# Creating a Toolkit for Identifying Twice-Exceptional Students

# William F. Morrison and Mary G. Rizza Bowling Green State University

Best practices in the identification of the twice-exceptional point to the use of multidimensional assessment that outlines specific areas of strength and concern. Students who are twice-exceptional remain a misunderstood population in schools, thus making identification that much more difficult. The purpose of this study was to review the extant literature in the field of twice-exceptional studies and to design a plan for identification to be used by school districts. This article reports on Project O2E, a statefunded collaboration program that resulted in a toolkit for identifying students who are twice-exceptional. Also included in this article is a discussion of issues raised during the implementation of the toolkit.

## Introduction

Although the past 20 years of research and practice with regard to the twice-exceptional student has greatly improved our understanding of issues related to the identification of these individuals, the process can still be described as problematic (Baum & Owen, 2003; Brody & Mills, 1997; Kokot, 2003; McCoach, Kehle, Bray, & Siegle, 2004). Specifically, underrepresentation of students with disabilities in gifted programs continues to be the main issue (Cline & Schwartz, 1999; Johnson, Karnes & Carr, 1997; Webb et al., 2005). Recent studies of recommended policies found that most states had language regarding identification and encouraged educational provisions for twice-exceptional students (Coleman & Gallagher, 1995; Karnes, 2003). Although the vast majority of states had written poli-

William F. Morrison is an Associate Professor in Intervention Services at Bowling Green State University, where he teaches graduate and undergraduate courses in special and gifted education. Mary G. Rizza is an Associate Professor and Coordinator of Gifted Programs at Bowling Green State University, where she teaches graduate-level courses in all areas of gifted education, school psychology, and assessment.

Journal for the Education of the Gifted. Vol. 31, No. 1, 2007, pp. 57–76. Copyright ©2007 Prufrock Press Inc., http://www.prufrock.com

cies that outlined identification and programming recommendations, there remained underrepresentation of students with disabilities in gifted programs. This discrepancy between policy and practice can be attributed to miscommunication of policy intent, concern over numbers of students, availability of adequate resources, and building bridges for special populations.

Misunderstanding by professionals remains an issue for identification because, all too often, twice-exceptional students are misdiagnosed (Baldwin & Valle, 1999; Webb et al., 2005). If educators attribute giftedness with IQ scores or high achievement, it may seem incongruous that a gifted student could have difficulties with reading or math. Bias on the part of educators remains an issue, but concern about bias is slowly being eroded (Coleman & Gallagher, 1995; Davis & Rimm, 2004; Neihart, 2000). In fact, the literature is replete with evidence that an increasing number of gifted students may also struggle with learning and behavioral disabilities (Baum & Olenchak, 2002; Kaufman, Kalbfleisch, & Castellanos, 2000; Neihart, 2000; Neu, 2003).

The purpose of this study was to review the extant literature in the field of twice-exceptional studies and make recommendations for identification to be used by school districts. This article will report on Project O2E, a state-funded collaboration program that resulted in a toolkit for identifying students who are twice-exceptional.

## **Review of Literature**

As previously mentioned, identification of twice-exceptional students remains a great challenge (Baum & Owen, 2003; Brody & Mills, 1997; Kokot, 2003; McCoach et al., 2004). Often the twice-exceptional student goes unnoticed because he or she does not exhibit the typical behaviors that precipitate a referral (i.e., behavior problems or failing grades). While the twice-exceptional population can be described as a heterogeneous group of students, Mills and Brody (1999) pointed to the following three characteristics as indicators of the twice-exceptional student: (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. Appropriate

2E Toolkit 59

diagnosis, therefore, requires understanding of how these characteristics are witnessed in student behavior and designing a plan that incorporates best practices.

