Gifted Children with Learning Disabilities: A Review of the Issues

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Abstract

Many people have difficulty comprehending that a child can be gifted and also have learning disabilities. As a result, children with special needs that result from both their high abilities and their learning problems are rarely identified and are often poorly served. This article explores the current policies and practices with regard to defining, identifying, and educating this population. Recommendations are included that would help ensure that students who are gifted and have learning disabilities receive the intervention needed to help them achieve their full potential.

When educators first began describing children who showed evidence of having a learning disability (LD) yet also appeared to be gifted, many viewed this as contradictory. The stereotype that had prevailed since Terman's (1925) time was that gifted children score uniformly high on intelligence tests and perform well in school. How could a child be considered gifted who has serious enough learning problems to be characterized as having a learning disability?

In 1981, a colloquium held at The Johns Hopkins University convened experts from the fields of both learning disabilities and giftedness to consider this issue. At the time, interest in meeting the needs of gifted and talented students, as well as students with learning disabilities, was evident on many levels, but students who exhibited the characteristics of both exceptionalities had received scant notice. The participants agreed that students who are gifted and also have learning disabilities do, in fact, exist but are often overlooked when students are assessed for either giftedness or learning disabilities. The colloquium did much to establish students who are gifted but also have learning disabilities as a population with special characteristics and needs (Fox, Brody, & Tobin, 1983).

In recent years, the concept of giftedness and learning disabilities occurring concomitantly in the same individual has become commonly accepted. Several books have been written on the subject, numerous articles have appeared in journals, and most educational conferences focusing on either learning disabilities or giftedness include at least one presentation on the dual exceptionality. We appear to have reached an understanding that high ability and learning problems can both be present in the same individual. Nonetheless, empirical research on the characteristics and needs of this population has been limited, and relatively few students with LD who are gifted are identified as such or given special services. In this review, we examine some of the theoretical arguments, regulations, and educational practices that affect students with LD who are gifted.

Who Are These Students?

Students who are gifted and also have learning disabilities are those who possess an outstanding gift or talent and are capable of high performance, but who also have a learning disability that makes some aspect of academic achievement difficult. Some of these students are identified and their needs are met. This happens only rarely, however, unless a school specifically decides to identify and then serve these students. The majority of students who are gifted with learning disabilities "fall through the cracks" in the system.

There are at least three subgroups of children whose dual exceptionality remains unrecognized (Baum, 1994; Baum, Owen, & Dixon, 1991; Fox, Brody, & Tobin,1983; Landrum,1989; Starnes, Ginevan, Stokes, & Barton, 1988). The first group includes students who have been identified as gifted yet exhibit difficulties in school. These students are often considered underachievers, and their underachievement may be attributed to poor selfconcept, lack of motivation, or even some less flattering characteristics, such as laziness (Silverman,1989; Waldron, Saphire, & Rosenblum,1987; Whitmore, 1980). Their learning disabilities usually remain unrecognized for most of their educational lives. As school becomes more challenging, their academic difficulties may increase to the point where they are falling sufficiently behind peers that someone finally suspects a disability.

A second group includes students whose learning disabilities are severe enough that they have been identified as having learning disabilities but whose exceptional abilities have never been recognized or addressed. It has been suggested that this may be a larger group of students than many people realize. In one study, as many as 33% of students identified with learning disabilities had superior intellectual ability (Baum, 1985). Inadequate assessments and/or depressed IQ scores often lead to an underestimation of these students' intellectual abilities. If their potential remains unrecognized, it never becomes a cause for concern or the focus of their instructional program. Due to this underestimation or to inflexible identification and/or instructional expectations in the "gifted program," they are rarely referred for gifted services.

Perhaps the largest group of unserved students are those whose abilities and disabilities mask each other; these children sit in general classrooms, ineligible for services provided for students who are gifted or have learning disabilities, and are considered to have average abilities. Because these students typically function at grade level, they are not seen as having problems or special needs, nor are they a priority for schools on tight budgets. Although these students appear to be functioning reasonably well, they are, unfortunately, performing well below their potential. As course work becomes more demanding in later years, and without the help they need to accommodate their limitations, their academic difficulties usually increase to the point where a learning disability may be suspected, but rarely is their true potential recognized.

For all three of these subgroups, the social and emotional consequences of having exceptional abilities and learning disabilities, when one or both of the conditions is unrecognized, can be pervasive and quite debilitating, as well as difficult to address if appropriate diagnosis and programming never take place or are delayed until adolescence (Baum et al.,1991; Durden & Tangherlini, 1993; Fox, Brody, & Tobin,1983; Whitmore,1980). With an increasing number of LD researchers

questioning the relevance of a child's aptitude in determining intervention strategies (cf. Siegel,1989), even fewer students with high potential and learning disabilities will be recognized or fully served, resulting in a great waste of intellectual potential.

Definitions

The literature is replete with references to individuals with extremely high abilities and talents who also have a specific learning disability (e.g., Aaron, Phillips, & Larsen, 1988; Goertzel & Goertzel,1962; Ochse,1990; Thompson, 1971). Some researchers have even suggested that, at least for some individuals, the learning disability may be fundamentally associated with a "gift" (e.g., Geschwind, 1982; West,1991). To most practitioners who work with individuals with disabilities, being gifted and also having learning disabilities does not appear to be an unfamiliar or especially problematic condition, at least in theory. Nonetheless, a number of thorny issues and debates make the understanding and identification of the condition difficult.

Controversy surrounds what is meant by the terms gifted and learning disabled. As Vaughn (1989) pointed out, "no two populations have suffered from more definitional problems than learning disabled and gifted" (p.123). With regard to students who exhibit the dual exceptionalities simultaneously, legislation defining special populations has never specifically described this group. When educators and researchers describe these students as a unique group, they generally talk about students who exhibit strengths in one area and weaknesses in another (e.g., Ellston, 1993; Fall & Nolan, 1993) and/or show a discrepancy between potential and performance (e.g., Gunderson, Maesch, & Rees, 1987). For a more formal definition, however, it has been necessary to rely on the separate prevailing definitions of gifted children and children with learning disabilities, which are almost always inadequate for accommodating students who exhibit the characteristics of both groups simultaneously.

