenteeism rates, school policies, school climate, parental involvement, sense of belonging, attitudes toward school, and educational support in the home. These variables are critical to the design and imple-

mentation of services and programs targeting students with disabilities who drop out of school, because educators, for the most part, have the ability to change or influence these variables using effective interventions and practices.

Consideration 2

Students with LD and EBD typically have trouble with national measures of academic performance and need effective interventions to improve academic outcomes. It is no longer arguable that youth with LD and EBD typically exhibit substantial deficits in reading, mathematics, written expression, and executive functioning. For example, youth with LD experience early problems with reading, such as identifying important information in text materials, remembering facts and details, clarifying, interpreting, making inferences, and summarizing information (Vaughn, Bos, & Schumm, 2003). Many students with LD also experience difficulties in mathematics (e.g., understanding and solving word problems, math concepts, and computational skills). Students with EBD also experience academic difficulties in school. On average, the reading and mathematics abilities of students with EBD are closer to grade level than those of students with LD, but students with EBD are more likely to receive low grades because of interfering behaviors (Wagner & Cameto, 2004).

Many of these students need intensive and systematic instruction to address the challenges posed by the severity of their learning needs. When students with LD and EBD receive services in general education classrooms, where the expectation for academic progress is to keep up with other students in the class, most do not keep up, and they often perform poorly on high-stakes accountability tests under NCLB. Advances in research on effective teaching practices for students with LD and EBD have greatly increased our ability to improve the educational outcomes for these students. Results culled from this research indicate that when students receive explicit instruction using effective methods, their academic performance improves significantly (deBettencourt, 2003). Because a student's sense of alienation and disengagement from school often precedes unsuccessful school experiences (e.g., failing grades, course failure and retention, excessive absences, and behavior problems), effective instructional practices are critical in the design and delivery of dropout prevention programs.

Consideration 3

The use of research-validated practices as a foundation for effective teaching is essential to the success of the education system in the 21st century. One of the most important suggestions for teachers to enhance the likelihood that students will succeed academically and socially is to learn about and then implement research-validated instructional practices (Miller, 2002). Advances in educational research over the past few decades have clearly highlighted more about effective instructional practices (e.g., math, reading, strategy instruction, and behavior) than ever before. Research in special education (e.g., with students with LD and EBD) has contributed substantially to the knowledge base on effective educational practices (Gage, 1997; Swanson & Hoskyn, 1998). Research syntheses (Gersten, Williams, Fuchs, & Baker, 2001; Sugai & Horner, 2002; Mastropieri, Scruggs, Bakken, & Whedon, 1996) and meta-analyses (Swanson & Hoskyn, 1998) have confirmed a consistent knowledge base that can generalize across student, teacher, content-area, and environmental contexts. Consequently, teachers have the opportunity to implement research-validated practices rather than relying on their own intuitive judgments about what works and what does not work. Statistical and social significance are considerations in determining what constitutes research-validated practices. Social significance relates to such questions as the extent to which these practices will enable students to perform on age- and grade-level tasks and how they perceive themselves and how others perceive them (Deshler, 2004).

Principles of Effective Instruction and School Engagement

The degree to which information or skills are organized and presented so that students can easily learn them and the degree to which students are given enough time to learn the materials being taught are crucial variables in the delivery of effective instruction. For our purposes, we will summarize 10 effective teaching principles from a technical report on generally effective instructional principles (Ellis et al., 1994) and their relevance for keeping students with disabilities engaged in school.

Principle 1: Active Engagement

Active engagement (i.e., time on task) refers to the amount of time students and teachers attend to work that is diagnostically and instructionally appropriate. Students learn more when they are actively engaged during an instructional task. Disengagement—a long and complicated process, beginning early with students missing school and experiencing academic and behavioral difficulties—is a reason often identified by students with disabilities for dropping out of school (Rumberger, 1995). To decrease disengagement, the amount of time students are actively engaged in relevant instructional tasks must increase. Teachers can increase the amount of time students are appropriately engaged in instructional tasks through (a) effective design and delivery of lessons, (b) selection of interesting materials that are culturally relevant and appropriate to the students' instructional levels, (c) offering a variety of opportunities for appropriate student responses,

and (d) reinforcing class participation (Mastropieri & Scruggs, 2004).