When discussing gifted students whose abilities may mask their disability area, we need to remember that the disability may be obscured because the student is not falling below grade level in achievement. Proper identification in this case necessitates a true appreciation for potential because that is where the discrepancy will lie, between the individual student's potential for success and his or her actual achievement in the classroom (Baum & Owen, 2003). In the assessment of giftedness, many times an individual- or groupadministered test is used to determine eligibility (Silverman, 2000). The easiest method for defining potential, therefore, is to use an IQ score or other measures of cognitive ability. However, when evaluating students for special education, the use of test scores alone has come under question. Under the new regulations (Individuals with Disabilities Education Improvement Act [IDEA], 2004), schools may not identify on test scores alone and should use a response-tointervention model to monitor student progress. This model poses unique problems for the twice-exceptional because it presupposes that the student is failing. All too often, the twice-exceptional student rarely gets to the point of failing and is able to mask discrepancies in achievement. More commonly, students show average accomplishment or profiles that regress to the mean. Mills and Brody (1999) warned that simply relying on this discrepancy may not be enough to identify the twice-exceptional student; this discrepancy may be a result of other causes. They suggest that there needs to be evidence that a true processing deficit exists to rule out other potential causes of underachievement for the gifted child. Should the issue be a motivational one, further evaluation should be conducted to determine if there is an emotional disability interfering with achievement.

There is also a great deal of confusion related to the testing profile of the twice-exceptional student. Researchers have reported highest scores in spatial measures concurrent with low sequential scores (Bireley, 1991; Dix & Schafer, 1996) or profiles with extremely uneven subtest scores (Reis, McGuire, & Neu, 2000; Winner, 2000). Identifying discrepancy scores that exceed one standard deviation is often easy to support, but, when the scores are not in the below-

average range, as expected in a typical special education referral, the process becomes difficult. The mistake often occurs when achievement scores in the average range are ignored because it implies that the student has the innate ability to succeed. In the case of the gifted student whose aptitude scores are in the superior range, even average achievement scores indicate a problem in functioning. Average achievement may not constitute a problem for most students, but, for those who have the potential to score significantly higher, the problem should be clear. Although the use of intelligence tests can provide the practitioner with valuable information, its value needs to be viewed as limited for the twice-exceptional student.

Identification, therefore, will always be problematic because disabilities may mask abilities and vice versa. The impact of a learning disability may cause a regression to the mean effect that results in the student appearing "average" (Baum & Owen, 2003; Beckley, 1998; Cline & Schwartz, 1999). Conservative and rigid identification procedures can complicate identification because test scores may be suppressed by an undiagnosed disability. Thus, we find the conundrum for students whose disability area is affecting their ability to demonstrate their giftedness. One possible solution, if test scores are to be used, is to analyze individual subtest patterns rather than look at fullscale scores. Conservative use of test scores often precludes twiceexceptional students from participation in gifted programs because they may not meet cut-off score requirements. For example, students with emotional disabilities often have suppressed IQ scores as a result of emotional problems that are unrelated to their cognitive abilities (Hallahan & Kauffman, 2005). Such students would not be considered for further screening because there is nothing in their testing profile to indicate potential. Brody and Mills (1997, 2004) have also recommended that cut-off scores be adjusted downward for the twice-exceptional student. They suggest the use of multiple measures of ability for the identification of both strengths and weaknesses in the student. McCoach et al. (2004) warned that use of test scores alone will cause many students to go unnoticed because abilities may be masked by disabilities, and there is the possibility of a regression to the mean effect on overall test scores commonly used to identify gifted students.

2E Toolkit **61** 

There are many who advocate against the use of test scores alone and insist that authentic assessment is the only way to properly identify the twice-exceptional student (Clark, 2002; Coleman & Gallagher, 1995; Coleman, Gallagher, & Foster, 1994; Karnes, 2004). Using multiple criteria for identification will provide support when the case is being made to cross-list students into both gifted and special education programs. The more information that is assembled, the better able we are to provide appropriate services based on an accurate identification. Clark advocated for the inclusion of nomination forms, student product assessment, teacher reports, behavior/ interest inventories, and checklists, in addition to test scores. In many ways, this process of portfolio review is in keeping with a responseto-intervention model but perhaps we need to redefine the types of information collected and the manner in which we monitor progress. For the twice-exceptional student, the process must include an examination of strengths and weaknesses, drawing upon what the student knows to assist him or her with problems.

