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A case study of giftedness and specific learning disabilities: Bridging the two exceptionalities

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Keywords

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A Case Study of Giftedness and Specific Learning Disabilities:

Bridging the Two Exceptionalities

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Abstract

Despite being unable to dress himself, sit still on a chair, or write a legible sentence, Scott was, from a very early age, able to build whole cities from construction blocks, complete complex puzzles, and was verbally precocious. Even with his disabilities and their contrast with his academic talent, he completed K-12 school and went on to excel at university. This case study represents the challenges many parents experience with identifying their children's disability and giftedness and ensuring that both exceptionalities are optimally developed. Through this case study, the roles an education system and the parents of such a child must assume if this development is going to happen are highlighted. Recommendations for identification, service provision, professional development for teachers, and collaboration among all parties connected with such students are made.

Key Words: schooling, adolescents, adjustments, parents, siblings, twice exceptionality, challenges, disability.

A Case Study of Giftedness and Specific Learning Disabilities:

Bridging the Two Exceptionalities

This case study of Scott was part of a larger research project that explored why students with disabilities and academic giftedness were not being identified nor served in Australian schools. Scott was the middle of three children with an older and younger brother. He completed 13 years of K-12 schooling in Australia and has worked in the retail industry, and is currently completing an environmental science degree by distance education whilst working with a local government organization. Being academically gifted with severe learning disabilities has meant that Scott's academic achievements are remarkable. He has had to overcome bullying, disbelief by his teachers that he was capable of achieving, and a lack of genuine support by the education systems in Australia.

Scott's schooling was completed utilizing a combination of education systems and schools. He initially attended a K-2 school, moving to a local mainstream elementary school for grades 3-6. Seventh grade was undertaken at a local secondary school. Grades 8-10 were completed through a combination of attending a high school support center, distance education, and attending part time at the local high school. For his final years of schooling he completed subjects in the New South Wales Higher School Certificate with additional subjects completed through the college system in the Australian Capital Territory (ACT) through two different methods of study. He attended college classes and participated in Distance Education. Distance Education meant that Scott was provided with subject material in the form of booklets including study notes. He was required to complete set work, which was returned, marked and feedback provided. Through the study reported here, just how Scott has been able to make these remarkable achievements will be described and analyzed. The research literature especially that on twice exceptional individuals is still relatively small

compared to research literature on giftedness or learning disabilities and of little practical help per se to educators and parents who might wish to address the intensive needs of children such as Scott, but certainly a review of what is known follows.

Literature Review

Identification

Identification processes for gifted programs and learning disability services are mutually exclusive and there is, at present, no identification protocol that fully takes into account those students who would fit in both populations (Assouline, Foley Nicpon & Whitman 2010; Boodoo, Bradley, Frontera, Pitts & Wright, 1989). Students are identified for gifted programs or for remediation, or may not be identified for either, as they are performing at a level commensurate with their chronological cohort. Of great importance has been the 20-year review of the literature on twice-exceptional identification produced by Foley Nicpon, Allmon, Sieck, and Stinson in 2011. In their search of the ERIC and PsycINFO databases, 10 qualitative and quantitative studies regarding the identification of, and programming for GT/SLD students were located for the period, 1990-2009. Of the 11 studies, 5 dealt specifically with identification issues, with many differences in what each set of researchers viewed as the psychosocial factors of this form of twice exceptionality. One study among these (Assouline, Foley Nicpon & Whiteman, 2010), was particularly important when considering psychosocial factors and identification procedures. The researchers conducted a quantitative case study of 14 GT/SLD students, finding that parents were likely to identify more “at risk” behaviors than were teachers and the students themselves, when self-reporting using the BASC-2 and the Piers-Harris instruments, placed themselves in the “average” range of behaviors, not recognizing their behaviors as “at risk” for SLD. But with the subjectivity of the instruments currently used, the likelihood of a valid diagnosis is slim. And where there

is disagreement among professionals and family, there is the risk that the child's specific needs will not be addressed.

Baum, Owen and Dixon (1991) suggested that there are three subgroups of gifted students with a learning disability. The first group are students who are identified as gifted but present with subtle learning difficulties. These difficulties become apparent as the level of work undertaken at school increases in difficulty. This group is often placed in programs for gifted students, but this placement creates frustration for the teacher and student when the student fails to reach expected outcomes as the work becomes more difficult. The second group are those who are not identified as gifted or as having a learning disability, because they are achieving at a grade level. This is a group that is likely overlooked as more and more American school systems take on Response to Intervention (RtI) programs (McCallum, Coles, Miller, Hopkins & Hilton-Prillhart, 2013). These students will fail to reach their potential as they will be working very hard to maintain average grades. The third group are the students who have been identified for their learning disability. These students are often placed in remedial programs. The possibility that they may be gifted is not even considered by special educators and classroom teachers, let alone addressed.