Definitions of Learning Disabilities

Numerous conceptual definitions of learning disabilities have been proposed by experts in the field (Hammill, 1990). Most of these allow for the co-occurrence of being gifted and having learning disabilities, as they set no upper limit on general intelligence or specific abilities in one or more areas. When the Association for Children and Adults with Learning Disabilities (1985) proposed a definition that specifically included the phrase "average and superior intelligence" occurring concomitantly with the disability, the door was opened wider for recognition of children with disabilities who are gifted. Some conceptual definitions include a reference to a discrepancy between intellectual ability and achievement, a concept and practice that is important for identifying many students with LD who are gifted, though the use of such a discrepancy for defining a learning disability has been criticized (cf. Lyon, 1989). Although there is nothing in most LD definitions that excludes students with learning disabilities who are also gifted, the definitions fail to specifically encourage practitioners to identify students in this subgroup.

Swanson's (1991) review of operational definitions is quite useful in understanding the issues related to defining and identifying learning disabilities. Many of the issues and debates he discusses, particularly the concepts of specificity (which refers to a learning disability being confined to a limited number of academic or cognitive

domains), discrepancy (whereby it is determined that a child's achievement does not measure up to his or her potential), and exclusion (whereby the learning disability is distinguished from other handicapping conditions), are particularly relevant to defining students with academic talents and learning disabilities. Because operational definitions are so closely tied to identification, these issues and debates are reviewed later in this article under "**Identification**."

Definitions of Giftedness

In the gifted and talented field, attempts to define giftedness from a conceptual viewpoint have resulted in little consensus. For example, giftedness has been defined as high general intelligence (Terman, 1925); high aptitude in a specific academic area (Stanley, 1976); and the interactions among high ability, task commitment, and creativity (Renzulli, 1986). (For other examples, see Sternberg and Davidson,1986.) Perhaps contributing to the difficulty in defining giftedness is the lack of agreement as to what intelligence is, with proponents of a variety of psychometric, developmental, and information-processing approaches offering conflicting viewpoints (Kail & Pellegrino, 1985; Sternberg & Detterman, 1986). Some of these definitions are more likely than others to accommodate the child with learning problems. For example, Gardner's (1983) concept of multiple intelligences provides for showing high ability in one area without requisite corresponding ability in all areas. In contrast, proponents of the concept of general "g" (Spearman, 1927) have greater difficulty considering students with learning difficulties as highly able.

A multifaceted view of giftedness, proposed by Marland (1972), has been adopted by the U. S. Department of Education and a majority of state departments of education and school systems. Marland described gifted and talented children as those who demonstrate high achievement or potential in any one of six areas: general intellectual ability, specific academic aptitude, creative or productive thinking, leadership ability, visual and performing arts, and psychomotor ability (which was deleted in subsequent legislation). Recently, a revised definition has asserted that "outstanding talents are present in children and youth from all cultural groups, across all economic strata, and in all areas of human endeavor" (U.S. Department of Education, 1993, p. 26). This recognition of culturally disadvantaged gifted children was not matched by equal attention to gifted students with learning disabilities. However, neither federal definition of the gifted child excludes students with learning disabilities because the definitions (a) specify that a child need not be exceptional at everything to be gifted, (b) set no lower limits of performance or ability in remaining areas, and (c) specifically acknowledge that students can be gifted even if they are not currently performing at a high level, as long as they have the potential. Unfortunately, however, academic potential independent of performance is a difficult concept for many to accept.

Conclusion

Attempts to describe students with LD who are gifted have drawn heavily on definitions of each exceptionality separately; yet, a lack of consensus is evident in definitions of giftedness or learning disabilities, and the implications of the two conditions overlapping have not been adequately considered. For example, the broadbased federal definitions of giftedness, as well as other definitions, recognize students' abilities in a variety of areas. Thus, a student might exhibit talent in leadership or the arts but not in academic areas, and be labeled gifted and qualify for

services. If such a student also has a learning disability, he or she might be considered gifted and learning disabled. The concept that a student might have different abilities and needs in art than in mathematics is not difficult for most people to accept or understand.

However, accepting the concept that a student's giftedness and learning disabilities both lie in related academic areas, such as a student whose reading level is well above grade level but who has great difficulty with spelling and writing, is more problematic for most people. And the programming implications for these two types of students (i.e., those whose talents and disabilities lie in related or unrelated areas) are very different. Although students whose strengths and weaknesses are in unrelated areas might be gifted and have a learning disability, it is students whose talents and disabilities overlap and are both in academic areas who are most likely to be misunderstood, underserved, and in need of special services.

Descriptions of individuals who are academically talented and individuals who have learning disabilities should be examined and expanded to include students who exhibit the characteristics of both exceptionalities simultaneously in related and unrelated areas. At present, the operational definitions currently used by most schools to place children in gifted or special education programs exclude many academically talented students with learning problems who rarely meet the rigid cutoffs of most identification procedures (Fall & Nolan, 1993). For the few students who are identified via existing definitions and guidelines, it usually means receiving services in one or the other area, but not both.

