

ADOLESCENT LITERACY AND OLDER STUDENTS WITH LEARNING DISABILITIES

A Report from the National Joint Committee on Learning Disabilities*

June 2008

The National Joint Committee on Learning Disabilities (NJCLD) recognizes the importance of addressing critical issues related to adolescent literacy and advocates for effective reading and writing instruction for struggling middle and high school students, especially those with learning disabilities (LD).¹ First, it describes the adolescent literacy problem (grades 4 to 12), its consequences, and factors that contribute to it. Later sections address guiding principles for assessment, instruction, and professional development, concluding with recommendations for short-term and future consideration.

Literacy is a complex set of skills that comprise the interrelated processes of reading and writing required within varied socio-cultural contexts. Reading requires decoding, accurate and fluent word recognition, and comprehension at the word, phrase, sentence, and text levels. Writing requires automatic letter formation and/or keyboarding, accurate and fluent spelling, sentence construction, and the ability to compose a variety of different text structures with coherence and cohesion.

¹ Learning disabilities is a general term that refers to a heterogeneous group of disorders manifested by significant difficulties in the acquisition and use of listening, speaking, reading, writing, reasoning, or mathematical skills. These disorders are intrinsic to the individual, presumed to be due to central nervous system dysfunction, and may occur across the life span. Problems in self-regulatory behaviors, social perception, and social interaction may exist with learning disabilities but do not, by themselves, constitute a learning disability. Although learning disabilities may occur concomitantly with other disabilities (e.g., sensory impairment, mental retardation, serious emotional disturbance), or with extrinsic influences (such as cultural differences, insufficient or inappropriate instruction), they are not the result of those conditions or influences (NJCLD, 1990).

* This is an official document of the National Joint Committee on Learning Disabilities (NJCLD). The following are the member organizations of the NJCLD: American Speech-Language-Hearing Association, Association of Educational Therapists, Association on Higher Education and Disability, Council for Learning Disabilities, Division for Communicative Disabilities and Deafness, Division for Learning Disabilities, International Dyslexia Association, International Reading Association, Learning Disabilities Association of America, National Association for the Education of African American Children with Learning Disabilities, National Association of School Psychologists, National Center for Learning Disabilities, and Recording for the Blind & Dyslexic.

The Problem

Data specific to learning disabilities are lacking, but several useful inferences can be drawn. For example, significant numbers of adolescents in the United States do not read and/or write at levels needed to meet the demands of the 21st century. Data from the National Assessment of Educational Progress (NAEP) reading and writing assessments (Perie, Grigg, & Donahue, 2005; Persky, Daane, & Jin, 2003; Grigg, Donahue, & Dion, 2007) indicate little improvement in development of literacy skills for the nation's 13- and 17-year-olds. With respect to reading, the most recent NAEP data (Perie, Grigg, & Donahue, 2005; Grigg, Donahue, & Dion, 2007) indicate that 36% of 4th graders and 27% of 8th grade students in the U.S. scored at the *Below Basic* level of proficiency, which NAEP defines as partial mastery of the knowledge and skills that are fundamental for proficient work at a given grade level. These students have difficulty with one or more of the following:

- Literal understanding of what is read;
- Ability to identify specific aspects of the text that reflect overall meaning;
- Extension of the ideas in the text by making simple inferences;
- Drawing conclusions based on the text.

Additionally, at the 12th-grade level, 26% of 17-year-old students do not demonstrate a fundamental ability to communicate in writing, which means they may have difficulty with skills such as the following:

- General understanding of both the writing task at hand and the audience to be addressed;
- Inclusion of details that support and develop the central idea of a piece;
- Organization that reflects consistency in topic, sequencing, and a clear introduction and conclusion;

- Grammar, spelling, punctuation, and capitalization accurate enough that they do not interfere with meaning.