Some research exists on ways to identify gifted students with a learning disability for specialist programs. Schiff, Kaufman and Kaufman (1981) compared the WISC-R scores of 30 children with at least one IQ index score above 120, to determine whether a pattern of IQ subtest or index scores could be established and used to identify gifted learning disabled students. They found Verbal and Performance index discrepancies, but no consistent pattern of subtest scores for identifying gifted students with a learning disability. Barton and Starnes (1989) duplicated the research by Schiff et al (1981) and compared the WISC-R scores of two groups of students – gifted and gifted learning disabled – from public schools within a single county in the US. Both groups of researchers found Verbal and Performance index

discrepancies, with Verbal generally being higher. In general, the most recent study comparing the identification measures for children with Dyslexia who are and are not gifted in verbal performance, showed that the GT/SLD students outperformed SLD comparisons with superior verbal reasoning but not on verbal working memory unless the memory tasks are integrated within "intellectually engaging" lessons (Berninger & Abbott, 2013, p. 223). These data, though, did not show a consistent pattern of subtest scores for the identification of gifted learning disabled students. The researchers found that analysis of the subtest scores on the WISC-R can give an indication that a student is gifted and has a verbal or performance weakness, but it is not enough by itself to identify these students as twice exceptional. Identification of these students, therefore, cannot rely solely on IQ scores. Waldron and Saphire (1990) also established through the comparison of WISC-R sub-test scores of students who were gifted and students who were gifted with a learning disability that "there is no evidence that rank ordering of WISC-R subtests is an effective method of identifying the existence of a learning disability" (p. 497). Assouline, Foley Nicpon and Whitman (2010) noted that students who are gifted with a learning disability have a wide range of score variability supporting that it is difficult to establish a specific profile for identification of these students.

Maker and Udall (1997) suggested that a wide variety of information is required in order to identify students who are gifted and learning disabled. IQ tests, diagnostic achievement tests, parent interviews, tests of aptitude and creativity are some of the means recommended by Maker and Udall (1997) for identification of these students. It has been suggested that rather than trying to find a pattern of scores for identifying gifted students with a learning disability, consideration should be given to the three defining characteristics of: an outstanding talent or ability, a discrepancy between expected and actual achievement, and a processing deficiency. Identification of a processing deficiency occurs through IQ testing or

specific processing tests (Brody & Mills, 1997). Additionally Brody and Mills (1997) suggested that behavioral observations, measures of cognitive processing and a battery of achievement tests should be administered. McCoach, Kehle, Bray and Siegle (2001) noted that assessment should be undertaken in any curriculum area that a student may have a suspected disability. In their description of "best practices" in the identification of gifted students with learning disabilities, the researchers concluded that best practice needs to include (1) a complete assessment battery that consists of behavioral observations, an individual intelligence test, cognitive processing measures, in addition to the school or district's evaluations of the student's functional levels within the curriculum; (2) longitudinal monitoring of changes (i.e., declines in) achievement and academic performance data; and (3) referral for additional assessments when there seems to be a pattern of declining achievement.

One approach for identification is dynamic assessment/interactive evaluation. This method assesses a student's knowledge in a specific area while scaffolding the student's knowledge in other areas. The assessor helps the student undertake assessment tasks and notes the conditions under which the student's ability to demonstrate knowledge is facilitated. The scaffolding consists of providing guided assistance. Munro (2002) argued that the use of dynamic assessment/interactive evaluation is one appropriate method that would be useful in identifying gifted students with a learning disability in addition to assessing their "general ability, creativity and divergent thinking, motivation, learning disability, aptitude in a particular area, self-concepts, metacognition and self-management" (pp. 27-28). Olenchak and Reis (2002) recommended that teachers rely on discrepancies between scores on achievement and ability tests as well as analysis of IQ subtests for identifying gifted learning disabled students and, at times, use qualitative data such as structured interviews and observations of students to aid in the identification process.

Findings from Rogers' (2011) research corroborated this approach, suggesting a number of strategies for identification of these students. These strategies included but were not limited to, a tiered system of identification, a specialist team with training, and looking at the 'family tree' of individual students. Foley Nicpon (2013) also notes that comprehensive assessment is required for accurate identification of twice exceptional students.

Through observation and research, the characteristics of gifted students with a learning disability have been determined and some information provided about various strategies that are useful when identifying these students. In general, though, they are underrepresented in gifted programs. For example, Boodoo et al. (1989) surveyed Special Education teachers and directors of gifted programs in Texas and found that teachers and schools did not deal well with identifying and therefore providing for gifted learning disabled students. At the time Boodoo et al (1989) undertook this research, programs for gifted students were not mandated in Texas. Mandating did not occur until later in 1990 and made little difference to the number of gifted learning disabled students participating in programs for the gifted in Texas. For example, research undertaken by Tallent-Runnels and Sigler (1995), in which they surveyed gifted program coordinators in Texas, found that little had changed since the research undertaken by Boodoo et al (1989) and that the rate of identification of gifted learning disabled students had dropped from 23% to 19.7%. It may be that with identification efforts declining that schools see little point in providing programs for these students if they cannot be formally identified for placement.