Identification

At present, identifying students for gifted programs and for special education services for individuals with learning disabilities tend to be mutually exclusive activities (Boodoo, Bradley, Frontera, Pitts, & Wright, 1989). Unfortunately, too many students with LD who are gifted fail to meet the eligibility requirements for either because the identification protocols fail to consider the special characteristics of this population. For example, research has shown that teachers are much more likely to refer nondisabled students than students with learning disabilities for placement in gifted programs (Minner, 1990; Minner, Prater, Bloodworth, & Walker, 1987). Screening for learning disabilities typically requires evidence of underachievement. Gifted students who are able to compensate for their learning problems rarely get referred unless they exhibit behavioral problems (Senf, 1983). At the same time, because students with LD who are gifted rarely show consistently high achievement, they often go unrecognized as being gifted. Although a few will qualify for special education services because of the severity of their disability, and some will qualify for gifted services because of the type or level of their talent (Baum et al., 1991), most students with LD who are gifted rarely qualify for multiple services. Unless operational definitions and identification criteria are modified to accommodate the characteristics of this subgroup, this situation will, unfortunately, continue.

In an effort to shed light on the pattern of abilities of students with LD who are gifted, and to simplify identification, many researchers in this area have focused on Wechsler Intelligence Scale for Children-Revised (WISCR) score patterns (e.g., Bannatyne, 1974; Baum et al., 1991; Kaufman, 1979). To date, however, no consistent pattern of results has come from this research. Although Schiff, Kaufman,

and Kaufman (1981) reported a significant Verbal-Performance (VP) discrepancy (greater than that found for students with LD with average ability), with Verbal scores higher, Waldron and Saphire (1990) concluded that a significant discrepancy between Verbal and Performance scores may not be the best indicator of a learning disability in gifted students. Barton and Starnes (1989) observed that "the inconsistencies in magnitude or direction of VP discrepancies among the studies seem to result from differing patterns of deficits in the samples" (p. 28), and Fox, Brody, and Tobin (1983) concluded that "more research is needed to determine what, if any, unique patterns characterize the gifted/LD child" (p. 106).

It is clear that we are dealing with a very heterogeneous group of students who represent all types of intellectual giftedness and academic talents, in combination with various forms of learning disabilities. Therefore, trying to find one defining pattern or set of scores to identify all gifted students with learning disabilities is probably futile. On the other hand, there are some defining characteristics that should be considered in identifying these students: (a) evidence of an outstanding talent or ability, (b) evidence of a discrepancy between expected and actual achievement, and (c) evidence of a processing deficit.

Evidence of an Outstanding Talent or Ability

To identify a student with LD who might be gifted, one should find evidence of a special gift, talent, or ability whereby the student exhibits performance at a high level or the ability to perform at a high level. The talent or gift can be general ability or a specific talent in any of a variety of areas. However, practitioners need to recognize that a learning disability can depress the test performance of students who are academically talented. Thus, if academically talented students with learning disabilities are to be recognized as gifted, cutoff scores on whatever measures are used may have to be adjusted downward to accommodate the depressing effect of their learning disability (Karnes & Johnson, 1991; Silverman, 1989), and, for those students who manage to meet cutoff scores in spite of their disability, the extraordinary nature of their ability should be recognized.

When seeking evidence of a student's ability or potential, one often turns to a standardized intelligence test. However, the use of IQ tests for identification is problematic and has become increasingly controversial. The issues have to do with the nature of IQ tests and what they measure, the appropriateness of using them for certain populations, and whether an IQ score contributes to our understanding of students or programming decisions for them.

Within the field of gifted education, the reliance on IQ scores to identify gifted students has been questioned on many fronts. One concern is that intelligence tests measure a limited range of abilities (RamosFord & Gardner, 1991; Sternberg, 1991) and thus many gifted students will be overlooked. For example, intelligence tests are not good measures for identifying students who are creatively gifted (Torrance, 1979) or mathematically gifted (Stanley, 1974, 1979). The IQ scores of students from disadvantaged backgrounds may not reflect their true abilities (Baldwin, 1991). And, with gifted students who have learning disabilities, global IQ measures may be particularly insensitive to depression of scores caused by the disability (Fox & Brody, 1983).

Another concern is that a global measure of ability is not particularly helpful for educational programming (Fox & Brody, 1983). Although some children can certainly be gifted and talented in many diverse areas, identifying students who have exceptional talent in a specific area (e.g., mathematics, written expression) lends itself to targeted instruction and programming that is more appropriate and, ultimately, more justifiable (Durden & Tangherlini, 1993; Stanley, 1974). With just a global measure of academic potential to work with, only a global and often academically irrelevant program can be implemented. This is not to say, however, that IQ tests have no usefulness for diagnostic or intervention purposes.

Fox and Brody (1983) discussed the appropriateness of intelligence tests, aptitude and achievement tests, teacher nominations, and creativity tests for identifying strengths and potential in students with LD who are gifted. Torrance (1982) used the Torrance Tests of Creative Thinking to identify creatively gifted students, some of whom had LD. Behavioral observations and structured interviews have also been recommended for identifying gifted students with learning disabilities (Baum et al.,1991). In general, it seems advisable to use a variety of assessments, including intelligence tests, to measure potential and assess strengths in children who might be learning disabled and gifted.

In practice, it is rare that giftedness is identified only through IQ scores. The federal definitions of giftedness require assessment of ability, aptitude, and achievement in a variety of talent areas. Talent searches conducted by Johns Hopkins, Duke, and Northwestern universities, the University of Denver, and others employ Stanley's (1974, 1977) model of using above-grade-level aptitude tests to assess exceptional reasoning ability in mathematical and/or verbal areas (Cohn, 1991). The gifted field appears to be moving in the direction of identifying specific subgroups of students who can be more specifically served. Unfortunately, identification of such discrete subgroups also may result in students being overlooked whose exceptional abilities and learning disabilities are in closely related areas.