Recognition of the adolescent literacy problem has received national attention in recent years as seen in documents such as the Alliance for Excellent Education's *Reading Next* (Biancarosa & Snow, 2004) and *Writing Next* (Graham & Perin, 2007) as well as the Center for Instruction's *Academic Literacy Instruction for Adolescents* (Torgesen et al., 2007). In addition, initiatives such as the Striving Readers Program (U.S. Department of Education, 2007a) are designed to raise literacy achievement in secondary students. The basis for this current interest is a recognition that emphasis on early reading and writing alone will likely fall short of the ultimate goal of improved literacy for all unless a similar investment is made in reading and writing instruction for older students. A wealth of evidence shows that intensive, high-quality literacy instruction can help students who are struggling build the skills they need to succeed in high school and beyond (Biancarosa & Snow, 2004).

The overall picture of adolescent literacy in the U.S. is not promising, but it is even more discouraging for older students with learning disabilities—the focus of this paper.

The Consequences of Literacy Problems for Adolescents with LD

Underdeveloped literacy skills have profound consequences for students, families, and society. These effects are academic, social, emotional, and economic in nature. Students with LD are often inadequately prepared for the academic challenges presented across the educational continuum from grade four through postsecondary settings.

It is reported that secondary students with LD experience significant deficits in reading and math when compared to other students assigned to the same grade level; for example, 21% of these

students are estimated to be five or more grade levels below in reading (National Longitudinal Transition Study II, 2003). Students with LD and/or low literacy levels drop out of high school at higher rates than the general population. The dropout rate for this group was estimated at 31.6 % as compared to 9.4 % for students with no disabilities (U. S. Dept. of Education, 2007c). Only 11% of students with LD, as compared to 53% of students in the general education population, have attended a four-year postsecondary program within two years of leaving high school (National Longitudinal Study II, 2003).

Evidence suggests that the literacy skills of many high school graduates are insufficient for success in the workplace and society. It has been reported that low achievement in literacy correlates with high rates of poverty and unemployment (Wagner, 2000). The impact of these realities is significant to society, and the consequential socio-emotional risks for these individuals are profound.

For the older student with LD, opportunity for intervention decreases markedly when the student exits the public school system. Moreover, the 25 fastest growing professions have greater than average literacy demands while the fastest declining professions have lower than average literacy demands (Barton, 2004). Students must not only possess proficiency with print but also the skills and strategies required by a digital environment. Thus, it is imperative that intervention for students with LD begin when literacy needs are identified.

Contributing Factors

Learner Characteristics

Literacy development has its roots in oral language development. Adolescents with LD often have persistent receptive and expressive oral language deficits that become more pronounced as demands increase in areas such as vocabulary, content specific knowledge, organization and

retrieval of semantic information, basic and complex syntax, and higher-order semantic processing (e.g., figurative language forms; inferencing). Metacognitive deficits affect students' self-awareness and self-regulation of their own problem-solving abilities and strategies for guiding, monitoring, and directing their success. As a consequence of these problems, students with LD often have difficulty maintaining positive attitudes and sufficient motivation and persistence needed to meet educational expectations. These students may have limited awareness of their individual pattern of strengths and challenges and the remediation and accommodations needed to support their progress.

Literacy acquisition is even more challenging for students with LD whose native language or culture differs from the language of literacy instruction. English language learners (ELLs) may have complex backgrounds and experiences that influence learning (e.g., interrupted or limited schooling, living through long separations from family, political turmoil, or poverty). In addition, ELLs at 4th, 8th, and 12th grades are twice as likely as their peers to score below basic levels in reading and writing skills, and these achievement gaps have been generally stable for more than a decade (Perie, Grigg, & Donahue, 2005; Grigg, Donahue, & Dion, 2007). Census data suggest that by the year 2020, 25% of all children in the U.S. will be ELLs. Because some ELL students have the additional challenge of an LD, it is essential to distinguish between those whose limited linguistic proficiency is due to a language difference from those who have a concomitant LD.

Characteristics typical of the adolescent learner must also be considered when designing assessment and delivering instruction. Developmental characteristics may result in resistance to instructional support, particularly for adolescents with LD. For example, because adolescents manifest a desire for independence and expression of personal identity, they often resist dependent relationships with adults able to provide needed services and support. On the contrary, these

students have a compelling need for peer group acceptance and access to peer social interaction. Teens may reject being singled out in any way from their peers and strive to belong. Perceived social competence, which may be diminished in adolescents with LD, is a reliable indicator of school success and long-term life adjustment and satisfaction.