Similar results were found by Karnes, Shannessy and Bisland (2004) when they surveyed directors of public school programs for the disabled. These directors were also responsible for the gifted students in the state of Mississippi. This research indicated that identification was poorly done and that further research was required in order to understand why these students are not being identified and placed in appropriate educational programs.

Although research has identified the characteristics of gifted learning disabled students and recommendations have been made about appropriate strategies that can be used to identify these students, it can be generally stated that teachers and schools have not dealt well with identifying and therefore providing for these students.

Programming

Over time, gifted/learning disabled education has received increasing attention in developing and providing appropriate educational programming for these students (Baum, 1988; Bees, 1998; Hishinuma & Nishimura, 2000; Rogers, 2011; Shevitz, Weinfeld, Jeweler, & Barnes-Robinson, 2003; Weinfeld, Barnes-Robinson, Jeweler, & Shevitz, 2002), in addition to integration and teaching strategies (Baum, Cooper, & Neu, 2001; Bisland, 2004; Reis & Ruban, 2005; Rogers, 2011). Crim, Hawkins, Rubin, and Johnson (2008) compared the accommodations provided by the IEPs of SLD/low-ability (n=225), SLD/average ability (n = 708, and SLD/high ability (n = 112) students. The researchers found that GT/SLD students were offered fewer modifications than other groups. Yet, the accommodations these GT/SLD students might need do not appear to be extraordinarily intensive. In a qualitative study of teachers and administrators, Mann (2006) concluded that a caring atmosphere that focuses on strength-oriented accommodations and student-centered learning, were considered best practices for GT students who were verbally disabled. Olenchak's (2009) study of 57 GT/SLD students found substantial affective gains (self-concept) for students engaged in Schlichter's Talents Unlimited program, coupled with individual counselling. Certainly Weinfeld et al.'s (2002) study with severely learning disabled gifted students showed the efficacy of placing these students in special "Center" classrooms that focus on self-direction, self-reflection, problem solving, and inquiry-based curriculum experiences showed merit. Likewise, Baum, Cooper, and Neu's (2001) description of Project High Hopes indicated that helping GT/SLD students focus on problem-solving, analysis, creativity is beneficial to them

educationally. But, as Foley Nicpon pointed out in 2011, the focus of empirical research on GT/SLD specific interventions, including the part assistive technology may play is not extensive enough for the field to "rest on its laurels". As Nielsen (2002) concluded, not only must these students' strengths be addressed, as they work in learning environments with others like themselves, but also they must be allowed to develop compensatory strategies for their weaknesses.

Rogers (2011) found that gifted students with learning disabilities had distinct learning differences that needed to be addressed by implementing a number of strategies. Her initial strategy is interesting in that she notes that no single strategy addressing a particular issue works for long and that it is necessary to initiate a new strategy to address that particular issue. She concluded that "strategies must be developed and integrated within the differentiated curriculum to cover several components of the whole learner… a child profiling team must plan the specific strategies that address the child's strengths and weaknesses… it is important not to water down the gifted curriculum provided for the 2e child" (pp. 62, 65).

Research on programs and strategies that have focused on students' giftedness rather than their disabilities has found that such programs have led to an increase in self-esteem, improved learning behavior, and creative productivity. For example, Bees (1989) studied a program implemented in Vancouver that included resource room support for the student's learning disability and enrichment for their giftedness and concluded that providing meaningful school connections for gifted learning disabled students contributed to the success of the program. Baum and Owen (1988), in their research comparing high ability students, high ability/learning disabled and average/learning disabled students, concluded that feelings of self-efficacy are improved by providing programs that recognize these learners' giftedness as well as their learning disability, and this in turn leads to greater achievement

when the students' gifts were acknowledged. In another study, Baum, Emerick, Herman, and Dixon (1989) undertook case studies of four programs specifically designed for gifted learning disabled students and concluded that when the students' giftedness was recognized and nurtured, there was an increased willingness by the students to complete tasks, and a decrease in unsuitable behaviors (including disruptive tendencies, inattentiveness, short attention span, task avoidance and manipulation tactics) which affected their learning.

Baum (1988), in a study of an enrichment program for seven gifted learning disabled students in grades 4-5, concluded that as a result of the enrichment program, students demonstrated improvement in motivation and behavior when they were allowed to choose their own area of study and end product. As a result of this work, she constructed the following guidelines for educators working with gifted learning disabled students. These guidelines include provision of a talent-supportive environment, instruction in compensatory strategies, awareness of personal strengths and weaknesses. Both she and Hannah and Shore (1995) have confirmed these four guidelines since their initial introduction. In another example, Weinfeld et al. (2002) established that four major components are required for successful programs for gifted learning disabled students. These components were the result of a specialist program that was developed and implemented in one county in the U.S. Their guidelines were very similar to Baum's earlier list, with the addition of the idea of comprehensive case management to coordinate all aspects of the student's individual education plan.