Within the LD community, there is also debate as to whether IQ tests are the best or most appropriate measure of potential. At a more problematic level, however, is the question of whether it is necessary or even useful to recognize a child's potential. As part of that debate, it has been pointed out that two children with very different IQ scores, both exhibiting problems in learning to read, may not be fundamentally different in terms of decoding (or phonological-processing) skills (cf. Siegel, 1989; Stanovich, 1986). As Lyon (1989) noted, however, they are "qualitatively and quantitatively different from each other on tasks assessing a range of 'intelligent' behaviors" (p. 505) that may be critical to how they learn and adapt. Furthermore, a child's level of intelligence may influence his or her emotional and behavioral responses to persistent failure, parent and teacher expectations, and, most importantly, remediation (Lyon, 1989). For example, Olson (1985) found that verbally intelligent readers with a learning disability were able to depend less on labored phonetic coding and more on context and orthographic codes when reading continuous text. Similarly, French (1982) found that a gifted nonreader was able to use contextual cues to learn to read. These arguments for recognizing a child's potential are extremely relevant for students with LD who are academically talented.

The critical issue, of course, for gifted students with learning disabilities is that without some measure of high ability (whether that measure is an IQ score or something else), and then recognition of a discrepancy between that ability and

achievement, few will be identified. Although the debate is largely theoretical at present because IQ is still commonly used in practice when assessing learning disabilities, the decision to ignore intellectual potential would have major consequences for students with learning disabilities who are also gifted.

Evidence of an Aptitude - Achievement Discrepancy

Gifted students who have learning disabilities in a related area should show evidence of a discrepancy between their high ability and their achievement. Students whose talents and disabilities are in unrelated areas may be considered gifted and also be diagnosed with learning disabilities, but the performance discrepancy concept (a discrepancy between expected and actual achievement) does not apply.

Although the concept of a performance discrepancy is common in many operational definitions of learning disabilities, numerous objections to the use of an IQ achievement discrepancy to identify students with learning disabilities have been raised (cf. Lyon,1989; Stanovich,1993). Even though arguments against defining learning disabilities on the basis of a performance discrepancy have much validity, seeking evidence of a discrepancy between ability and achievement is particularly important for identifying students who are academically talented and learning disabled. This is because the relatively high achievement of many of these students (compared to that of their chronological age peers) often masks a disability unless that achievement is compared to the student's ability. Proposals to select students for intervention solely on the basis of poor achievement- for example, performance in the bottom 20% or so on an achievement test (Reynolds, Zetlin, & Wang,1993; Siegel & Metsala, 1992)-will not identify gifted students with learning disabilities who function at or near grade level. Although a discrepancy between ability and achievement should not be the only feature for describing gifted students with learning disabilities, it should be a piece of information that is carefully considered. In general, Graham and Harris's assertion (1989) that "decisions as to presence and severity of learning disabilities must ultimately rely on professional judgment ... based on a multifaceted assessment of which norm-referenced IQ and achievement data are only a part" (p. 502) seems appropriate for gifted students with learning disabilities as well.

Evidence of a Processing Deficit

Although the presence of an aptitude achievement discrepancy may be a prerequisite for identifying academically talented students with learning disabilities, it is not sufficient in and of itself, as such a discrepancy may result from very different causes (Krippner,1968; Silverman,1989; Whitmore,1980). Likewise, uneven profiles or discrepancies among test scores do
not, in themselves, necessarily constitute evidence of a learning disability (Patchett & Stansfield,1992). Evidence of a processing deficit, however, can help to distinguish a learning disability from other causes of underachievement

For example, the identification of a processing deficit (obtained by examining subtest scores from an IQ test, such as the WISCR, and/or specific processing tests) can help in differentiating between naturally occurring differences in the development of specific cognitive abilities (e.g., widely different levels of verbal ability vs. quantitative ability) and the co-occurrence of intellectual giftedness and a learning disability. Identification of a processing deficit can also help in differentiating

between a gifted child who is underachieving because of educational placement issues (e.g., a curriculum that is not sufficiently challenging) and one who is not achieving at a level commensurate with his or her general ability because of a learning disability (Rimm, 1986; Whitmore & Maker, 1985).

The idea that a learning disability can and should be distinguished from other known causes of learning problems (e.g., low intellectual ability, lack of opportunity to learn, poor teaching, emotional problems) has been challenged in the LD literature by those who suggest that students with learning disabilities and students with learning problems due to other causes have more similarities than differences (e.g., Kavale, 1980; Stanovich, 1993; Taylor, Satz, & Friel, 1979). On the other hand, Adelman (1992) suggested that failure to differentiate under-achievement caused by neurological dysfunctioning from that caused by other factors has been cited specifically as a major deterrent to important lines of research and theory and is certainly a threat to the very integrity of the LD field. (p. 17)

Identifying the cause of a learning problem is particularly important for gifted students with learning disabilities. Without it, diagnoses separating gifted students who exhibit learning difficulties into subgroups of those with learning disabilities, those with normal variation in cognitive development, and those who are unmotivated for a variety of reasons can be problematic. Differential diagnosis is, of course, important for decisions regarding the need for intervention, as well as the appropriate type of intervention (Daniels, 1983). It is important, however, to note that in children with high abilities, scores on any test (including processing tests) that are "average" may be sufficient to indicate a "deficit."

Conclusion

The lack of a clear description of gifted students with learning disabilities has resulted in few of these students being identified. The following points seem to be evident: (a) There is a rationale for thinking about these students as a separate subgroup; (b) students with LD who are gifted represent a heterogeneous group with many different types of gifts/talents and disabilities; (c) a performance discrepancy is essential for identifying gifted students with learning disabilities; and (d) for appropriate intervention to take place, it is necessary to establish causal factors for the learning problems, or at least to rule out other causal factors that could lead to very different interventions. A complete assessment battery is needed to identify and plan interventions for gifted students with learning disabilities, including an individual intelligence test, an achievement battery, indicators of cognitive processing, and behavioral observations.

Ideally, early identification and appropriate intervention are recommended to help prevent the development of the accompanying social and behavioral problems that often result when the needs of a gifted child with learning disabilities are overlooked (Whitmore, 1980). In addition, the identification of talents and learning problems should continue as an ongoing process throughout the school years. Children's abilities and needs, as well as available services, change over time so that continuous reevaluation is necessary. In particular, one should beware of rigid cutoff scores for program participation that discriminate against students with the atypical profiles that characterize gifted children with learning disabilities.