Learner characteristics contribute to widening gaps in literacy skills between students with and without LD that coincide with increasing demands of the curriculum and escalating expectations for independent learning. This situation is most extreme for students who have not received services earlier in their educational careers.

Educational Context

A variety of organizational challenges and increased academic demands also contribute to the difficulties faced by adolescents with LD as they transition from elementary to middle school and high school.

Organizational Challenges

The organizational structures traditionally found in middle and high schools are not designed to accommodate the continuum of instructional services, such as intervention and intensive instruction, required to adequately address the literacy needs of adolescents with LD. Student success is based on the ability to acquire, manipulate, store, and use large amounts of information from varied sources; middle and high schools are organized to facilitate these goals. Complex curriculum demands often impede consideration of the learning inefficiencies evidenced by students with LD. Educational settings typically are not designed to deliver instruction to students who struggle to acquire literacy skills or instruction in the use of the strategic approaches necessary for acquiring required content knowledge. This organizational incompatibility, in addition

to the sheer size of many secondary schools, makes translation of best-practice knowledge to implementation of effective practice more difficult to accomplish. A rethinking of organizational structures—including, but not limited to, changes in curriculum, allocation of instructional resources, and use of time—should be considered in planning for more effective education of our struggling adolescent learners, especially those with LD.

Increased Academic Demands

The increasing complexity of reading and written expression, beginning in grade four, requires a shared recognition of content area literacy demands and responsibility for teaching critical skills across a continuum of student needs. The primary years serve as a preparatory springboard for higher grade levels when students are expected to think more abstractly and successfully access language-based information and skills requiring increased levels of integration across content areas. There is an assumption that adolescents can integrate skills and transfer literacy knowledge to this higher level of thinking without direct intervention. However, many adolescents with LD transition to secondary education with under-developed language, literacy, and executive functioning skills, and struggle to meet grade-level expectations.

Following are some of the increased academic demands of middle and high school:

- Greater complexity of tasks;
- Steadily increasing amounts of information;
- Need for comprehension of complex linguistic forms and abstract concepts;
- High stakes testing and graduation requirements;
- Greater demand for working memory for on-the-spot problem-solving;
- Increased focus on specific content with tightly scheduled time slots for acquisition of knowledge (e.g., block scheduling) tied to standards and high stakes assessment;

- Increased reliance on print (including a shift from narrative texts to emphasis on informational content/expository text structures and domain-specific vocabulary);
- Increased expectations for greater output within shorter amounts of time requiring rapid and accurate retrieval of information and consolidation of learning into long-term memory;
- Increased demands for digital (versus traditional) literacy proficiency;
- Increased need for self-advocacy and individual responsibility.

The complexity of all these contributing factors has direct implications for assessment, instruction, and professional development.

Guiding Principles for Assessment

The goals of assessment for the older student should be tied directly to instructional planning. This requires a team-based, comprehensive approach that often necessitates the collection of multiple forms of information, including standardized tests, qualitative analysis of student work samples, observation, and self-report measures. Currently, assessment procedures are linked primarily to the issue of eligibility for special education and related services. Assessment should lead to appropriate program planning, *whether or not* an individual student meets eligibility criteria for special education services.

A Response to Intervention (RTI) approach provides data for the purposes of both instructional planning and eligibility for special education services (NJCLD, 2005). In an RTI model, continuous progress monitoring throughout the assessment and instructional processes is used to gauge student progress. Curriculum-based measures and traditional data, including quizzes, homework and test grades are used to monitor student progress in the general education classroom. If a student is progressing as expected, no instructional changes need to occur. However, if a student

does not meet anticipated targets/benchmarks within the expected timeframe, the diagnostic team should recommend a shift to a tier that provides increased levels of support. Students move in and out of tiers based on the interpretation of progress monitoring data that yields critical information about program effectiveness. When students do not make expected progress, or when a referral is made to determine eligibility for special education services, a more comprehensive evaluation will be necessary to obtain additional data to support instructional planning. In such cases, the progress monitoring data can also be used to rule out the lack of appropriate instruction as the cause of the performance deficits.