Principle 2: Providing the Experience of Success

High and moderate success rates are correlated positively with student learning outcomes, and low success rates are correlated negatively with student learning outcomes. Simply engaging students in social and academic activities is not sufficient; students must experience success early and often while they are engaged in school activities—especially academic tasks. Teachers must create an instructional environment to actively engage students and to encourage successful social and academic experiences.

Teachers must also carefully consider the content match between students' level of achievement and task assignment. This match is crucial for students to experience academic success. The connection between students' success rate and students' dropping out of school is readily apparent. If students do not experience success but repeatedly fail, their motivation quickly dissipates, leaving them with feelings of inadequacy and an inability to see the relevance of school. The lack of successful experiences often ends with the student dropping out of school.

Principle 3: Content Coverage and Opportunity to Learn

Increased opportunity to learn content correlates positively with increased student achievement. Therefore, the more content is covered, the greater the potential for student learning. Absenteeism is a common characteristic of students with disabilities who drop out of school. If students do not attend classes, their opportunity to learn is greatly reduced, thereby resulting in lower achievement. If teachers do not provide an engaging environment that fosters feelings of success in academic and social situations, students are likely to become disinterested and avoid school altogether. Not only is content coverage important, but the manner in which the teacher delivers instruction is also an important factor that directly influences student achievement.

Principle 4: Grouping for Instruction

Students achieve best in classes in which they spend most of their time engaged in learning activities supervised directly by their teacher. Grouping can facilitate a teacher's ability to keep students engaged in the classroom. There are several different arrangements for teachers to place students into groups (e.g., whole class, small group, one to one); each has its distinct advantages. For example, whole-group arrangements engage all students in shared learning experiences, whereas small homogeneous groups allow teachers to meet individual student needs and increase opportunities for students to respond. Moreover, teachers can provide more individualized feedback and adjust instructional pacing to ensure mastery (Vaughn, Bos, & Schumm, 2003). Grouping of students has both positive and negative effects on student engagement, resulting in increased or decreased levels of academic progress (Maheady, 1997). Whether through grouping or additional support, when a student's academic success is increased, the likely result is a student who stays in school.

Principle 5: Scaffolded Instruction

Students can become independent, self-regulated learners through carefully scaffolded instruction. Students with disabilities require a supportive learning environment to experience success. Scaffolded instruction must be a part of the supportive learning environment because it helps students use their strengths and compensate for their weaknesses. Scaffolded instruction is not one thing that a teacher does, but rather a carefully and systematically sequenced series of prompted content, materials, tasks, and teacher support (Dickson, Chard, & Simmons, 1993). It is a system of instructional support that is deliberately designed by a teacher to assist students with disabilities in becoming independent and self-regulated learners, hence enabling them to become more successful in school and successful adults.

Principle 6: Addressing Forms of Knowledge

Teachers should address all forms of knowledge at one point during instruction. The critical forms of knowledge associated with strategic learning are

1. declarative knowledge: basic facts and vocabulary;
2. procedural knowledge: steps used to solve problems; and
3. conditional knowledge: when and where to use certain strategies (Ellis et al., 1994).

The field of special education has received criticism for the overemphasis placed on declarative and procedural knowledge. Often, students with disabilities experience placements in instructional environments that focus solely on the remediation of basic skills. In these environments, students quickly lose sight of the relevance and importance of school after experiencing the same seemingly irrelevant content and low expectations year after year, and they eventually choose not to participate. When students no longer see the relevance of their academic learning to their daily lives outside of school, they become disengaged and drop out of school. When teachers can find a balance in their instructional emphasis, students are more likely to see the relevance and choose to participate.

Principle 7: Organizing and Activating Knowledge

Not only is the content that teachers emphasize important, but the structure information during the instructional episode is also critical to student success. Carefully combining what the learner already knows and understands with new information increases the understanding and application of new information. Students will learn more if the teacher carefully builds simpler skills, such as facts, into more complex knowledge, such as rule relationships. This progression from easier skills to more difficult skills is crucial for the development of the foundational skills and knowledge required to progress to more complex concepts. Moreover, student learning increases when the teacher presents information in a manner that helps the students to organize, store, and retrieve knowledge. A large knowledge base supports many different strategies to increase students' ability to organize, store, and retrieve information (Mastropieri & Scruggs, 2002, 2004). Students with disabilities experience great difficulty with storing and retrieving information. Obviously, students who cannot retrieve information efficiently are destined to fail not only in school but also in postschool employment opportunities. When students do poorly in school, they are more likely to feel disconnected and leave.