A recent mixed methods study by Willard-Holt, Weber, Morrison, and Horgan (2013) updated the field on the most recent innovations in practice for GT/SLD students. The research team included a table that listed sources for both strategies to enhance giftedness and compensation strategies, all of which have been researched by leaders in the gifted education field. In addition, they described proposals by those in the field that may not have empirical

evidence to support them, including academic acceleration (Assouline & Whiteman, 2011), interest-based learning with authentic curriculum (Baum et al., 2001; Hua, 2002), and strength-oriented accommodations (Leggett, Shea, & Wilson, 2010; Pereles, Omdal, & Baldwin, 2009).

Successful programs for gifted students with a learning disability are programs that recognize their giftedness and provide educational opportunities that allow for enrichment and extension. At the same time, the program must recognize that the students have learning disabilities that require help and the development of strategies for overcoming their learning disabilities. Research by Foley Nicpon, Allman, Sieck, and Stinson (2011) found that a number of students who are academically gifted with learning disabilities have not received appropriate educational services. Placement in programs that correspond to Baum's (1988) and Weinstein et al.'s (2002) program guidelines depends on educational professionals recognizing and identifying these students. If teachers cannot identify these students there seems little point in establishing specialist programs. With this review in mind, how the school system to which the case study described in this article responded to the talents and deficits they found illustrates the pain and frustration the learner with twice exceptionality, his parents, and the teachers and schools who have this learner in their setting may experience. What this case study will address is to what degree the education system recognized both the gifts and disabilities of this young man and to what degree they engaged in providing strategies that would help him develop compensation strategies by working through his strengths. The study will explore what each "party", student, parents, and school contributed to the ultimate development of this individual's talents as an adult.

Method

This case study was part of a larger research project that used a multiple case study method of inquiry to address the following research questions:

1. What part does the school contribute to optimal development of talent in students who are gifted and learning disabled?
2. What part does the family contribute to optimal development of talent in students who are gifted and learning disabled?
3. What part does the student contribute to optimal development of personal talents?
4. In what ways does the identification process for twice-exceptionality impact school adjustment?
5. In what ways does the programming provided in schools and the community impact the student's talent development?

Case studies were deemed the most appropriate research approach because they provide an in-depth understanding of the subject and allow for a focus on discovery (Burns, 1996). In the larger study for which this is one case, GT/SLD students were located through an advertisement placed in an Australian journal in gifted education. Scott and his parents were recruited to the research by responding to an advertisement requesting participants for a project that would follow the educational development of gifted learners with varying learning disabilities. After an initial discussion, Scott's parents agreed to be part of the research study. Scott was interviewed on three occasions, lasting an hour at each interview. His mother was interviewed on three occasions and also provided documentation such as specialist and school reports. All interviews were conducted by the researcher and digitally recorded. Ethics approval was granted by the supervising university to conduct the research.

In keeping with the recommendations for case study research (Yin, 2003), multiple sources of data were collected to enable triangulation of data, which in turn strengthened the validity of the findings. The forms of data collection were semi-structured interviews conducted informally, researcher observations, and relevant artefacts. Semi-structured interviews were deemed an appropriate form of data collection because they allow the researcher to establish rapport with the participant and thereby increase the likelihood of in-depth responses. They also have the flexibility for the researcher to probe participant responses and address any contradictions or ambiguities in the participant's responses.

This research was seeking to understand why students were not being identified by schools as being gifted with a learning disability. Additionally, understanding from the student perspective provided insights into their world and the issues with which they were dealing. Interviewing allowed the participant and the parents to reflect on what they had experienced, particularly in relation to what processes had been undertaken to try and achieve an appropriate education. Some examples of the broad questions that were asked of the participant were:

- Tell me about school and what you like and dislike about it.
- What do you find easy to do, difficult to do?
- Describe your ideal teacher/school/classroom.
- What do you do outside school?
- Can you give me an analogy of how you feel about yourself?
- If you had the option to have input into work undertaken in the classroom and assignments set for you, what sort of things would you tell the teacher you would like?

And some questions that were asked of the parents:

- Tell me about your child.
- When was your child first identified as gifted with a learning disability?
- Who identified the disability or giftedness?
- How was your child identified as gifted with a learning disability?
- What strategies have you implemented to support your child?
- Has the school/ teachers addressed the issues your child has at school, with school work, and how have they done this?
- What has been the effect on the family?

Additional data were collected through interviews with two of Scott's teachers, and through reports from the various therapists who had provided assessments of his abilities and intervention programs. Some of the questions asked of the teachers were:

- Tell me about Scott. What was he like in the classroom?
- How did you identify that he was gifted when other teachers had targeted him as only having a disability?
- Why did you advocate for Scott and request that he be allowed to attend the school for longer than the usual designated time?