The most successful mode of identification, however, is to include a variety of methods. Coleman (2003) suggested that identifying gifted populations should include a variety of data from multiple sources that are taken over multiple time periods. This should also be considered for the twice-exceptional and should include the use of traditional test scores and nontraditional methods of identification that include questionnaires, self-concept scales, talent checklists, and interviews of adults directly associated with the student being assessed. Among the components needed in the referral and placement process for the gifted student with disabilities are: individually administered intelligence tests; information from multiple sources including parents, family, and the student; observations of the student (Coleman & Gallagher, 1995; Grimm, 1998; Silverman, 2000); case histories; and subjective evaluations (Silverman, 2000).

In addition to accumulating data from a variety of sources and ensuring proper training for advocates, Nielsen (2002) recommended the use of a multidisciplinary task force at the district or school level that would be responsible for the evaluation and placement decisions. Similarly, Landrum (2001, 2003) advocated for a consultation model that brings together all relevant school personnel to make decisions about identification and programming. Using a team approach simi-

lar to that used in making special education referrals will ensure due process and match current recommendations for both populations.

Guidelines for the identification of the twice-exceptional student should focus on a multidimensional approach that includes information from a variety of sources, individualized plans, and interdisciplinary consultation (Fetzer, 2000; Landrum, 2001; Nielsen, 2002; Ward, Pelco, & Landrum, 1998). Mills and Brody (1999) stated that the identification process of students into gifted and special education programs tends to be mutually exclusive, adding to the misdiagnosis of the twice-exceptional. Identification plans, therefore, should be closely examined to find individual overlap within schools and districts and a new process for the twice-exceptional be drawn up that mirrors the best practices of both systems.

Little can be done to address the barriers to identification of the twice-exceptional without large-scale changes in the overall process for identifying gifted students. Because training and support will only go so far in finding the twice-exceptional, districts must be willing to extend services to these students in the absence of full funding, because funding is currently tied to the number of appropriately identified students. The state must also find creative ways to support districts that are providing support to twice-exceptional students who may not fully qualify in either category.

# **Preliminary Recommendations**

Recognition of the subtle nuances of a dual diagnosis is key to the proper identification of the twice-exceptional. As we have discussed here, there is no single definition that describes all of these students, thus requiring a close examination of discrepancies between what is expected and what is witnessed in terms of achievement and ability. When using test scores, for example, it is recommended that index or full-scale scores should be avoided and specific functioning levels as defined by subtests be used to highlight strengths and document weaknesses. The same applies to alternative assessments, such as looking at discrepancies in potential and performance on curriculum indicators. Many curriculum-based assessments include the use of skill worksheets, both timed and untimed, to document fluency.

Such assessments may not accurately evaluate true potential in gifted students who are not motivated to complete work that they perceive as redundant.

Twice-exceptional students will show some form of discrepancy between potential and achievement. Finding the specific area is key to providing proper support. For example, students who are failing in their coursework but have shown previous high achievement should be considered. Conversely, lack of failure should not preclude consideration. Twice-exceptional students should be afforded the same consideration as a gifted student, and their progress should be compared to their potential. A low, yet passing, grade is not acceptable for a high-ability student and should not be used to deny services for the twice-exceptional.

Next, students in special education programs need to be given opportunities to display areas of talent and foster their interests. More importantly, when they show advanced ability either in test scores or products, the information should not be discounted or assumed to be an anomaly. Finally, students who are underachieving require specific attention. Programs should provide experiences that allow students to explore their abilities and opportunities to work within strength areas. Just as looking at discrepancies is a natural activity in identifying students for support services, so too should allowing choice and challenge common to gifted programs be included in the plan for students with disabilities.

In conclusion, we recommended the following points be considered when designing a plan for identification of the twice-exceptional:

- in-service training for general, special, and gifted education teachers on the characteristics and needs of twice-exceptional students;
- inclusion of gifted education teachers on Individual Assistance Teams (IAT) and Multifactor Evaluation (MFE) teams and special education teachers involved in the gifted identification process;
- formation of a multidisciplinary team responsible for referrals and further evaluation of twice-exceptional populations;
- 4. flexibility in use of test data to include subtest scores to

- denote discrepancies between ability and achievement; and
- use of traditional and nontraditional data that further demonstrates student strength areas including tests from approved list for gifted identification, teacher, parent, and student nominations, student product assessment, behavior checklists, record review, portfolio assessment, and progress monitoring.

