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# Identification and Assessment of Gifted Students With Learning Disabilities

*More is known about the characteristics and needs of gifted students with learning disabilities today than in the past, as more educators understand that children with high potential can simultaneously struggle with academic tasks at school. However, many of these students are not identified as requiring services, and if they are, it is for only 1 exceptionality. This absence of knowledge about the consequences of the coincidence of gifts and disabilities has resulted in misidentification and minimal services for many students. In this article, current identification and assessment practices are reviewed within a framework of a broadened view of giftedness; connections*

*are made between identification and assessment, and the provision of appropriate interventions. The authors contend that a scholarly exchange of ideas in the fields of learning disabilities and giftedness can enable researchers and practitioners to discuss the best ways to translate research into practice to find the most appropriate methods to identify students with dual exceptionalities.*

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**I**N A RECENT VOLUME of research on students with both gifts and learning disabilities (gifted/LD), Baum (2004) summarized the major questions in the field of gifted education during the last 30 years. These include whether students can be both gifted and learning disabled, the characteristics these students exhibit, how they can be appropriately identified, and how educators can appropriately meet their needs. Many researchers understand that academically talented children can simultaneously struggle with academic tasks at school (e.g., Baum, Cooper, & Neu, 2001; Baum & Owen, 2004). The origins of

the belief that students with gifts and talents could also have learning disabilities began a quarter century ago with the seminal work by Maker (1977) who suggested an unexplored and provocative area of research on a special population of students initially referred to as “gifted handicapped.” Maker’s book added a new dimension to the idea that students can simultaneously have gifts, talents, and disabilities, and her pioneering concept of gifted handicapped, or twice-exceptional children, resulted in a line of inquiry devoted to this important topic.

Researchers currently know more about the characteristics and needs of gifted students with learning disabilities; however, disagreements exist about how these students can be appropriately identified (McCoach, Kehle, Bray, & Siegle, 2004; Olenchak, 1994; Reis & Ruban, 2004). For instance, the concept of masking and the use of profile analysis have been challenged, and a potential disappearance of the discrepancy formula from the proposed 2004 reauthorization of the Individuals with Disabilities Education Act (IDEA) will result in debate about the viable alternatives for identifying gifted/LD students. Areas of consensus exist as well as others that require further work. On a positive side, many educators and professionals believe in the importance of capitalizing on strengths and minimizing weaknesses. As increasing numbers of researchers continue to make a compelling argument for adopting a broadened definition of giftedness beyond the traditional IQ-based definition (Gardner, 1993; Renzulli, 1986; Sternberg, 1997), a stronger need exists to align the broader view of giftedness with the provision of appropriate services for students with diverse gifts and learning disabilities.

In this article, current identification and assessment practices are reviewed within the framework of a broadened view of giftedness and a link is drawn between identification, assessment and the provision of appropriate interventions for this unique student population. Promising approaches for solving problems in this area are described and a framework for current identification and assessment procedures related

to gifted students with learning disabilities is briefly discussed.

### **Definitions of Giftedness, Learning Disabilities, and Gifted/LD**

Many current theorists define conceptions of giftedness in terms of multiple qualities, conceding that aptitude or IQ scores are not synonymous with giftedness and are, therefore, inadequate measures of giftedness. For example, motivation, self-concept, and creativity are often included in many of these broadened conceptions of giftedness and the role of culture is often discussed as interwoven with giftedness (Sternberg & Davidson, 1986). One of the most popular broadened conceptions of giftedness developed by Renzulli (1986) includes three interlocking clusters of above average ability, creativity, and task commitment. One authoritative definition of learning disability adopted in the federal regulations of the U.S. Office of Education (USOE, 1977) explained

“Specific learning disability” means a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, which may manifest itself in an imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations. The terms includes such conditions as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. The term does not include children who have learning problems which are primarily the results of visual, hearing, or motor handicaps, or mental retardation, or emotional disturbance, or environmental, cultural, or economic disadvantage. (USOE, 1977, p. 65083)

The notion of IQ–achievement discrepancy was not initially incorporated into the federal learning disability (LD) definition. However, it later became part of the regulations outlining procedures for identification of specific learning disabilities (SLD) issued by the Bureau of Education for the Handicapped (USOE, 1976). In 2004, Baum and Owen defined gifted students with learning disabilities as having outstanding talents

in some areas and debilitating weaknesses in others. Brody and Mills (1997) proposed the definition of gifted/LD students to include a statement about their superior abilities, as well as their performance deficits, as follows:

Gifted/LD students are students of superior intellectual ability who exhibit a significant discrepancy in their level of performance in a particular academic area such as reading, mathematics, spelling, or written expression. Their academic performance is substantially below what would be expected based on their general intellectual ability. As with other children exhibiting learning disabilities, this discrepancy is not due to the lack of educational opportunity in that academic area or other health impairment. Because academically gifted students with learning disabilities demonstrate such high academic potential, their academic achievement may not be as low as that of students with learning disabilities who demonstrate average academic potential. Consequently, these students may be less likely to be referred for special education testing. (p. 285)

**Characteristics of Gifted Students with Learning Disabilities**

During the last 2 decades, much has been learned about the characteristics and traits of this unique population of students (Davis & Rimm, 2002). In a thorough review of the literature on gifted /LD students, Reis, Neu, and McGuire (1995) summarized the characteristics of gifted/LD students that reflect their giftedness but also hamper their identification as gifted. These positive and challenging characteristics seem to stem from the unique and perplexing interaction of their abilities and their disabilities as summarized in Table 1.

Some high-ability students with SLDs may display very different characteristics from each other. For example, those with reading disabilities may have high verbal or visual-motor aptitude, possible creativity, boredom with grade level or below grade level reading, variable scores on achievement tests in reading sections, improved performance with compensation strategies (e.g., information presented orally, word

**Table 1**  
**Characteristics of Gifted Students with Learning Disabilities**

<i>Characteristics Which Hamper Identification as Gifted</i>	<i>Characteristic Strengths</i>
<ul style="list-style-type: none"> <li>• Frustration with inability to master certain academic skill</li> <li>• Learned helplessness</li> <li>• General lack of motivation</li> <li>• Disruptive classroom behavior</li> <li>• Perfectionism</li> <li>• Supersensitivity (e.g., to criticism, to feeling of others)</li> <li>• Failure to complete assignments</li> <li>• Lack of organizational skills</li> <li>• Careless in one’s work</li> <li>• Demonstration of poor listening and concentration skills</li> <li>• Deficiency in tasks emphasizing memory and perceptual abilities</li> <li>• Low self-esteem</li> <li>• Unrealistic self-expectations</li> <li>• Absence of social skills with some peers (e.g., can be aggressive and defensive in relationships)</li> </ul>	<ul style="list-style-type: none"> <li>• Advanced vocabulary use</li> <li>• Exceptional analytic abilities</li> <li>• High levels of creativity</li> <li>• High levels of productivity (particularly in the area of interest)</li> <li>• Advanced problem-solving skills</li> <li>• Ability to think of divergent ideas and solutions</li> <li>• Specific aptitude (artistic, musical, or mechanical)</li> <li>• Wide variety of interests</li> <li>• Good memory</li> <li>• Strong critical-thinking skills</li> <li>• Unusual ability to see interrelationships among ideas and concepts</li> <li>• Extraordinary reasoning skills</li> <li>• Task commitment</li> <li>• Desire for knowledge, desire to explore and discover</li> <li>• Sense of humor</li> <li>• A variety of special abilities</li> </ul>

processor, spell-checkers, additional time for assignments), low tolerance for frustration with rote-drill reading tasks, possible inattention, and unrealistically high or low self-concept (Hishinuma & Tadaki, 1996). High-ability students with math disabilities may display different characteristics including: high verbal aptitude, possible creativity, boredom with grade level or below grade level math, variable scores on achievement tests in math sections, improved performance with compensation (emphasis on word problems, calculator use, additional time for assignments), low tolerance for frustration with rote-drill math tasks, possible inattention, and unrealistically high or low self-concept (Hishinuma & Tadaki, 1996).

Students who exhibit characteristics of both academic talents and learning disabilities pose quandaries for educators. The misconceptions, definitions, and expected outcomes for these types of students further complicate the issues facing appropriate programming for this population. Awareness of these students' needs is becoming more common with teachers of both gifted students and those with learning disabilities, yet few school districts provide interventions or programs for this group (Boodoo et al., 1989; Newman, 2004). Problems with identification and delivery of services to these students may exist at many levels, including varying definitions and criteria for eligibility, referral process, masking effects (i.e., when a student's giftedness masks his or her disability and vice versa), political issues, and other issues. It appears that better understanding of these complex issues may arise from exploring the connections of ideas from both the fields of giftedness and learning disabilities.