Thus far, research on RTI implementation has been limited to the primary grades, and little evidence is available to guide its use at the secondary level. Although research is needed to determine the efficacy and effectiveness of RTI implementation in middle and high schools, a tier-based, progress-monitoring model could provide data needed to support students with LD in both general and special education settings.

Assessment of the literacy needs of adolescents who may have LD should be

- Conducted by professionals who meet accepted standards in the field and who have expertise in LD and non-biased assessment;
- Conducted by professionals with expertise in working with adolescents and knowledge of adolescent learning and development characteristics;
- Individualized to address questions of concern related to the student's cognitive, academic, social, behavioral, motivational, and/or emotional needs;
- Sensitive to differing profiles at higher grade levels
 - Students who remain at the early stages of literacy development;
 - Students who have not been identified at earlier grade levels;

- Students who exhibit late-emerging problems;
- Students with concomitant difficulties in language, behavior, or motivation;
- Designed to gather multiple sources of qualitative and quantitative information, including measures that reflect student background knowledge, readability of textbooks used in different subject areas, classroom expectations, information about the use of literacy skills outside the school setting, and the need and the level of ability to use assistive technology;
- Designed to provide sufficient data to identify and diagnose an LD and exclude other factors as the cause of performance problems;
- Integrated so that data interpretation results in a clear profile of the student's strengths and weaknesses, describes the literacy needs of the student, and provides specific recommendations that are tied to instruction, learning/behavioral supports, and transition planning.

Because linguistic and cultural factors impact assessment, a comprehensive evaluation for ELL students who may have LD requires consideration of several additional factors:

- Language and literacy proficiency in the student's native/primary language versus English;
- Developmental history of language and learning delays in the student's native/primary language versus English;
- Identification of cultural variables that may affect test and classroom performance;
- Language(s) spoken in the home, with peers, and in the community.

For ELL students, comprehensive assessment also involves evaluation of language and literacy skills in both primary and secondary languages as research indicates that students are not

equally proficient across languages. Because few standardized tests of language and literacy exist in languages other than English, and English translations of tests do not yield reliable and valid results, assessment most often relies on a variety of informal procedures. Among the most useful are observational methods and dynamic assessments, which measure a student's response to instruction in a test-teach-test environment.

The results of a comprehensive assessment for adolescents with literacy problems should yield recommendations that are clear, specific, and meaningful so that teachers and other professionals can use them to inform instructional planning for accommodations/modifications, behavioral supports, and type and intensity of remediation, if indicated. Remediation should be the priority; accommodations and modifications complement, rather than substitute for, remedial instruction.

Guiding Principles for Instruction

Instruction at the middle and secondary levels requires a *continuum of services that is differentiated* according to the individual learning needs of each student.² The principle of universal design addresses this need through the use of inclusive instructional strategies that benefit a broad range of learner characteristics and abilities. Within content-area classrooms, students should have access to a variety of teacher-based and learner-based strategies for mastering the critical concepts of curriculum.

Such a continuum also necessitates the infusion of high-quality, research-informed literacy instruction throughout secondary curricula to address varying levels of literacy proficiency.

² Not all students are alike. Based on this knowledge, differentiated instruction applies an approach to teaching and learning so that students have multiple options for taking in information and making sense of ideas. The model of differentiated instruction requires teachers to be flexible in their approach to teaching and adjusting the curriculum and presentation of information to learners rather than expecting students to modify themselves for the curriculum. Classroom teaching is a blend of whole-class, group and individual instruction. Differentiated Instruction is a teaching theory based on the premise that instructional approaches should vary and be adapted in relation to individual and diverse students in classrooms (Hall, 2007).

Students who continue to struggle, whether with decoding or comprehension, need targeted instruction at differentiated levels of intensity to address specific difficulties. This may include more explicit instruction in the general or special education setting in literacy-related foundational skills or higher-level skills. Some students, particularly those with LD, require sustained and intensive combinations of classroom instruction, remediation, and accommodations that are individualized, explicit, systematic, and relevant.