These points were used to discuss options and design the toolkit that resulted from this investigation.

## **Project O2E**

The goal of this project was to identify best practices in the identification of the twice-exceptional and design an appropriate set of strategies to insure equitable access to services.

#### Data Collection

Three school districts in a Midwest state were recruited to assist in the project. At each district, a research team was assembled who was charged with identifying the key points needed to create an identification plan for the twice-exceptional. In addition to the university researchers, each research team included district-level personnel who served as key informants for the project. Each team was required to include the gifted coordinator, teachers of the gifted, the special education director, the special education teacher, and at least one administrator. Two of the teams also included regular education teachers and the school psychologist. Members of the teams were selected by the districts because of their knowledge of current practices within the schools and general knowledge about working with twice-exceptional students.

Central district was a large, urban district located in the center of the state. It was comprised of 142 schools that serve more than 62,000 students. More specifically, there were 87 K–5 elementary schools, 3 K–8 elementary schools, 26 middle schools, 18 high schools, 4 career

centers, 4 special schools, and 2 English-as-a-Second-Language (ESL) welcome centers housed in existing school buildings. The demographic breakdown by gender was approximately 49.2% female and 50.8% male. With regards to ethnicity, the students were 62.5% African American, 31.5% Caucasian, 2.3% Asian American, 3.5% Hispanic, and .2% Native American. A total of 4.3% of the students in the district received ESL services, 13.1% were eligible for special education, and 19.9% were identified gifted.

Eastern district was a fast-growing, suburban district with a total enrollment of 2,054 students in 5 buildings. The district included 3 elementary buildings, 1 middle school, and 1 high school that was 91% Caucasian, 5% African American, 2% Asian American, 1% Hispanic, and 1 % Native American. Although students are identified as gifted in grades 1, 2, 5, and 7, Eastern district only provided gifted intervention in grades 2–6 and Advanced Placement at the high school. Approximately 20% of the district was eligible for special education services and 6% were identified as gifted, according to state rules.

Western district was a rural district covering approximately 179 square miles. There were two elementary (Pre-K-6) and one junior/senior high school (grades 7–12) in the district with approximately 1,107 students who were 97 % Caucasian, 1% African American, 1% Hispanic, and 1% Native American. Approximately 11% of the students are identified gifted and 30% receive special education services.

Qualitative data from record reviews, observations, and interviews were also collected to add rich description to case studies of the districts used by the university personnel. A review of records at the district level was conducted to ascertain the policies and procedures in place for the identification of the twice-exceptional. Where available, school-level plans for identification were used to promote discussion of best practices.

Interview and focus-group discussions comprised the primary data collected for this project. The protocol of questions was general and asked informants to describe practices. First, the university personnel met individually with each informant to determine practices related to identification and programming for twice-exceptional populations in each district. Subsequently, the teams met with the university personnel, in focus groups by district, to discuss issues and identify the

key ingredients for a proposed identification plan. Current practices in each district were described and evaluated by the teams. The district teams were also provided a review of the literature on best practices and a list of recommendations from the university personnel to evaluate. The teams then compared best practices from the literature, recommendations by the university researchers, and current practices in the district to determine a final plan for the district.

The university personnel aggregated all the data collected from each team and presented it at the next round of district-level meetings. In addition to the fact-to-face group meetings and individual interviews, the research teams conducted discussions via phone and e-mail. These aided the group in forming a consensus for the contents of the overall toolkit.

# Data Analysis

Data in this project were analyzed using qualitative methods. A naturalistic inquiry technique was applied to the data using grounded theory techniques, resulting in general themes describing the situation and experiences of the key informants (Lincoln & Guba, 1985; Strauss & Corbin, 1998). This technique of analysis required a constant review of data, allowing for themes to emerge naturally during the data collection process, which in turn were confirmed by the key informants. Informants were asked to verify information collected at each site and at each level of data collection. For example, data from individual interviews were compared to data from like meetings at the previous sites. Novel points were extracted from each interview and verified with informants both from the originating site and also from other sites. This technique was applied to all data gathered during the project. All data, therefore, were triangulated among the research teams to ensure the veracity of the analysis and ensuring that an accurate interpretation of the situation was obtained.