### **Prevalence Rates as a Function of the Adherence to a Particular Definition**

The views on the nature and definitions of giftedness have changed continually, and their evolutions have moved toward including an increasingly more diverse set of capabilities; however, no universally agreed-on definition of giftedness exists. Drawing attention to this lack of

consensus, McCoach and colleagues (2004) suggested that a school district's implicit or explicit definition can actually determine eligibility for specialized services. In some states, for example, only 1–2% of the school-aged student population is identified as gifted, whereas in others the percentages are 5% or higher. In the talent pool approach, reflecting broadened conceptions of giftedness, as many as 10–15% of students in the total population in a particular school can be identified as having high potential using a flexible and inclusive system with multiple criteria (Renzulli & Reis, 1997).

An interesting similar phenomenon has been reported in the field of learning disabilities. According to Gresham (2002), findings in the last 15 years have pointed to a lack of consistent definition in policy or practice in the identification of LD students, a major stumbling block to effective research and practice. MacMillan and Siperstein (2002) explained that the population of LD students has changed over the years as public schools have responded to societal and policy changes and the ways in which these have affected both general and special education. For example, between 1976–77 and 1992–93, the number of children served as LD nationwide increased by 198% (U.S. Department of Education, 1995). Commenting on the magnitude of this increase, MacMillan, Gresham, Siperstein, and Bocian (1996) wrote: "Were these epidemic-like figures interpreted by the Center for Disease Control one might reasonably expect to find a quarantine imposed on the public schools of America" (p. 169). Presently, students with LD account for 52% of all children with disabilities in the public school system, and represent more than 5% of the total school population, but these numbers greatly vary by state (U.S. Department of Education, 1998). Gresham (2002) qualified the process by which schools identify students as learning disabled as "confusing, unfair, and logically inconsistent" (p. 467). MacMillan and Siperstein (2002) provided an interesting explanation for understanding the trends in the number and nature of LD students being served by emphasizing that, in reality, a distinction exists between "research-identified" and "school-identified" perspectives.

With regards to prevalence rates of gifted students with LDs, a similar situation occurs. In reviewing research over the last few decades, Nielsen (2002) suggested that many estimates concerning the prevalence of gifted children with LDs have been reported. These rather conservative estimates range from 2% to 5% of the total population of children with disabilities. Nielsen also pointed out the dearth of empirical data regarding the incidence of gifted children with LD and cited the available statistics relating to estimates of gifted students from a population of students with LD, as well as estimates of students with LD from the population of gifted students. Baum and Owen (1988) found that 36% of the students in their study who had been identified by school personnel as possessing a learning disability simultaneously demonstrated behaviors associated with giftedness. Mauser (1981) found that 2.3% of children with LD also met gifted criteria. In contrast, Silverman (1989) investigated the number of children with LD within the intellectually gifted student population, reviewing test protocols for 14,000 children at the Child Development Center and finding 200 (1.4%) of those who were gifted also had a learning disability. Nielsen also reported findings from her federally funded Twice-Exceptional Child Project in New Mexico (Nielsen, Higgins, & Hammond, 1995). She and her colleagues examined public school district diagnostic data for 22,000 children receiving special education services who had been tested over a 7-year period to calculate the incidence rate of children who were gifted/LD. According to Nielsen, prior to the implementation of the collaborative university–district projects, 1.04% of children with LD in the large urban district were identified as gifted. After 3 years of project outreach and advocacy, 3.5% of the children were identified as gifted students with learning disabilities.

In examining critical issues related to definition and identification it appears that these issues exist across the boundaries of the fields of giftedness and learning disabilities. It is unfortunate, however, that the proponents of the reauthorization of the IDEA have chosen not to include in their discussions issues related to identification and services for students with learning dis-

abilities who may also be academically talented and gifted. Developments in research and practice in these two fields should interact with the issues that apply to students with both gifts and learning disabilities.