Some instructional approaches for teaching reading and writing are more effective than others. Successful instructional approaches include attention to the developmental level, language abilities, interests, motivation, and learning characteristics of the student, and address the structure and functions of language. It is generally accepted that teachers who address critical language and literacy skills through direct, systematic, sequenced lessons are effective with most students. From an instructional perspective, it is also important to distinguish between a strategy and a skill. Strategy instruction focuses on teaching an approach to a task (e.g., how a student thinks about, plans, executes, and evaluates performance of a given task). Skill instruction focuses on teaching a set of steps or procedures to accomplish a specific task.

All of the following factors should be considered when planning instruction and intervention designed to address the specific literacy needs of the adolescent student with LD:

- Target areas that are critical to reading and writing proficiency. Key foci include decoding, vocabulary, comprehension, fluency, spelling, composing, higher-order language skills, metalinguistic awareness and metacognitive skills of self-regulation, and executive functioning.

- Combine strategy-based instruction/remediation with skill-based instruction. Strategies are only effective if students have the appropriate skills to carry out a given strategy.
Conversely, skill learning is often insufficient to bring about generalization to other tasks.
- Teach literacy strategies within the context of content area material and discipline-specific literacy. Adolescents are asked to read volumes of materials from primary to secondary source texts that relate to various topics in the social, physical, and life sciences and mathematics. They also are asked to share what they know and think about these topics in writing. Each field has particular ways of communicating knowledge to others within and outside the discipline, and students must become adept at participating in the specialized discourse communities of scientists, mathematicians, historians, etc. Situating literacy instruction in specific disciplines can facilitate students' development of competence in reading content area texts and writing to communicate ideas associated with a content area.
- Provide clearly-scaffolded and sequenced instruction/remediation that strives toward helping students become independent learners. Both modeling and informative instructional feedback are effective strategies that should be incorporated into a systematic approach for teaching critical literacy and literacy-related language skills. By knowing how to use systematic approaches, students become more adept at accessing the general curriculum, learn information more efficiently, and achieve curriculum/remediation goals successfully.
- Provide repeated opportunities to apply and generalize strategies and skills. It is often necessary to reteach skills and strategies and to provide guided practice in their functional application at higher and higher levels of complexity. For struggling learners, particularly those with LD, it is not sufficient to simply teach a learning strategy; continued support for the use and generalization of strategies is required for real change to occur.

- Identify and incorporate strategies and tools that provide support for acquisition of critical literacy skills necessary in print and digital environments. These include, but are not limited to, the implementation and utilization of assistive technology tools, use of student skill in digital environments, and principles of universal design. Universal design involves the use of inclusive instructional strategies that benefit a broad range of learners, including those with LD. While universal design increases the overall responsiveness of instruction, it does not eliminate the need for specific accommodations for students with LD.
- Actively use student performance assessment data to monitor progress, determine continuing instructional/remedial needs, and obtain information about the student's strengths and interests to incorporate into instructional planning.

While ELLs with LD benefit from the same interventions as their monolingual peers, they have additional specific instructional needs. These include special emphasis on cognates for word recognition, spelling, and vocabulary development, and focus on visual scaffolding (e.g., pictures, gestures, facial expressions) to facilitate reading and writing skills. In addition, it may be most productive to first teach the alphabetic principle and basic decoding skills in the student's primary language and then transfer this knowledge to the second language as a means of supporting further language and literacy development.

In summary, educators must design and deliver a continuum of differentiated services that focus on the specific needs of individual adolescents with LD. Instruction must be guided by the results of a comprehensive assessment and informed by ongoing progress monitoring in the instructional setting.

Guiding Principles for Professional Development

Meeting the needs of the older student with LD is a challenging task that will require collaboration and commitment at state, district, and local levels. Professional development is pivotal for creating informed learning environments, providing quality instruction, and developing the expertise needed in schools. Practices that reflect principles outlined in an earlier NJCLD paper on professional development (1999) and consideration of the following will be critical in effecting sustained change.