#### Results

The data resulted in several themes related to practices in identification and programming for twice-exceptional students. For the purposes of this study, only those themes related to identification were used to create the toolkit described later. Additional themes emerged related to providing services and support systems for both academic and social/emotional functioning. Primary among the concerns expressed by the informants was the fact that there was little in the way of training for school personnel, which in turn resulted in few services being offered to students. The themes related to identification were organized according to four general categories: screening, intervention, evaluation, and planning. In addition to identifying issues related to these categories, informants were also asked to provide suggestions for addressing each area. The results of the analyses are called a toolkit, designed to provide districts with a wide variety of options from which to choose when defining an identification plan for the twice-exceptional. It is strongly recommended that each of the following categories be included in the identification plan; however, the actual contents of the toolkit should be modified to meet the policy and procedures specific to individual districts and needs of the student populations therein.

Each toolkit shall include description and items in the following categories:

- I. Prereferral and Screening,
- II. Preliminary Intervention,
- III. Evaluation Procedures, and
- IV. Educational Planning.

## Prereferral and Screening

For the purposes of this study child-find efforts are defined according to the three categories of students to which the twice-exceptional belong (Baum & Owen, 2003):

- 1. students first identified as gifted who later show indicators of a specific disability area;
- 2. students identified as having a specific learning disability and who also show outstanding talent in one or more areas; or
- 3. students who may appear average or underachieving because the disability area masks any manifestation of giftedness.

To this end, child-find efforts for Categories 1 and 2 above were conducted by examining the records of students in gifted programs who show problems in specific academic areas and in special education who show indicators of talent in specific areas, academic or otherwise.

Finding students in Category 3 can be the most difficult. In order to facilitate the identification in this category, a review of records for students whose scores did not reach minimum standards for identification for either gifted or special education was conducted. In addition, any student who showed indicators of talent regardless of his or her achievement level was also considered for this category.

The purpose of the prereferral process is to address the issue that the majority of students who are twice-exceptional may be identified first as gifted. To this end, the screening process for twice-exceptional identification may be accomplished during the regular gifted screening procedures used by the district. Initial screening will be based on test scores that indicate potential for outstanding performance in a specific area of academic endeavor. Strict reliance on traditional cut-off scores needed for gifted screening should be modified to meet the requirements of finding twice-exceptional students through this method. It is recommended that percentile scores used for screening be lowered and scores for students who fall in the lower percentile category be assessed to determine if evidence of subtest scatter exists to substantiate further evaluation.

Students who are being evaluated for special education services may be referred for twice-exceptional screening at any point in their evaluation process. Initial referrals may be based on specific subtest scores that indicated advanced performance.

Finally, it is vital that all parties have access to the system. Referrals may come from any school personnel with first-hand knowledge of the student. Information used to make the referral may come from grades, tests, classroom performance, or other anecdotal evidence. Next, parents may wish to nominate their child for consideration based on performance at home or in the community. Finally, students may provide valuable information regarding performance of their peers or self and may be considered valid referral sources.

## Preliminary Intervention

It is recommended that, similar to the student support procedures used by the district, a team of school personnel be established for the purpose of providing analysis of student progress. The team may be involved in the prereferral assessment as described above. The main charges of the team, however, are to evaluate the students who show potential for twice-exceptional identification and to determine the effectiveness of an intervention plan and whether a recommendation for further evaluation is necessary.

The team should be provided with information to assist in determining action for the student being assessed. To this end, the team will be provided with available test score data, grades, anecdotal information regarding areas of strengths and weaknesses, and behavioral checklists designed specifically for this purpose. The team shall meet and discuss the student to determine appropriate interventions to be implemented in the school and at home. Such intervention shall include, but not be limited to, academic support via remediation and enrichment, study skills training, interpersonal/social skills training, and behavioral support plans. The team shall meet following the intervention to evaluate the extent to which it was effective for the student. There are three general outcomes for the student at this point. First, the intervention was not successful because it did not adequately address the need and a further intervention plan is required. Next, it may be found that the preliminary intervention is found to be sufficient to meet the needs of the student, and no further steps are necessary. The main issue to consider in this case is whether it can be reasonably sustained within the established plan for the specific student. It is often the case that the intervention is a reasonable accommodation made by the regular classroom teacher. However, when it involves accessing special services, either special or gifted, it may require official paperwork and formal identification. This leads to the third scenario for intervention evaluation, the recommendation for further evaluation because the intervention was properly implemented but was not sufficient to meet the needs of the student. When necessary, students shall be referred for a full MFE designed specifically for twice-exceptional identification as described in the next section below.