### **Connecting Ideas from the Fields of Giftedness and Learning Disabilities: Common Areas of Concern**

An examination of key issues about identification, assessment, and appropriate programming for gifted students with learning disabilities reveals common areas of concern. Researchers in the LD field have worked to reach a consensus on key issues related to identification and services for students with LD, in what has become known as the Learning Disabilities Initiative (Bradley, Danielson, & Hallahan, 2002). These efforts are currently at the forefront of the changes in the proposed reauthorization of the IDEA (IDEA, 1997) anticipated in 2004. Of immediate concern for researchers and practitioners in the field of gifted education, who study identification issues and programming options for gifted students with learning disabilities, is the proposed elimination of the aptitude–achievement discrepancy. Many researchers in the field of learning disabilities have questioned the use of IQ tests as a measure of a student’s potential, as these tests do not often help to determine services that address students’ specific learning needs. After years of debate and research on the benefits and drawbacks of using a discrepancy formula for the identification, researchers and practitioners summarized their consensus, by stating that the “IQ/achievement approach has become outdated and no longer reflects current research” (Bradley et al., 2002, p. 796) and providing a convincing argument that the use of IQ tests is neither sufficient nor necessary for LD identification. Researchers and school psychologists in gifted education, however, rely on the use of the discrepancy formula to identify gifted students with learning disabilities, arguing that if the IQ–achievement discrepancy approach is eliminated, it would be increasingly difficult to identify these students (McCoach et al., 2004). With the

advent of the proposed changes to the IDEA, researchers and practitioners in the field of gifted education must consider alternatives to the IQ–achievement discrepancy formula.

The proponents of the reauthorization of the IDEA propose an alternative called a *dual discrepancy model*, based on children’s failure to respond to well-planned general education interventions. Fuchs, Fuchs, and Fernstrom (1993) suggest that special education should be considered only when a child’s performance shows a dual discrepancy: The student both performs below the *level* evidenced by classroom peers and shows a *learning rate* substantially below that of classroom peers. Researchers and practitioners participating in the Learning Disabilities Initiative agreed that alternative methods can help to identify students with SLD in addition to achievement testing, history, and observations of the child. Their consensus statement suggests that response to quality intervention is the most promising method of alternative identification to promote effective practices in schools and close the gap between identification and treatment. Researchers in gifted education also recognize the need to link assessment and diagnosis to intervention for gifted students with learning disabilities (Brody & Mills, 2004). Providing gifted/LD students with appropriate interventions that focus on the development of their gifts rather than emphasizing weaknesses is consistent with the proposition that these students should be viewed as being “at promise” rather than “at risk” (Nielsen, 2002, p. 93).

### **Identification of Academically Talented Students with Learning Disabilities**

Identification of students with talents and disabilities is problematic and challenges educators. Most school personnel rely on discrepancy formulae between intelligence and ability test scores, analyses of intelligence test results for differences across subtests (“scatter”), and multidimensional approaches that incorporate interviews, observations, and other qualitative data (Lyon, Gray, Kavanagh, & Krasnegor, 1993). However, short-

comings exist with these approaches, including identification later in school, despite having problems in earlier grades (Reis, Neu, & McGuire, 1997). In summary, students who are academically talented and gifted and also have learning disabilities are at risk of underidentification or exclusion from both programs for students with learning disabilities and programs for gifted and talented students.

Inadequate identification of students with LD is attributable to a number of factors. First, the label of learning disability is largely viewed as an educational rather than a medical diagnosis, and the criteria and methods used for diagnosis vary from state to state and from school to school. Second, many types of LD, such as nonverbal disabilities, are more difficult to identify. Certain cognitive processing disabilities are challenging to identify in the early elementary grades. Third, other psychosocial, attention deficit, or conduct disorders may mask an academically talented student’s LDs, and these become the primary and sole focus of medical attention and treatment. Other reasons for the low number of identified academically talented students with LDs include the high cost of evaluation and parental concerns regarding possible damage to academically talented students who are labeled as having a learning disability.

Recently, McCoach et al. (2004) proposed a comprehensive eight-step system for identifying gifted students as learning disabled longitudinally, providing a rationale for using a complete assessment battery to identify and plan interventions for these students. In their view, assessment should include behavioral observations, an individual intelligence test, measures of cognitive processing, and a full achievement battery. They also recognize the importance of assessing the student’s level of functioning in the regular classroom environment, curriculum-based assessments, and interviews with students to assess their perceptions and attitudes toward academics. This research-based approach, however, raises questions about its feasibility and replication on a large scale, particularly in light of financial, social, and political concerns in public schools. Concerns also exist

about the lack of trained personnel and the need for teacher training to appropriately assess these twice-exceptional students. In addition, when so much time is spent on diverse assessments, less time may be devoted to actually helping the child who is in need of special services. Among the issues proposed for IDEA reauthorization is a reconsideration of how to make identification procedures less complex while placing more emphasis on assessing student achievement (Bradley et al., 2002). One might argue that the goals of IDEA and gifted education seem incompatible. For students with learning disabilities, a major emphasis is placed on assessing achievement and accountability for student learning (Bradley et al., 2002). For talented and gifted students, although student achievement is viewed as a desirable goal, a major emphasis is the development of students' talent and diverse gifts (Baum, 2004; Renzulli & Reis, 1997; Sternberg & Grigorenko, 2004).