Shared Responsibility for Literacy Skill Development

The entire educational community must share responsibility for the development of literacy skills for the older student. This requires a paradigm shift from common practice where literacy instruction has been viewed as the sole responsibility of specialists instead of general educators. While special educators and other specialists are primarily responsible for remediation, both general education and special education teachers must be accountable for the development of literacy skills that are critical to the acquisition of content area knowledge. Recognition of the need for shared responsibility should inform organizational changes and leadership commitment at all levels.

Professional Development Aligned with Needs of Educators

It is essential that teacher preparation programs include the explicit teaching of what is known about the science of reading and writing so that educators acquire the knowledge and skills critical to effective literacy instruction. The precise design and delivery of ongoing professional development should be differentiated according to professional expertise, experience, and responsibility.

All educators require the knowledge, skills, and attitudes identified as critical for literacy instruction, as well as an understanding of digital literacy and its impact in the general and special education setting. Special educators responsible for assessment, diagnosis, or delivery of remediation require a thorough understanding of language, reading, and writing development and disabilities as well as evidence-based instructional practices. Content area teachers should have knowledge of the reading comprehension and writing demands of their subject area and the instructional strategies that support students' acquisition of domain-specific vocabulary and concepts.

Professional Development Related to Adult Learning

Although traditional delivery of information (e.g., courses, conference presentations, or in-service workshops) is important, current adult learning research indicates that collaborative models of professional development are most effective in creating and sustaining change in teacher practice and attitudes. These models might include a professional development school partnership with a university or in-district designed professional development plans that provide additional options such as dialogue, coaching/mentoring, team-teaching, and collaboration with peers to promote implementation and application of learning. While numerous delivery models and practices can be considered, the essential idea is that effective professional development is a continuum of relevant, differentiated, and ongoing learning opportunities rather than a series of isolated events.

Creating and Supporting Organizational Culture –

The context in which educators teach and learn, the organizational culture, is often overlooked. The changes necessary to address the issues described in this paper require that schools be organized as professional communities. These communities include the following characteristics:

- Administrators that support and guide evidence-based instructional improvements;
- Administrators that commit to allocating necessary resources (e.g., personnel, policies, practices, and funding);
- Staff that assumes shared responsibility for student achievement;
- Staff that commits to continuous learning;
- School culture that provides dedicated time for adult learning essential to student success.

The role of administrators in creating a culture that supports the translation of professional learning into practice is paramount. If educators are expected to commit to implementation of effective literacy practices for adolescents with LD, educational leaders must commit to initiating, implementing, and sustaining conditions that support their efforts. This is consistent with development of a professional-parent-community partnership that fosters shared knowledge, skills, and responsibility for the educational success of adolescent learners.

Recommendations

This NJCLD paper addresses critical issues related to the literacy needs of adolescents with LD and advocates for effective reading and writing instruction for these students. Based on the preceding discussion, NJCLD makes the following recommendations:

1. Research is needed to determine factors, instructional approaches, and combinations of approaches that affect degree and rate of change in acquisition and application of literacy skills for adolescents with LD within varied educational and social contexts.
2. Research on the use of RTI and other alternative approaches for adolescents with LD must be a Federal funding priority to determine the effectiveness of this model at the secondary level for the purposes of identification, remediation, accommodations and progress monitoring.
3. Systematic studies are required to examine traditional and universal design approaches to print and literacy demands. Conduct studies to determine how adolescents with LD can use digital environments to foster self-efficacy and social identity and increase literacy skills and strategies.
4. Longitudinal and experimental studies are critical to extend understanding of how
 - Different profiles of cognitive, linguistic, socio-cultural, and psychosocial characteristics of the adolescent learner with and without LD affect learning outcomes;
 - Student learning profiles change over time.
5. Assessment for adolescents with LD must be reconceptualized as a comprehensive diagnostic process that is not solely related to eligibility but includes data that directly informs instructional planning and provides for ongoing monitoring of progress.