These broad questions allowed the respondents to initiate issues of concern to them and minimize the possibility of leading questions that might be inferred by a more closed form of questioning. The researcher was able to follow-up with additional questions and prompts as the interviews unfolded. The interview questions were designed to elicit the information required to answer the five research questions.

The researcher observations were conducted during the interview process and allowed the recording of '*relevant phenomena'* (Johnson & Christensen, 2004, p. 188) in the natural setting. Observations of participants' behaviour provided additional non-verbal information

such as the participant's degree of comfort with particular incidents being recounted and so on. In this way, the non-verbal observations allowed insight into the participant's feelings and behaviors, and in so doing provided an important form of data triangulation.

The final source for data triangulation entailed the collection and examination of relevant artefacts. These included official documents provided by the parents of the participants, such as reports and test results from school counsellors, psychologists, occupational therapists, speech therapists, physiotherapists, pediatricians, alternative therapists, general practitioners, teachers, optometrists, hearing specialists and educational consultants. These documents provided official evidence of identification of the participant as gifted with a learning disability. Artefacts in the form of students' work samples were also collected, for example, the original of a handwriting assessment.

The first question asked of Scott was could he give an overview of his education. He was unable, he admitted, to begin talking about the beginning of his schooling as this was "too painful" for him. His mother suggested that he start from his current position and work back. The interviews with mother and son took place across a period of six months. Eventually Scott was able to recount both the positive and negative aspects of his schooling experiences. To help Scott with the emotional issues that he was experiencing, it was suggested that he be provided with the opportunity to word process some responses and email them to the researcher. To this suggestion, Scott was able to provide three emails to elaborate on what he discussed in his face-to-face interviews. Scott's emails demonstrated a more calm and less emotional response than did his behavior during face to face interviews. This is one example of how triangulation of data across the interviews, observations and artefacts allowed the researcher to gain a more complete understanding of the participant's case.

Scott's mother's contribution was valuable as it provided data about what the family did in order to support Scott and the effect that having a child who was both gifted and had learning disabilities had on the family. Her contribution also reinforced the data that Scott provided and was another important form of data triangulation. In addition to the interviews, correspondence via email with her was undertaken. This helped to clarify data collected and to collect additional data.

The first form of data analysis focused on the documents provided by Scott's mother because these were provided prior to the interviews. The documents included IQ reports, reports from an optometrist, psychologists, occupational therapists, speech physiotherapists, school counsellors and teachers. The reports provided results of tests and assessments undertaken as well as recommendations for various interventions for the student. The information in the reports was divided into categories, such as Identification, Interventions, Effects on student learning, Schooling, and Professional recommendations. This first wave of analysis provided an initial picture of Scott's case while also raising specific questions to be explored in the interviews.

The interviews were recorded and later transcribed. Following each interview, the researcher listened to the recordings and made additional notes. These notes consisted of a summary of the interview, initial analysis of the information provided, tentative conclusions and further questions or information that needed to be sourced from Scott and his mother. These notes were appended to the transcripts of each interview where appropriate. A reading of the transcripts identified recurring ideas, which were coded and the data entered into a table (Miles & Huberman, 1994). An example of this process is depicted in Table 1. As these codes were identified and repeated across the various forms of data collection, the categories were refined into a number of themes based on the frequency of occurrence and the relationships among the categories. For example, provision of a computer, the opportunity to

negotiate school workload and assessment options, additional time to complete assessments and learning to touch type were all important in Scott's experience of schooling and were thus combined into the single theme 'classroom accommodations'. The final themes that emerged included disability, resources, school attitude, behavior, classroom accommodations, identification, and school achievement. The themes were supported through the triangulation of all forms of data collected.

Insert Table 1 about here

These themes were used to respond to the research questions and a narrative of the case was drafted by the researcher. This draft was sent to Scott and his mother for member checking, thereby allowing any errors in the analysis to be raised by the participants. Scott's teachers who participated in the study also were sent the drafted narrative. Scott, his mother and the teachers all indicated that they were satisfied with the accuracy of the draft document.

Scott: The Case Study

Mother's Perceptions

Scott's mother provided background information about his development and noted that she was aware from birth that he had problems, as he had difficulty feeding and suffered from various allergies, as well as vomiting constantly. Scott's feeding problems and his reflux were, in his mother's opinion, the first indications of motor dyspraxia. He was slow to walk and crawl, due to his inability to lie on his stomach as a result of reflux; he was clumsy and looked awkward when he did walk at the age of about 18 months. As a toddler when Scott fed himself, he would turn the spoon upside down as it approached his mouth in order to be able to remove the food from it. He did this because he was not able to get his lips to remove the food. He continues to eat this way.