Principle 8: Teaching Strategically

Teachers can help students become more independent, self-regulated learners through strategic instruction. Teaching strategically relates more to teaching students "how to learn" effectively than to "what content to teach." This often involves teaching students a strategy to learn. A *strategy* is an approach an individual takes to complete a task. Strategies involve the process of how a person thinks and acts when completing any given task. Although expert learners are able to control, monitor, and use effective strategies, students with disabilities often lack these "how to learn" strategies (Carnine, Silbert, Kame'enui, & Tarver, 2004). Students must be directly taught "how to learn" strategies by teachers before, during, and after instruction. In some cases, students will require practice using the strategy with support from the teacher. When students are taught strategies that can be applied across various settings and situations, students will have a greater likelihood of succeeding in the numerous and varied situations they encounter throughout the school day.

Principle 9: Making Instruction Explicit

Teaching is most effective when teachers present information in a systematic and explicit manner to help students become independent and self-regulated learners. Educators and researchers have learned a great deal about the attributes of instruction that results in increased student learning. Explicit instruction is teacher-directed instruction that is highly organized, task oriented, and presented in a clear, direct manner to promote student understanding. Teachers can make their instruction explicit by (a) clearly stating the goals and objectives of the lesson, (b) structuring the lesson in an obvious format, and (c) presenting content in a direct and clear fashion. The explicitness of instruction is crucial for students who struggle with learning, especially students with disabilities. Students with disabilities are often disorganized thinkers who do not to make sense of generalizations and observations by themselves. The teacher must introduce the new skills and concepts directly and explicitly to prevent students from drawing incorrect conclusions, which are then difficult to correct. Explicit instruction is the most efficient and effective method for teaching students with disabilities.

Principle 10: Teaching Sameness

By teaching sameness, both within and across subjects, teachers promote the ability of students to access potentially relevant knowledge in novel problem-solving situations. For many students with disabilities, the seemingly endless amount of isolated facts and information presented to them during school becomes overwhelming. Teachers must purposely design instruction to help students recognize patterns and organize knowledge. When teachers help students make relevant connections and link information, it helps students acquire knowledge in a more effective and efficient fashion. Kame'enui (1991) described two reasons for teaching sameness: (a) teachers can teach more content in less time, and (b) structural sameness allows teachers to help students acquire essential building blocks for the development of more complex cognitive structures. If teachers can teach more content in less time and do it more effectively, students' academic performance is likely to improve.

These 10 principles of effective instruction are research-validated practices that, when systematically and consistently implemented, are capable of helping students with disabilities experience school success and make academic gains in the general education curriculum. Because academic failure is a primary reason for school dropout, making effective instruction a *conspicuous* strategy to increase the academic engagement that leads to school completion is beneficial. Some practical strategies that teachers can use to make their instruction more effective are included in the Appendix.

Conclusion

Legislators, educators, and researchers recognize the seriousness and pervasiveness of the school dropout dilemma and have planned, financed, and implemented a rather extensive set of policies, accountability mandates, strategies, and focused monitoring procedures—all intended to increase the likelihood that students with disabilities will not only stay in school but graduate with a diploma. Yet the dropout rates for

students with disabilities have shown minimal improvements over the past decade. The urgency of this problem has initiated a series of legislative acts, including the Elementary and Secondary Education Act, or No Child Left Behind Act of 2001. These legislative acts are holding school systems accountable for the number of students that do not succeed and focus attention on the dropout problem, forcing schools to initiate programs targeting students who are at risk for dropping out of school—specifically, students with disabilities. This article provides a sound rationale for applying effective teaching practices to the task of decreasing school dropout rates and helping students with disabilities to graduate. We offer the following implications for practice and future directions for research.

Implications for Practice

Evidence from studies examining effective teaching principles indicates that effective instructional practices incorporated across grade levels and content areas can facilitate academic success for students of varying ages, abilities, and cultural backgrounds, including students with disabilities (Adams & Engelmann, 1996; Ellis et al., 1994; National Institutes of Child Health and Human Development, 2000; Rosenshine & Stevens, 1986). With approximately 51% and 27%, respectively, of students with EBD and LD dropping out of school, and even more who fail to make proficient scores on high-stakes tests, the lack of academic success of students with disabilities is one of the most serious and pervasive problems facing society.