Intervention

The lack of a clear definition that recognizes the unique characteristics and needs of gifted students with learning disabilities and of a protocol for identification has resulted in few specific programs being developed in school systems for this population. For example, a survey in one state found that the majority of school systems reported having no gifted children with learning disabilities in their district and no special programming (Boodoo et al., 1989). It has also been noted that some state policies impede the development of services for gifted children with learning disabilities because they do not permit school districts to be reimbursed twice for the same student, inadvertently implying that one cannot simultaneously have two exceptionalities (Baum, 1994).

Although the need for studies on effective treatments for gifted students with learning disabilities was cited in a 1987 report to Congress (Interagency Committee on Learning Disabilities, 1987), program development and evaluation with regard to this population has been weak (Vaughn,1989). Recent promising developments, however, include a commitment by the Maryland Task Force on Gifted and Talented Education (1994) to meeting the needs of gifted students with learning disabilities, and the funding of several projects to develop programs for this population under the Jacob K. Javits Gifted and Talented Education
disabilities.

Individualized Education Programs

Although many gifted students with learning disabilities would be best served by separate programs developed especially for them, it is likely that the needs of many could be met through appropriate identification of strengths and weaknesses and a flexible, individualized approach to using the existing services and resources available in and out of school. Gifted students with learning disabilities need (a) highlevel or "gifted" programming in their areas of strength, (b) developmental instruction in subjects of average growth, (c) remedial teaching in areas of disability, and (d) adaptive instruction in areas of disability (Fox, Brody, & Tobin,1983; Virginia Department of Education, 1990). Programs and/or services for average- achieving students who primarily need age- appropriate instruction, for gifted students who need accelerated and/or enriched instruction, and for average - ability students with disabilities could be utilized to develop an optimal Individualized Education Program to meet the needs of gifted students with learning disabilities.

Ideally, the individualized program would be developed through a team effort involving the parents, a gifted specialist, a learning disabilities specialist, a diagnostician, the general classroom teacher, and the child himself or herself (Silvermars, 1989; Van TasselBaska,1991). In developing the student's unique educational program, his or her particular strengths and weaknesses, as well as the resources available in the school, should be considered. The specifications should depend, of course, on the nature and severity of the student's disability as well as his or her degree of giftedness; however, there is much consensus that it is important to focus primarily on the student's strengths rather than his or her weaknesses. Generally, remediation is not the primary need of these students; instead, attention should be placed on developing the gift or talent (Baum et al., 1991; Ellston, 1993; Griffin, 1990). Learning strategies and adaptations can help ensure these students'

success in whatever placement seems appropriate, whether that is in a special class for gifted students with learning disabilities or another environment.

Special Classes for Gifted Students with Learning Disabilities

Numerous educators who have studied gifted children with learning disabilities have found that, ideally, these students should receive instruction as a special group for at least part of the day from a teacher sensitive to their specific academic, social, and psychological needs and with peers who share their dual exceptionalities (Daniels, 1983; Whitmore & Maker, 1985; Yewchuk, 1985). To date, however, few teachers have received specific training in the characteristics of gifted students with learning disabilities, and few separate programs for these students exist. Some schools have developed special classes for this population, and the Javits grants have stimulated a few additional programmatic initiatives. In some cases the students stay together all day; in others, a resource room model is used whereby gifted students with learning disabilities are brought to the resource room with other students who share their dual exceptionalities.

The separate-class/all-day model for students with LD who are gifted is often recommended for students with the most serious disabilities. For example, one school system identified gifted students with varying degrees of learning disabilities and developed a special self-contained class for gifted students with severe learning disabilities; those with moderate and mild disabilities received other services (Starnes et al.,1988). Regardless of the severity of the students' problems, selfcontained classes offer numerous advantages for differentiated learning (Clements, Lundell, & Hishinuma, 1994); eliminate the movement from classroom to classroom required when services are provided in a combination of gifted, special education, and general classrooms (Suter & Wolf, 1987); and may be better suited to meet students' emotional needs (Suter & Wolf, 1987). Such programs typically try to address issues related to raising selfesteem and influencing motivation, as well as individualizing instruction to enhance academic achievement.

An example of a full-time program for gifted students with learning disabilities can be found at ASSETS, a school in Hawaii for students who are "gifted/at risk, dyslexic/learning disabled, and gifted/dyslexic" (Clements et al., 1994). The school utilizes an interdisciplinary approach to instruction in self-contained classes, includes acceleration and enrichment to challenge strengths while also building basic skills, and attends to the students' social and emotional needs as well. For other program models and/or programmatic ideas for separate programs for gifted students with learning disabilities, see Baldwin and Gargiulo (1983), Baum et al. (1991), Udall and Maker (1983), and Whitmore (1980).

A part-time resource room model for academically talented students with learning disabilities is another option for exposing such students to peers who share their dual exceptionalities. The literature describing these efforts reports several attempts to modify traditional enrichment programs for this population. For example, the Schoolwide Enrichment Model (Renzulli & Reis, 1985), a program that encourages academically talented students to take on indepth projects on topics of their choice, was used in a class in which the students had all been identified as gifted with learning disabilities. The teacher was a specialist in both gifted and special education, and specific strategies were used with this group to augment their disabilities and compensate for weaknesses (Baum, 1988). Another gifted program model, Betts's

(1985) Autonomous Learner Model, which offers enrichment in an atmosphere that supports self-advocacy, has also been adapted for gifted students with learning disabilities (Fall & Nolan, 1993; Nielsen, Higgins, Wilkinson, & Webb, 1994).