According to his mother, at four years of age Scott could not dress himself in the correct order without help, but he was verbally precocious, aware of world events, and could complete complex puzzles and build entire worlds from Duplo (a plastic interlocking block), Mobilo (plastic interconnecting shapes) and wooden train sets. At preschool it quickly became apparent that Scott had substantial physical problems. He was unable to sit on a chair without falling off, and could not sit still on the floor without accidentally disturbing the other children. He avoided fine motor tasks and when painting at school, only painted bushfires – a whole page of black with a little red at the bottom. Gross motor skills were also a problem and he avoided any group physical activity at school. Scott was able to build with blocks more easily than paint, as painting was similar to holding a pencil whereas the blocks were a larger shape and easier to manipulate.

Despite these problems Scott was keen to learn and, according to his mother, was not disruptive at preschool. Other issues though surfaced, with his starting to dribble and exhibit stress behaviours, such as chewing the collars of his shirts. As a result, occupational and physiotherapy assessments were conducted and a pediatrician was consulted. Scott was diagnosed with a motor planning disorder known as dyspraxia. The possibility of academic giftedness was not considered at this stage. Scott started weekly sessions with an occupational therapist and bimonthly sessions with a physiotherapist. Thus began for Scott the long term process of undertaking various intervention therapies. Scott stated that at times everything was just overwhelming. But he also had a positive response to these therapies and noted that some of these activities were also a source of friendship for him. He said “I did a lot of therapies with disabled students and I always saw the other students as friends”.

According to Scott’s mother, his teacher in kindergarten assumed that because he could not write his own name, he was developmentally delayed. As a result, he was excluded

from reading groups and sent out to play instead. His mother, who had noted his verbal precocity, organized for an IQ assessment to be done. The results indicated that Scott had strengths in a range of areas but also significant difficulties. “We focused on the fact that the IQ was in the slightly upper range so potentially he would be able to undertake tertiary studies” (mother). After the IQ testing, Scott was allowed to join the reading groups in kindergarten and was given books to take home so that he could catch up. Within two weeks, according to his mother, Scott had advanced to the middle reading group and shortly after, to the top group, to the surprise of the teacher. She did not force him to do group work, but encouraged it and kept the groups to a group size of four. To help him improve his reading and learning abilities, one-on-one learning took place, sometimes with the teacher and sometimes with a specialist learning support teacher. Scott’s mother said that his classroom teacher stated “Well I have learned something new; some children just don’t fit into the developmental continuum at all.”

As a result of assessments undertaken during kindergarten, Scott also received counseling from the school counselor for mental health issues such as his frustration at not being able to complete some tasks, and from this point in time his parents talked to him frankly about his difficulties. They also began the process of seeking programs that would help him develop his physical skills and in which he could excel. Medication was also suggested to help with his motor skills; as a result of taking the medication, he was able to sit on a chair without disturbing other children and it seemed to reduce his extraneous movements. Unfortunately, gastrointestinal and appetite problems developed as a result of the medication. Despite these issues and because of the benefits to Scott’s physical performance he continued on this medication, as his parents could not afford the alternative medications. Scott learned to live with the side effects of the medication in order to gain from the benefits of taking it. His mother stated that “he suffered appetite problems and stomach aches as side

effects, but when on medication he could sit without accidentally disturbing others and could stay on a chair. Previously he would literally fall off it. The medication appeared to calm extraneous movements".

First grade was a difficult year and as a result, according to his mother, Scott produced some of his best creative efforts at avoidance tactics. The pressure was mounting at school, as more writing was expected of the students and occupational and physiotherapy was ongoing as well. Suggestions were provided to the school for alternative ways for Scott to express himself, other than through handwriting, but there was little cooperation from the school. Some suggestions Scott's mother mentioned that were given to the school, but ignored, included "using a parent to scribe, providing Scott with photos or pictures to help him get started on a writing task, using a tape recorder to record his ideas or give him access to a computer for writing." All of these suggestions are in the repertoire of special education teachers, but it was apparent that without a written learning plan, these strategies would not be employed by Scott's teachers.

Scott required many sessions with the Occupational Therapist in order to be able to dress himself properly. Before this therapy, he would put his clothes on in the wrong order, socks over shoes, pants on backwards. The final solution was to provide him with a series of photos showing the correct order. Shoelaces were another problem with his mother noting "in the short term, spring laces or Velcro was used. Sometimes there is just too much to tackle and you have to find other ways to make life easier for a while".

The end of first grade brought a change of school, as none of the educational strategies suggested above by the psychologist for Scott had been implemented by the current school. A school that had a strong special needs support team was found. The first year at this school was a good year for Scott, as he was supported through in-school programs and in his

various therapies. Following the good year, his mother stated that Scott had a teacher who struggled to come to terms with his obvious ability, and his inability to physically write and to organize his thought processes. Despite concerns for Scott's self-esteem, he was placed in a gifted group within a streamed class. His parents felt that it was better for him to be challenged academically, even if his achievement levels were low. At this time Scott was provided by the Education Department with a support teacher who taught him to touch type.