Often, state- and school-initiated programs to prevent dropout are not aggressively focusing attention on either systemic efforts to remediate academic failure or students with disabilities. Rather unfortunately, the programs and strategies implemented in schools generally focus on social, behavioral, and psychological interventions designed to "fix" students and often do not include students with disabilities. As such, these efforts do not significantly increase school completion rates. Because of the high dropout rates and the legislative mandates (NCLB and IDEA) holding school systems accountable for the number of students that do not succeed, schools must focus attention on increasing academic performance and school completion for *all* students.

Clearly, students with disabilities are at much higher risk of dropping out of school than students without disabilities and must be intentionally included in schoolwide efforts to increase school completion rates. Given the extant literature base on effective instruction, policymakers, educators, and researchers must begin to examine classroom instructional design and delivery as a strategy that is directly related to students with disabilities dropping out of school. The instructional decisions (what and how to teach) have a major impact on student achievement (i.e., learning) and ultimately influence the long-term outcomes of students with disabilities (i.e., graduation).

Implications for Research

Primarily, there is a need to improve the quality of dropout prevention research in general. The majority of publications found in the literature in the field of dropout prevention for youth with disabilities are not original research studies, but rather theoretical pieces, descriptions of curricula, and instructional strategies. Even a substantial proportion of the published studies that are indeed original research provide only minimal information and description of the intervention, expected outcomes, and contexts that would enable easy translation of this research into practice. Future researchers must provide descriptions of their interventions that are complete enough to allow other researchers and practitioners to replicate those interventions that are deemed effective.

Although researchers have clearly connected dropping out of school to prolonged low achievement, research to date has not examined the effects of using effective instructional practices as a measure to reduce dropout rates among students with disabilities in controlled studies. Researchers are just beginning to shift their efforts from elucidating the many variables associated with dropout prevention to focusing on designing and testing model programs to address the alterable variables associated with dropping out of school. As these efforts continue, dropout prevention programs with academic components will benefit from the use of these effective teaching principles in both content-area classes and tutoring.

Although numerous citations exist in the dropout prevention literature, research that would meet the "gold standard" has been extremely limited. Efforts to amass a working body of knowledge based on scientific rigor sufficient to assist educators in addressing high dropout rates are still emerging. To add effectively to this body of knowledge, researchers must overcome a number of methodological concerns identified in recent synthesis work in dropout prevention (Cobb et al., 2005).

Dropout as an outcome is an extremely difficult variable to operationalize with reliability and validity. Cobb et al. (2005) recommended that measuring school engagement is a more promising strategy. Measuring behavioral, emotional, and cognitive engagement variables has both philosophical and psychometric advantages over measuring dropout variables in the conduct of dropout prevention (or resiliency) research. However, much work is yet to be done to fully understand this construct and its various facets; it is a powerful and important outcome for interventionists in dropout prevention research.

Preventing students with disabilities from dropping out of school is an enormous challenge with high stakes and extraordinary benefits for all when effective instructional strategies are implemented. Instruction is the essential element in the classroom that is completely controlled by the teacher. We cannot change what students learned last year, where students come from, or what the students do when they leave the classroom. However, we can focus on designing and

delivering instruction that is more effective. The principles of effective instruction are a set of tools that are already available to increase positive educational outcomes for students with disabilities. We need to use them. ■

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AUTHORS' NOTE

Preparation of this article was supported in part by a cooperative agreement (H326Q030002) with the U.S. Department of Education, Office of Special Education Programs. Points of view or opinions presented herein do not necessarily reflect those of the U.S. Department of Education or offices within the department, nor does mention of other organizations imply endorsement by those organizations or by the U.S. government.

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Appendix: Strategies to Increase Academic Engagement and Make Instruction More Effective

1. Increase academic engagement time by
   (a) using instructional time efficiently, monitoring the rates of engagement of your students, avoid dead time by having materials ready and close at hand, and starting instruction on time;
   (b) speeding up transitions from one activity to another by establishing classroom routines, analyzing tasks and modeling appropriate methods of shifting between locations and activities, providing directed practice in activity and location changes, and using signals to cue transitions;
   (c) using pace and enthusiasm to maintain attention and elicit student participation. Ways to show enthusiasm involve a touch of the "ham" in all of us and can include humor and animation.