Whether full time or part time, special classes for gifted students with learning disabilities allow the teacher to develop a program unique to this population, one that is challenging but also provides structure and strategies to accommodate weaknesses. Students gain support from being with other students who also exhibit seemingly contradictory strengths and weaknesses. In the other settings, students must adapt more to the setting; learning to adapt and compete with nonhandicapped students is also important.

Using and/or Adapting Existing Services

For students with LD who attend schools that do not offer special programs for gifted students with learning disabilities, or for whom the special program does not fully meet their needs, consideration should be given to designing an individualized program from the programmatic options and special services already available in the school, supplemented by appropriate adaptations that will help ensure success in the various settings

Instruction in the General Education Classroom.

As schools move toward inclusion of all students in general classrooms as a result of the Regular Education Initiative (Will, 1986) and show reluctance toward grouping students on the basis of aptitude or achievement (Oakes, 1985; Slavin, 1987), the general education classroom is becoming a place where teachers are expected to meet the needs of a wide range of students. If this arrangement can successfully challenge all students, including gifted students, average students, and students with learning problems, gifted students who also have learning disabilities could be well served.

Whether or not such a diverse group can be optimally served in one environment is still not clear, however (Fuchs & Fuchs, 1994), as the movement toward full inclusion is not back by supportive research (Mather & Roberts, 1994). Problems involved in addressing the needs of students with severe disabilities in a general classroom have been raised by teachers and others in the field (Kauffman, 1995; Vaughn, Schumm, ballad, Slusher, & Saumell ,1996). Students who function at or near grade level, even if they are academically talented and have learning disabilities, are even more likely to be overlooked in an environment that includes students with more severe underachievement and students with more obvious high ability. Historically, learning disabilities have been considered an "invisible disorder"; the problems and needs of gifted students with learning disabilities may be the most invisible of all.

There is also much concern within the gifted community about the impact of the movement on the policy of grouping students by ability (e.g., Feldhusen & Moon, 1992; Gallagher, 1991; Mills & Durden,1992; Robinson, 1990; Rogne,1993). When aptitude and achievement are considered before placing students in a general classroom, large and/or smallgroup instruction can be designed to meet their particular needs. Although the academic benefits of ability grouping for gifted students have been well documented (e.g., Kulik & Kulik,1990; Mills & Durden,

1992), the practice has become controversial and consequently less often implemented in today's schools.

If the general classroom teacher does not recognize and accommodate individual differences, the gifted child with learning disabilities whose total placement is that classroom cannot receive an appropriate education. On the other hand, if the general classroom teacher does accommodate individual differences, or if the general classroom placement is supplemented by time spent in special programs for the gifted and/ or for students with learning disabilities, placement in the general classroom may be appropriate for gifted students with learning disabilities.

In schools that continue to offer separate services and programs for students identified as gifted and for students with learning disabilities, the general classroom serves primarily as the place where the curriculum is at or about grade level. For gifted students with learning disabilities, placement in the general classroom is appropriate for developmental instruction in subjects of normal achievement, although some compensatory strategies (such as using a calculator) might be necessary for optimal performance.

The general classroom teacher needs to be particularly aware that gifts and disabilities may mask each other and that students who both are academically talented and have learning disabilities are likely to exhibit variable performance and social and emotional difficulties (Landrum,1989). The general classroom teacher should also be the chief source of referral of gifted students with learning disabilities to special education services and gifted programs in their schools (Boodoo et al., 1989).

Programs and Services for Gifted Students.

Programs for gifted students vary considerably in form and content. The many options include differentiated instruction in the general classroom through small-group or independent instruction, self-contained classes where high - ability students are grouped together to learn material at a faster rate and/or more advanced level, and part- time pullout programs. The content may be accelerated or enriched. Placement with older students for one or more subjects is also an alternative. Regardless of the type of program, the purpose of differentiated instruction for gifted and talented students is to provide access to more challenging subject matter than is normally available in the regular curriculum. When gifted students are grouped together for instruction, the interaction with other talented students is viewed as advantageous for learning and peer support. Unfortunately, there is considerable evidence that we do not provide adequate programmatic options for gifted students in our country (Maryland Task Force on Gifted and Talented Education, 1994; U. S. Department of Education, 1993), and recent concerns about such issues as elitism, opposition to ability grouping, opposi tion to standardized testing, and a pervasive climate of antiintellectualism have emerged as "obstacles to renewing our commitment to gifted and talented students" (Maryland Task Force on Gifted and Talented Education, 1994, p. 6).

Nonetheless, a variety of programs and services is still available in the schools, and more may emerge from some of the new initiatives. However, the problems related to identifying gifted students with learning disabilities, and the reluctance shown by many teachers of the gifted to accommodate special needs, result in few students

with these dual exceptionalities being included in programs for the gifted. Although the severity of the learning disability and the nature of the gifted programming should be considered in determining placement of gifted students with learning disabilities into classes for gifted children, every effort should be made to include them if possible.

Acceleration and enrichment are two approaches to meeting the needs of the gifted. Acceleration can include moving ahead of one's age peers in grade placement and/or subject matter (Southern & Jones, 1991). Subject matter acceleration may be particularly beneficial as a vehicle for gifted students with learning disabilities to receive advanced course work in their areas of strength without having to be placed at the same level in their areas of weakness. For example, mathematically talented students might progress rapidly at their own pace through an accelerated mathematics class (Benbow, 1986), even if learning disabilities pose some problems for them in creative writing or learning a foreign language. In addition, with moderate adaptations, such as encouraging the use of calculators, word processors, untimed tests, and so forth, it is likely that many gifted students with learning disabilities could succeed in rigorous and/or accelerated courses in their areas of strength. This fact has been recognized in recent years by selective colleges that realize the benefits of adapting to the needs of academically talented students with learning disabilities (e.g., see Brown University, 1990).