In third grade, at age eight, Scott's classroom teacher struggled with his demonstrated limited physical skills and his obvious abilities; another IQ assessment was undertaken to re-confirm for the teacher that Scott was academically gifted. Scott's scores on the subtests ranged from a low of nine (average) to a ceiling score of 19 with his full-scale IQ (FSIQ) placing him at the 98th percentile of ability. At the same time as Scott was being assessed for academic ability, his difficulties with his fine and gross motor skills continued and it was recommended that physiotherapy be continued. In addition to physiotherapy and to help Scott with his dyspraxia, he attended a program named "Riding for the Disabled". Scott also participated in a special gymnastics program and the physiotherapist noted in her report that, "Scott is very good at avoiding any activity that he finds difficult and therefore it was necessary to alternate challenges with easy tasks in which he can enjoy showing off, thus increasing his confidence to try again"(Physiotherapy report).

Continuous re-assessment of Scott's physical disabilities was undertaken over a period of years as he completed various intervention programs. Scott made significant improvements not only because of maturation, "but also due to the enormous efforts that were made by his mother and by Scott" (Occupational therapist report). This comment was also made by one of Scott's elementary school teachers, and the teacher at the high school support center he later attended. Physical interventions continued throughout Scott's schooling.

Assessment of Scott's cognitive abilities was also ongoing. He had difficulty not only in physically writing but also with an inability to organize his thought processes prior to writing. He was provided with a support teacher to teach him to touch type, but as this was a motor planning task, he found it difficult. Additionally he did not have a good enough spelling ability for spell checker to be a useful tool. Visual assessments undertaken demonstrated that his visual memory was below the age norm and his visual sequential memory at the 77th percentile. This affected his ability to spell and to complete math problems. As a result, despite his abilities, he completed a general rather than advanced level of math for his final year of high school.

Scott continued to have difficulties with handwriting, and because of number and letter reversals did his mathematics in his head, making many careless errors. Scott did not let these issues stop him from trying, even though he still practiced avoidance activities. It was in sixth grade that when using the computer, he wrote a poem on the environment and produced a pamphlet on research about the Tasmanian tiger. Scott's mother's reaction to this project was "his research on the Tasmanian tiger presented in pamphlet form using the computer revealed an ability to use computer technology and a strong sense of design. His inability to spell difficult words never stopped him from using them in his writing." It was her belief that his completion of this piece of writing reinforced for Scott that he did have ability but that it just took him longer to achieve than it did for other students.

Planning for Scott's transition to high school (grades 7-12) was started by the parents and school system well in advance of attendance. Extra funding was applied for and the local high school was selected, as it was easy for Scott to get to, an important consideration in view of the fatigue from which he suffered. Funding and additional support were denied because Scott was not considered "disabled enough" and because of his high IQ. Seventh grade was a traumatic year for Scott. "When the disability support was not granted, the school seemed

unable to respond to his academic or intellectual needs. He was constantly harassed by other students and physically manhandled, which pushed him to the limits of his tolerance. He became verbally abusive, using his finely honed verbal skills to strike back at his tormentors. This just landed him in trouble with the school and they talked about demoting him three levels for his core subjects" (Personal communication, 2008, mother). Without additional funding the school was unable and unwilling to respond to his special needs. As Scott was not achieving to the expected level in class, the school suggested that he be dropped several academic levels. His parents felt that this would cause untold psychological damage to Scott. He was harassed and verbally and physically abused by his peers. His mother described one incident. "In the last fortnight of seventh grade Scott was assaulted during a class, he was dragged outside the building and physically thrown around and rolled in the dirt. This happened two days in a row." The principal's response to the parents, as related by Scott's mother, was "It is all right for a bright student to end up working on the roads. I know plenty of students who have ended up that way". Scott was withdrawn from the school, as the school could not give his parents a guarantee that he would be safe. Scott became distraught as a result of the treatment he had received at the school and talked about killing himself. He had talked in these terms previously as a result of incidents at elementary school, but the talk was becoming more frequent. This information came more from Scott's mother than Scott, as his comment was "this is really difficult for me to talk about, it was such a horribly depressing, stressful time but now I read, listen to music or have a hot bath to relax and de-stress." Scott attended psychological counseling for extended periods while he was at school.

While investigating alternatives for Scott's education at this point in his educational career – high school - his parents consulted with the pediatrician and his medication was adjusted so that Scott could control the amount he needed, depending on the demands of the day. After considerable research and consultation, and with the support of the Director of

Schools, a caring teacher and a youth worker, Scott began an alternative form of education. He studied English, math, history, and geography through distance education, and attended a support center one day a week to interact with other students, receive support, and participate in a physical education and socialization program.

In order to complete his schooling Scott had to take state-wide exams for the subjects he had studied through distance education. Special provisions were applied for, and after a battle with the relevant authorities, he was granted seven and a half minutes per half hour extra working time in addition to five minutes of rest time. While this was beneficial, it meant a three hour exam became a four hours, 15 minutes exam, a feat of endurance for Scott.