## **Evaluation Procedures**

A MFE shall be conducted for students who show potential for gifted behaviors and concomitant learning disabilities and whose needs cannot be accommodated in the regular classroom. Data collection for the MFE will include both traditional methods (e.g., grades, tests, and observations) and authentic assessment techniques.

Students who are referred for twice-exceptional evaluation shall be evaluated in a manner similar to those referred for gifted and special education assessment. To this end, data from cumulative files will be consulted, classroom teachers will be interviewed, and classroom observations will be conducted. In addition, data from individual and group-administered standardized test data will be compiled and supplemented appropriately depending on the referral question. It is recommended that a full individual psychoeducational evaluation be conducted for each student using measures as outlined in IDEA (2004). The data collected during the twice-exceptional evaluation process should be examined carefully by personnel who are well versed in the needs and characteristics of the twice-exceptional. The research in this area recommends a nontraditional view of identification that does not rely solely on standardized test data. When test data are used, however, it is recommended that the data be examined closely to uncover specific areas of strengths and weaknesses. To this end, it is suggested that when considering standardized test data, fullscale or overall scores should not be used in isolation. Rather, inconsistent performance and subtest scatter should be used to describe student strengths and weaknesses. Unusual patterns of high and low performance on statewide proficiency measures or other group achievement measures may also be used during deliberation because this may also point to an area of concern for this process.

In order to address regression to the mean issues found in test data of twice-exceptional student performance, it is recommended that curriculum-based assessment be used to determine eligibility for services. The assessment team will assemble a portfolio of student work that describes strengths and weaknesses. Such a portfolio will include commercially prepared curriculum assessments, student products, and evidence of special projects or portfolio items that demonstrate areas of outstanding performance or necessity

2E Toolkit 71

for remediation. Forms will be designed by the district to provide product assessment and action information in the form of rubrics, check sheets, and anecdotal notes on student performance. Twice-exceptional students may also show patterns of low or average academic achievement, yet demonstrate outstanding talent in areas outside school. All too often, the frustration of school becomes too much for the student, but, in situations outside of school, they are able to use their talents to succeed. Careful attention should be paid to student interests and hobbies. Commercially prepared instruments and locally designed forms to evaluate these areas will also be used during the evaluation process.

# Educational Planning

According to the IDEA (2004), all students who are identified for special education must have an Individual Educational Plan (IEP) on file at the school. The school must meet all accommodations and modifications outlined on the IEP. Similarly, students identified as gifted often have some form of paperwork that identifies their area of talent and subsequent service needs. Likewise, students who are identified as twice-exceptional will have either one or both of these plans on file at the school. It is expected, however, that there will be a subset of the twice-exceptional population that may not meet the minimum criteria set forth for either gifted or special education services and subsequently not have a formal plan on file. This will be the case because criteria for both categories are currently based on standardized test data, for which this project has established may not meet the child-find requirements for twice-exceptional identification. Provisions, therefore, must be made by the district to ensure that students identified as twice-exceptional have in place a means to guarantee appropriate educational programming. In some cases, a 504 Plan may be implemented that outlines the specific accommodations to be made. Districts may choose to design a new form that more closely mirrors the IEP and is adapted to include discussion of modifications to the curriculum for both enrichment and remediation services.

### **Conclusions**

The discussions with district personnel raised several issues that proved useful in the design of the final product for this project. It was decided that the main hindrance to identification for the twice-exceptional continues to be lack of understanding of student characteristics. This appears to be a two-pronged problem; one side involves communication, the other professional development. Communication and collaboration between special and gifted personnel remains a stumbling block. There are few instances when planning involves both areas of exceptionality. A review of tacit and explicit policies on collaboration will reveal a great deal of information on a district's or school's readiness to effect change for these students. The acceptance of twice-exceptionalities is greatly increased when special and gifted personnel maintain a working relationship because there is an understanding of the characteristics. Another way that school personnel can become cognizant of the issues related to a dual diagnosis is through professional development. In addition to training sessions specifically targeted to the needs of the twice-exceptional, all in-service topics should include discussion of how it will affect twice-exceptional populations.