Enrichment programs are intended to provide gifted students with a more varied educational experience, either by modifying the curriculum to include depth and/or breadth or by offering exposure to topics not normally included in the curriculum. Numerous models have been developed; one that has been used specifically with gifted students with learning disabilities, as noted earlier, is the Schoolwide Enrichment Model (Renzulli & Reis, 1985). This and other pullout enrichment programs have proven to be successful with this population, allowing gifted students with learning disabilities to interact with other talented students and to be challenged in an area of strength (Baum et al., 1991). The value of structuring the learning experiences of a gifted child with LD around his or her interests and experiences was cited by Daniels (1983), and this would be provided by many enrichment programs. Mentorships are another programmatic vehicle for gifted students that should be considered for those who also have learning disabilities; the mentors serve as role models while also offering an opportunity for the student to learn about a subject of interest in a oneonone environment (Baum et al., 1991).

Some concern has been raised about the possibility that gifted students with learning disabilities will become frustrated if they fail to compete with nonhandicapped peers in programs for the gifted (Tannenbaum & Baldwin, 1983), or that they will have trouble coping with the demands of having to work independently (Suter & Wolf, 1987). Such issues will have to be evaluated for students on an individual basis, but adaptive techniques, such as using calculators, word processors, untimed tests, and tape recorders, can help students compensate and succeed in challenging gifted programs (if basic reading, writing, or computation skills are deficient but thinking skills are at a high level; Fox, Tobin, & Schiffman, 1983). Teachers of the gifted, however, may be particularly guilty of being unwilling to adapt to the needs of a student who is not a consistently high achiever.

A study of gifted students with learning disabilities found that those receiving a combination of both gifted and learning disability services or only gifted

programming reported higher self-concept than did those students receiving intense or exclusive learning disability services (Nielsen & MortorffAlbert, 1989). Thus, there may be positive social and emotional effects, as well as academic ones, of making accelerated or enriched academic experiences available to gifted students with learning disabilities. Given the strong concern among educators that academically talented students with learning disabilities be challenged in their areas of strength, placement in a gifted program for at least part of the day seems advisable.

Resources for Students with Learning Disabilities.

Special services for students with learning disabilities typically focus on helping to remediate weaknesses. This may occur in the general classroom or in a resource room for students with learning disabilities. Gifted students with learning disabilities may benefit from some time spent with a specialist who can offer remedial strategies. A special education resource room setting, however, is unlikely to be the best environment for providing intellectual stimulation for students with learning disabilities who are also gifted. The nature, severity, and cause of the gifted student's disabilities, as well as the student's age, must be considered when evaluating placement in an LD resource room, even for part of the day; this placement is more likely to be appropriate for students with more serious disabilities. It is crucial, however, not to overlook the importance of challenging the student's "gift" (Baum et al. 1991).

Teacher training can contribute to making teachers, whose primary responsibility is to remediate students' deficiencies, more aware of the needs of their students who are also gifted. A program in Connecticut successfully trained special education teachers to provide challenging enrichment to gifted children with learning disabilities (Baum, Emerick, Herman, & Dixon, 1989).

Teaching Strategies and Adaptive Techniques

Regardless of the program model utilized or the setting in which it is taught, the importance of gearing the curriculum to the strengths, rather than weaknesses, of academically talented students with learning disabilities, and of utilizing a variety of [strategies, adaptations, and accommodations to help them succeed, is widely acknowledged (e.g., Baum et al.,1991; Fox, Tobin, & Schiffman, 1983; Hishinuma, 1991; Silverman, 1989; Suter & Wolf, 1987; Waldron, 1991). Carving big tasks into smaller units; making tasks meaningful; and using praising, peer tutoring, and cooperative activities are some of the techniques that can help ensure success (Baum et al., 1991). Role models of successful adults with disabilities can also help to enhance selfesteem and build aspirations among gifted students with learning disabilities (Silverman, 1989).

Accommodations, particularly the use of technology, are highly recommended to help these academically talented students overcome their disabilities (Baum et al., 1991; Daniels, 1983; Howard, 1994; Suter & Wolf, 1987; Tobin & Schiffman, 1983; Torgesen,1986). Such techniques may be helpful to many students with learning disabilities, but they are especially beneficial to those who are also gifted and in need of moving ahead in their areas of strength. For example, students who are capable of a high level of mathematical problem solving but who have difficulty with computation could be given a calculator so that they will not be held back in

mathematics. A microcomputer with a word processing package and a spell checker can be enormously helpful to a student whose problems lie in writing and/or spelling. Students who have difficulty taking notes in class might be allowed to tape record lectures. Tape recorded books and other sources of information that are not dependent on reading (e.g., films) might also help students with reading problems whose auditory processing skills are strong. Peer tutors or others might read material orally to academically talented students with reading problems. Alternative evaluation methods (such as untimed or oral tests) have also been advocated (Suter & Wolf,1987), as has the use of multisensory techniques (Daniels, 1983).

Enthusiasm for learning can be enhanced by helping gifted students with learning disabilities take responsibility for their own learning, exposing them to new and interesting methods of inquiry, teaching them self-assessment techniques, providing experiential learning, exposing them to a broad range of topics to encourage new interests, and assisting them in locating information (Miller, 1991; Moller,1984; Suter & Wolf,1987). "Because the process of remediating a serious reading deficit may require several years, the development and pursuit of new interests should not be postponed until students are capable of independent library research" (Moller,1984, p.168). One very promising approach for working with gifted students with learning disabilities is helping them to develop their metacognitive abilities and strategies (Montague, 1991).

Counseling

The drive to achieve perfection, common in many gifted children, generates much psychological conflict in academically talented children who have difficulty achieving (Olenchak, 1994). One survey of gifted students with learning disabilities found them to be emotionally upset and generally unhappy because of their frustrations; in particular, "virtually all had some idea that they could not make their brain, body, or both do what they wanted it to do" (Schiff et al., 1981, p. 403).