2. Provide opportunities for students to learn and be successful by
   (a) maintaining a comfortable and welcoming classroom environment (i.e., positive remarks, praise of student performance, students on task, students engaged in learning) to help motivate students to attend school regularly;
   (b) providing culturally diverse students with equal opportunities to participate and perceive learning as an important shared experience among instructor and students;
   (c) planning educational activities and using materials that reflect positive representations of various cultures and persons with and without disabilities;
   (d) spending instructional time teaching students what they need to learn and be able to do;
   (e) providing frequent reinforcement of correct responses and appropriate behavior, including (i) directed content-related praise; (ii) generalized reinforcers, such as tokens, points, and checkmarks; and (iii) activity reinforcers, such as computer time, library time, and free time;
   (f) using a variety of curriculum-based assessment measures to frequently monitor student progress and make instructional adjustments;
   (g) providing multiple means of engagement and multiple methods of expression to provide students with a variety of alternatives for demonstrating what they know, including the use of technology and flexible digital media.

3. Increase opportunities for student learning by
   (a) providing opportunities for all students to participate in instructional activities by asking a variety of randomly sequenced questions, requiring both unison and individual responses;
   (b) orienting students to the classroom procedure for responding to individual questions (e.g., ask the question, have students raise their hands, give think time, and call on a student);
   (c) eliciting frequent student responses to verify understanding, maintain attention, provide rehearsal and practice, and increase opportunities for learning; using signals to dissuade students from blurting out the answer;
   (d) using group or unison responding, peer-mediated or cooperative learning strategies, or response cards, to increase the number of opportunities that students have to respond.

(Appendix continues)

(Appendix continued)

4. Increase content coverage by
   (a) preteaching critical or potentially complicated vocabulary and teaching strategies for remembering words and their meanings;
   (b) providing short, explicit learning sessions with structured short pauses during lessons, varying types of learning tasks, reducing distractions, and breaking down complex tasks or concepts into smaller tasks.

5. Make instruction more explicit by developing a sequential structure for your lessons that includes an introduction to the lesson; instruction on basic facts, rule relationships, or concepts to be learned; and a review of pertinent information at the end of the lesson. The following suggestions can be used:
   (a) Gain students' attention and announce the intended goals for the lesson; give a brief review of previous, related lessons to refresh students' background knowledge; provide a statement of relevance for learning the information; and ask students for additional ways the information may be useful to learn.
   (b) Tell students your expectations for learning during the lesson. Determine and announce rules for behavior during discussions and presentations. Provide reminder cues as needed, without nagging or disrupting the flow of the lesson.
   (c) Review or reteach prerequisite skills before presenting new information.
   (d) Provide simple, clear directions; model each step; use clear, consistent language to verbalize your thinking process; ask clarifying questions to keep students on task; check for understanding; and verify knowledge. Repeat the model demonstration at least twice.
   (e) Use scaffolds to provide guided practice and gradually reduce teacher help as students exhibit more independent responses.
   (f) Use clear, recognizable examples and nonexamples; give multiple opportunities for guided practice and independent practice.
   (g) Review critical information presented in the lesson by summarizing big ideas. Encourage students to participate in the summary by asking guiding questions to elicit student responding and strengthen memory of key concepts in the lesson. Reviewing the lesson also serves as a transition cue for the next lesson or activity.
   (h) Remember that homework is another opportunity for independent practice to reinforce student learning. Assign homework only on information that has already been taught. Ensure reasonable opportunities for students to be successful, and review homework and provide feedback in a timely manner.
   (i) Preview the next lesson related to the content.

6. Teach strategically by
   (a) teaching students to use strategies that build critical thinking, decision-making skills, and problem-solving skills;
   (b) identifying "big ideas" for your courses, units, and lessons to help students attend to (what to look for) and understand (relevance) basic facts, rule relationships, and major concepts of materials they are expected to learn;
   (c) beginning units with big ideas; referring to the big ideas in each lesson; pointing out that materials reveal the big ideas; and having students uncover the big ideas in materials, reviewing big ideas at the close of each lesson.

Note. Sources: Ellis, Worthington, and Larkin (1994); Mastropieri and Scruggs (2004); Mercer and Mercer (2001).

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