General identification policy is another topic that should be well understood prior to adapting any plan for twice-exceptional students. How a school or district identifies students for gifted and special education will directly impact on child-find efforts for students with a dual diagnosis. For example, it has been shown that traditional use of standardized tests is not sensitive enough to measure nuances inherent in a proper identification. In some cases, a neuropsychological examination may prove more sensitive for the dual diagnosis. In addition, curriculum-based measures and response to intervention techniques may provide a more valid estimation of ability. Each of these identification models, however, may be useful in different situations. Maintaining a wide range of options available for identification appears to be the soundest plan for accurately measuring strengths and weaknesses. One plan that may prove particularly problematic centers on early identification for gifted. It was found in this project that identification in special areas like science and social studies before grade 4 was not stable. In fact, many students identified for

gifted services in this manner later proved to have difficulties in the areas for which they were identified.

In conclusion, it should be stressed that the toolkit plan proposed herein is intended to provide a framework for schools and districts to consider the complex issue of identifying students who are twice-exceptional. The goal was to present a general enough plan that could be adapted for use in a variety of settings. Final product design is left to the reader based on the needs of the students served.

## References

- Baldwin, A., & Valle, W. (1999). *The many faces of giftedness: Lifting the mask*. Ontario, Canada: Wadsworth.
- Baum, S., & Olenchak, F. (2002). The alphabet children: GT, ADHD and more. *Exceptionality*, 10(2), 77–91.
- Baum, S., & Owen, S. (2003). To be gifted and learning disabled: Strategies for helping bright students with LD, ADHD, and more. Mansfield Center, CT: Creative Learning Press.
- Beckley, D. (1998). Gifted and learning disabled: Twice exceptional students. Storrs: National Research Center on the Gifted and Talented, University of Connecticut.
- Bireley, M. (1991). The paradoxical needs of the disabled gifted. In M. Bireley & J. Genshaft (Eds.), *Understanding the gifted adolescent: Educational, developmental, and multicultural issues* (pp.163–175). New York: Teachers College Press.
- Brody, L. E., & Mills, C. J. (1997). Gifted children with learning disabilities: A review of the issues. *Journal of Learning Disabilities*, 30, 282–296.
- Brody, L. E., & Mills, C. J. (2004). Linking assessment and diagnosis to intervention for gifted students with learning disabilities. In T. M. Newman & R. J. Sternberg (Eds.), Students with both gifts and learning disabilities: Identification, assessment, and outcomes (pp. 73–94). New York: Kluwer Academic.
- Clark, B. (2002). Growing up gifted: Developing the potential of children at home and at school (6th ed.). Upper Saddle River, NJ: Merrill/Prentice Hall.

- Cline, S., & Schwartz, D. (1999). Diverse populations of gifted children: Meeting their needs in the regular classroom and beyond. Upper Saddle River, NJ: Merrill/Prentice Hall.
- Coleman, M. R. (2003). *The identification of students who are gifted*. Arlington, VA: ERIC Clearinghouse on Disabilities and Gifted Education. (ERIC Service Reproduction No. ED480431)
- Coleman, M. R., & Gallagher, J. J. (1995). State identification policies: Gifted students from special populations. *Roeper Review*, 17, 268–275.
- Coleman, M. R., Gallagher, J. J., & Foster, A. (1994). *Updated report on state policies related to the identification of gifted students*. Chapel Hill, NC: University of North Carolina.
- Davis, G. A., & Rimm, S. B. (2004). *Education of the gifted and talented* (5th ed.). Needham Heights, MA: Allyn & Bacon.
- Dix, J., & Schafer, S. (1996). From paradox to performance: Practical strategies for identifying and teaching GT/LD students. *Gifted Child Today*, 19(1), 22–25, 28–31.
- Fetzer, E. (2000). The gifted/learning disabled child: A guide for teachers and parents. *Gifted Child Today*, 23(4), 44–50.
- Grimm, J. (1998). The participation of gifted students with disabilities. *Roeper Review*, 20, 285–287.
- Hallahan, D. P., & Kauffman, J. M. (2005). Exceptional learners: Introduction to special education. Boston: Allyn & Bacon.
- Individuals with Disabilities Education Improvement Act of 2004, 20 U.S.C.1400 et seq. (2004).
- Johnson, L. J., Karnes, M. B., & Carr, V. W. (1997). Providing services to children with gifts and disabilities: A critical need. In N. Colangelo & G. A. Davis (Eds.), *Handbook of gifted education* (2nd ed., pp. 516–527). Boston: Allyn & Bacon.
- Karnes, F. A. (2003). State of the states gifted and talented education report 2001–2002: Council of state directors of programs for the gifted. Washington, DC: National Association for Gifted Children.
- Karnes, F. A. (2004). Appropriate practices for screening, identifying and instructing gifted/disabled youth. Hattiesburg, MS: University of Southern Mississippi.
- Kaufman, F., Kalbfleisch, M. L., & Castellanos, F. X. (2000). Attention deficit disorders and gifted students: What do we really