6. Middle and high schools may require restructuring to provide a continuum of services to meet the needs of adolescents with LD, including instruction in the general education program, remediation, accommodations, and learning/behavioral supports (e.g., study skills and self-advocacy).
7. Educational priorities, policies and practices should support shared responsibility for literacy instruction between general educators and special educators.
8. Professional development plans and practices for all educators should be ongoing and should reflect the current knowledge base on adult learning.
9. Professional development should be differentiated dependent upon professional roles and responsibilities.
10. Professional preparation should reflect current science and research-informed practices to ensure that all professionals working with adolescents with LD possess the necessary competencies for literacy instruction.

References

- Barton, P. E. (2004). What jobs require: Literacy, education, and training, 1940-2004. Washington, D.C.: Educational Testing Service.
- Biancarosa, G., & Snow, C. (2004). Reading next: A vision for action and research in middle and high school literacy—A report to Carnegie Corporation of New York. Washington, D. C.: Alliance for Excellent Education.
- Coiro, J., Knobel, M., Lankshear, C., Leu, D. (Eds.) (2008). *Handbook of Research on New Literacies*. New York, NY: Lawrence Erlbaum Associates.
- Graham, S. & Perin, D. (2007). Writing next: Effective strategies to improve writing of adolescents in middle and high school-A report to Carnegie Corporation of New York. Washington, D. C.: Alliance for Excellent Education.
- Grigg, W., Donahue, P., & Dion, G. (2007). The nation's report card: 12th-grade reading and mathematics 2005 (NCES 2007-468). U.S. Department of Education, National Center for Education Statistics. Washington, D. C.: U.S. Government Printing Office.
- Hall, T. (2007). Differentiated instruction. Boston, MA: Center for Applied Special Technology.
- Lenz, B., Ehren, B. & Deshler, D. (2005). The Content Literacy Continuum: a school reform framework for improving adolescent literacy for all students. *Teaching Exceptional Children*, 37(6), 60-63.
- National Center for Learning Disabilities (2008). Specific learning disabilities: A national review.
- National Joint Committee for Learning Disabilities (1990). Learning disabilities: Issues on definition. www.ldonline.org/njcd.
- National Joint Committee for Learning Disabilities (1999). Professional development for teachers. www.ldonline.org/njcd.
- National Joint Committee for Learning Disabilities (2005). Responsiveness to intervention and learning disabilities. www.ldonline.org/njcd.
- National Longitudinal Transition Study II (2003). National Center for Special Education Research at the Institute of Education Sciences, U. S. Department of Education.
- Parsad, B., Lewis, L., & Greene, B. (November, 2003). Remedial education at degree-grating postsecondary institutions in Fall 2000 (NCES 2004-010). Washington, D.C.: U.S. Government Printing Office.

- Perie, M., Grigg, M., & Donahue, P. (2005). The nation's report card: Reading 2005 (NCES 2006-451). U.S. Department of Education, National Center for Education Statistics. Washington, D. C.: U.S. Government Printing Office.
- Persky, H. R., Daane, M. S., & Jin, Y. (2003). The nation's report card: Writing 2002 (NCES 2003-529). U.S. Department of Education, National Center for Education Statistics. Washington, D. C.: U.S. Government Printing Office.
- Torgesen, J. et al. (2007) Academic literacy instruction for adolescents: A guidance document from center on instruction. Portsmouth, NH: RMC Corporation.
- U.S. Department of Education (2007a). Striving Readers Program. Retrieved April 24, 2007 from <http://www.grantsalert.com/grants.cfm?id=1&gid=1611>.
- U.S. Department of Education, Institute of Education Science, National Center for Education Statistics (2007b). National Assessment of Adult Literacy (NAAL). Retrieved February 25, 2007 from <http://nces.ed.gov/NAAL/index.asp?file=KeyFindings/Demographics/Overall.asp&PageId=16>
- U.S. Department of Education, Institute of Education Science, National Center for Education Statistics (2007c). Dropout rates in the U.S.: 1995. Retrieved February 25, 2007 from <http://nces.ed.gov/pubs/dp95/97473-6.asp>.
- Wagner, D. A.(2000). EFA 2000 thematic study on literacy and adult education: For presentation at the world education forum, Dakar. Philadelphia: International Literacy Institute.