#### **Linking Identification and Assessment to Intervention for Gifted Students with Learning Disabilities: Promising Practices**

Lupart (2004) reviewed approaches and issues associated with identification and assessment of gifted students with learning disabilities over the past 3 decades, offering implications for the field of gifted education. In her view, a preponderance of articles deal with identification as opposed to assessment concerns, and the practices associated with the identification of the gifted/LD students have borrowed from both the fields of giftedness and LD. Despite the fact that no real consensus exists about the best means for identification of these twice-exceptional children, widespread agreement exists concerning the difficulty of trying to identify students who are gifted or learning disabled (Baum & Owen, 2004; Brody & Mills, 2004; Yewchuk & Lupart, 2000). Apparently, in most school systems, whatever identification program is pursued, neither will be likely to have adequate flexibility to enable the recognition of both gifts and learning disabilities. And, if a student is

successfully identified, interventions tend to favor one area and consequently, are not as likely to address the unique learning needs in the other area of exceptionality (Reis, McGuire, & Neu, 2000).

An increasing number of researchers and practitioners support the idea that the point at which a talented student with LDs has been identified should be regarded as the beginning rather than the end of the assessment process. Recent trends in moving toward broader conceptions of giftedness and intelligence have stimulated an important paradigm shift in approaches that link identification and assessment to interventions (Baum & Owen, 2004; Sternberg & Grigorenko, 2004). Perhaps it is this disconnect between identification, assessment, and link to interventions that can be effectively addressed using the talent pool approach suggested in the Schoolwide Enrichment Model (SEM; Renzulli & Reis, 1985, 1997). Research indicates that identification of academically talented students with learning disabilities is problematic, but in research conducted, this approach has emerged as a successful method of identification of this population (e.g., Baum, Owen, & Dixon, 1991; Olenchak, 1995). According to Robinson (1999), "Renzulli's model of talent development (Renzulli, 1977) and a theory of how to foster creative productivity (Renzulli, 1992) are particularly useful in developing an instructional approach that meets the needs of children who are gifted and have LD" (p. 195).

In the SEM, a talent pool of 15–20% of above-average ability and high-potential students is identified through a variety of measures including: achievement tests, teacher nominations, assessment of potential for creativity and task commitment, as well as alternative pathways of entrance (self-nomination, parent nomination, etc.). High achievement test and IQ test scores automatically include a student in the talent pool, enabling those students who are underachieving in their academic schoolwork to be included. Once students are identified for the talent pool, they are eligible for three services. First, interest and learning styles assessments are used with talent pool students and various methods are used to create or identify students' interests and to encourage stu-

dents to further develop and pursue these interests in various ways. This information, which focuses on strengths rather than deficits, is compiled into a Total Talent Portfolio (Purcell & Renzulli, 1998) used to make decisions about talent development opportunities. Second, curriculum modification can be provided to all eligible students for whom the regular curriculum is modified by eliminating portions of previously mastered content. A form, entitled *the Compactor* (Renzulli & Smith, 1978), is used to document the content areas that have been compacted and what alternative work has been substituted. Third, three types of enrichment experiences are offered, based on the theoretical approach underlying the SEM, the Enrichment Triad Model (Renzulli, 1977; Renzulli & Reis, 1985, 1997). The goal is to encourage creative productivity on the part of young people by exposing them to various topics, areas of interest, and fields of study, and to further train them to apply advanced content, process-training skills, and methodology training to self-selected areas of interest.

### Conclusions

Many academically talented students with learning disabilities are identified later in school, either in middle or high school. This late identification occurs even if these students were referred earlier by teachers or parents for testing or various types of assistance because of difficulties in primary or elementary school (Reis et al., 1997). The situation is complicated, as the abilities of gifted students often mask their disabilities, and, in turn, their disabilities can disguise their giftedness. Due to this contradiction between high levels of ability and critical problems with learning, students who are academically talented but also have learning disabilities are at risk of underidentification. They may be excluded or underrepresented in both programs for students with learning disabilities and in programs for gifted and talented students. More flexible identification and assessment will enable more twice-exceptional children to be both appropriately identified and served.

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