- *know* (RBDM0105). Storrs: The National Research Center on the Gifted and Talented, University of Connecticut.
- Kokot, S. J. (2003). Diagnosing and treating learning disabilities in gifted children: A neurodevelopmental perspective. *Gifted Education International*, 17, 42–54.
- Landrum, M. S. (2001). Resource consultation and collaboration in gifted education. *Psychology in the Schools*, *38*, 457–466.
- Landrum, M. S. (2003). Consultation in gifted education: Teachers working together to serve students. Mansfield Center, CT: Creative Learning Press.
- Lincoln, Y., & Guba, E. (1985). *Naturalistic inquiry*. Thousand Oaks, CA: Sage.
- McCoach, D. B., Kehle, T. J., Bray, M. A., & Siegle, D. (2004). The identification of gifted students with learning disabilities: Challenges, controversies, and promising practices. In T. M. Newman & R. J. Sternberg (Eds.), Students with both gifts and learning disabilities: Identification, assessment, and outcomes (pp. 31–48). New York: Kluwer Academic/Plenum.
- Mills, C. J., & Brody, L. E. (1999). Overlooked and unchallenged: Gifted students with learning disabilities. *Knowledge Quest*, 27, 36–40.
- Neihart, M. (2000). Gifted children with Asperger's Syndrome. *Gifted Child Quarterly, 44*, 222–230.
- Neu, T. (2003). When gifts are camouflaged by disabilities: Identifying and developing talent in gifted students with disabilities. In J. Castellanos (Ed.), *Special populations in gifted education: Working with diverse gifted learners* (pp. 151–162). Boston: Allyn & Bacon.
- Nielsen, M. E. (2002). Gifted students with learning disabilities. *Exceptionality*, 10, 93–112.
- Reis, S. M., McGuire, J. M., & Neu, T. W. (2000). Compensation strategies used by high-ability students with learning disabilities who succeed in college. *Gifted Child Quarterly*, 44, 123–144.
- Silverman, L. K. (2000). The two-edged sword of compensation: How the gifted cope with learning disabilities. In K. Kay (Ed.), *Uniquely gifted: Identifying and meeting the needs of the twice-exceptional student* (pp. 153–159). Gilsum, NH: Avocus.

- Strauss, A., & Corbin, J. (1998). Basics of qualitative research: Techniques and procedures for developing grounded theory. Thousand Oaks, CA: Sage.
- Ward, S. B., Pelco, L. E., & Landrum, M. S. (1998). Getting noticed: An alternative, multi-component assessment model for identifying gifted preschool learners in at-risk populations. *Journal of At-Risk Issues*, *4*, 38–44.
- Webb, J. T., Amend, E. R., Webb, N. E., Goerrs, J., Beljan, P., & Olenchak, F. R. (2005). *Misdiagnosis and dual diagnosis of gifted children and adults*. Scottsdale, AZ: Great Potential Press.
- Winner, E. (2000). Giftedness: Current theory and research. *Current Directions in Psychological Science*, *9*, 153–156.