Gifted students with learning disabilities may also experience conflict between their desire for independence and the feelings of dependence that result from the learning disability, as well as between their high aspirations and the low expectations others may have for them (Whitmore & Maker, 1985). Low self-concept is a common problem among gifted students with learning disabilities who have difficulty coping with the discrepancies in their abilities (Fox, Brody, & Tobin, 1983; Hishinuma, 1993; Olenchak, 1994; Whitmore, 1980) . Frustration, anger, and resentment can result, influencing behavior as well as relations with peers and family members (Mendaglio, 1993). In fact, parents of gifted students with learning disabilities are quick to emphasize the importance of addressing the social and emotional needs of their children (Hishinuma, 1993).

In planning interventions for students with LD who are gifted, one should not overlook the importance of providing counseling for these students to address their social and emotional needs (BrownMizuno, 1990; Hishinuma, 1993; Mendaglio, 1993; Olenchak, 1994; Suter & Wolf, 1987). The benefits of both group and individual counseling have been identified by researchers (Baum, 1994; Mendaglio,1993; Olenchak,1994). For example, group counseling can let students see that others experience problems similar to their own. However, some students may require the attention to their unique problems and needs that is more likely to occur in one-on-one individual counseling. The counseling role can sometimes be

undertaken by teachers who understand the needs of gifted students with learning disabilities (Baum et al., 1991; Daniels, 1983; Hishinuma, 1993). Parents also need counseling to help them understand the characteristics and needs of their gifted children with learning disabilities (Bricklin, 1983; BrownMizuno, 1990; Daniels, 1983).

In addition to addressing the social and emotional needs of gifted students with learning disabilities, counselors advise students on appropriate course-taking, particularly during the secondary school years, on opportunities to participate in extracurricular activities and other learning experiences outside of school, and on postsecondary options. As gifted students with learning disabilities approach the college years, they need help in identifying colleges that will accommodate their special needs.

Conclusion

Clearly, students with LD who are gifted have needs that differ considerably from those of gifted students without disabilities, students without exceptional abilities who have learning disabilities, and average students whose abilities are more even. Individualized instruction is optimal for all students so that pace, level, and content can be geared to ability, interests, and learning style, but it is essential for students whose abilities are clearly discrepant. Ideally, a continuum of alternative placement options should be available, so that teachers can develop a plan that builds heavily on students' strengths but also provides remediation and support for social and emotional needs.

Discussion and Recommendations

Many more students may be learning disabled and gifted than anyone realizes. In spite of their high intellectual ability, such students remain unchallenged, suffer silently, and do not achieve their potential because their educational needs are not recognized and addressed. Unlike the situation in which a learning disability is accompanied by another "handicap," students with LD who are gifted present a paradoxical picture of exceptional strengths coexisting with specific deficits. Curiously, this condition carries with it both a blessing and a burden. On the one hand, gifted students with learning disabilities can draw on their gifts and talents to compensate for their disability. With support, understanding, and some instructional intervention, many are able to overcome their academic difficulties and go on to productive, satisfying careers and lives. On the other hand, because they are able to draw on their strengths, for many students the disability is masked while the "drag" on their academic performance prevents them from consistently achieving at high levels. Thus, they are often not identified and continue to be a severely misunderstood and underserved population. When gifted students fail to achieve their potential, whatever the cause, our nation loses a great deal of talent.

When a learning disability coexists with other handicapping conditions, it is often difficult to separate the two, in terms of both underlying causal factors and primacy. This is not an issue in the case of gifted students with learning disabilities. Rather, the two conditions are often seen as mutually exclusive by definition. This seeming dichotomy can leave everyone (student, parents, and teacher) feeling frustrated and puzzled. It has hindered program development, teacher training, and research on

behalf of gifted students with learning disabilities. Who cares about, and for, these students? In a climate of budgetary concerns, and in light of a growing population of students with severe levels of underachievement, the problems of students who fail to achieve their potential but function at or near grade level do not alarm most educators.

Current regulations and practices for educating special populations need to be reevaluated, because they often fail to include academically talented students with learning disabilities. To improve services for this population, we must move away from using rigid definitions and cutoff scores to specify who receives special programming. Broader definitions of giftedness and learning disabilities are needed to allow for students with both exceptionalities, and programming options should be flexible to meet the individual needs of these students. In actuality, the complex nature of human abilities suggests that all students would benefit from individualized programs to build on their strengths and remediate their weaknesses. However, this is particularly important for gifted students with learning disabilities, whose cognitive profiles are likely to be more variable than other students. Support for the unique social and emotional needs of students who must deal with the large inconsistencies in what they are and are not able to do well is also vital, as is teacher training to assist teachers in understanding the characteristics and needs of gifted students with learning disabilities, as well as strategies to facilitate their learning.

The current movement toward including students with a broad spectrum of abilities and disabilities in the general classroom bears on the issue of meeting the needs of gifted students with learning disabilities. To truly individualize instruction, a broad range of options is needed (e.g., a variety of levels of content and pace, opportunities for remediation and accommodation, etc.). Proponents of inclusion suggest that all of these options can take place in one setting. At present, we have no clear evidence that this is possible (Mather & Roberts,1994), and it seems overly optimistic to expect that gifted students with learning disabilities who function at or near grade level will be given adequate attention in an environment where others appear to have greater needs. In schools where inclusion is the instructional model of choice, it is imperative to evaluate this issue.

Ultimately, providing a selection of settings (e.g., general classroom, gifted class, LD resource room, special class for gifted students with learning disabilities) and a multitude of service options (e.g., accelerated course work, enrichment, individualized instruction, homogeneous grouping) seems to be a better way to meet the needs of academically talented students with learning disabilities (and perhaps all students). Whatever options are utilized, students with LD who are gifted deserve to have every opportunity to develop their talents and achieve their full potential, and society will benefit from the talents that too often remain unrecognized and undeveloped in gifted children who have learning disabilities.

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