Scott's mother reported on the incredible journey she undertook to support her son in his endeavours to achieve his potential, but she only acknowledges Scott's journey and not the part she played in it. "His has been on a long and difficult road but he has always worked hard towards achieving his goals. He has amazing tenacity, which is a strength he has developed because of his disability as well as his love of learning". (Parent personal communication)

Scott's Perceptions

Scott presented as a quiet, shy, young man with a steely determination to be part of the research, despite the emotional cost to him, in order that other young gifted students with learning disabilities could be spared what he went through to achieve an education. He noted that "talking about this is really difficult, but I've got to get the information out there". The discussion brought to the surface the trauma he had experienced throughout his schooling. At times he could not respond due to the distress he felt, so it was decided that he would use a computer to express the thoughts and opinions that were too difficult for him to verbalize.

Stress and anxiety were constant issues for Scott, and he developed various ways of coping with it. When he was younger he would jump on the trampoline or use a swing to relax. As he got older he would draw maps and mazes and later still, design whole shopping centers as well as build whole cities using building bricks. The early years of elementary school were such a depressing and stressful time that he has blotted out many of those memories. As a young adult he learned he could read, listen to music, or take a hot bath to cope with the stress.

From an early age Scott was aware that he had difficulty doing some activities that were easy for other children. He knew he was not stupid, but he could not make his body do what he wanted it to do and he found this very frustrating. "I did know I was not stupid despite not being able to do things as well as other kids. I knew I had trouble with my body and I couldn't make it do what I needed it to do. It was very frustrating" (Scott). His understanding that he was also gifted did not come until he was in fourth grade when he was in a class for gifted students, but he also knew that he had to work harder than everybody else, in order to achieve. " I probably have more determination than other people my age because I knew I was as smart as everybody else, but that I had to work harder because of my issues" (Scott).

According to his own reflections, Scott became a master of avoidance. He had many ways to avoid undertaking a task that he felt might be problematic for him to complete. This began as early as preschool with his bushfire paintings. At other times he would just not do anything, or he would deliberately forget his school supplies, or knock his books off the table and then pick them up. He felt very self-conscious about his handwriting and did not like others to see it. In fifth and sixth grades, when he worked on a laptop he would close without saving and lie that he had saved and couldn't understand why the work was not there. Also, Scott relates, "When I had my laptop in fifth and sixth grades I would sabotage it by tripping

over the cord" (Scott). As he got older he would use emotional ploys to get out of work by using issues that were upsetting him to his advantage. "When I was older I would act upset about another issue to get out of doing my work- it was probably something that was bothering me but I would use it to my advantage" (Scott). Knowing that others were aware that he suffered from fatigue he would feign extreme tiredness even when he wasn't. "However tiredness is part of me, a full day of work really does tire me out. It was quite a shock when I started nine hour shifts. When I was a casual you rarely worked more than six hours at a time."

As a result of Scott's initial experience with high school, as described earlier, alternatives for his education were investigated. The plan that called for distance learning and a once weekly support center began a period of confidence-building time for Scott as he was more in control of his learning, and the distance education teachers allowed him to modify or change his assignments so that they were more challenging and appropriate, and more in line with his interests. Scott noted that "Distance education proved to be an ideal way for me to study, lesson notes were sent out in booklet form and needed to be read and responded to." During these years he received awards each year at the awards nights and at the end of 10th grade received an award for every subject except history and advanced math. At the same time, he was continuing his other activities and interventions and still experiencing difficulties with many aspects of his life, particularly with having time to interact with other members of his family and the time it took him to complete any task whether physical or cognitive. Scott reflected that he felt sad during this time of his life as he was aware that his relationships with his siblings was not what he would have liked but he felt overwhelmed by everything else that he had to deal with.

Due to Scott's growing confidence he decided to "*do school"* again to complete his final two years of high school. The biggest concern for Scott was his inability to take notes.

He could not listen to the teacher and take notes at the same time. He also found that because of his handwriting he often missed notes that were written on the board as they were rubbed off before he had a chance to copy them into his book. Scott often felt overwhelmed during this time but with the support of his counselor he began to negotiate due dates and workloads with his teachers. One teacher provided him with notes prior to exams to help with his study, but other teachers refused to do so as teachers saw this as being unfair to other students. "Fairness came up a lot in the discussions. People could not decide what was fair on other students. Our position was to distribute the same lesson notes to all students – those who want to study will, and those who don't, won't" (mother). Scott stated that he agreed with this and felt that anything extra put in place for him would also be useful for other students. Scott found math problems that were presented out of context, as in an exam, very difficult. Due to his poor visual memory he would spend an inordinate amount of time trying to recognize the topic it was related to, and then try numerous ways to solve it. As a result, Scott was forced to repeat math at a lower level rather than an advanced level. He noted that he was disappointed about this. "I can do the math and understand it but couldn't demonstrate it and they weren't prepared to help so I just had drop a level" (Scott, personal communication, 2008).

The science department was supportive of Scott and installed wireless technology so that any notes written by the teacher automatically downloaded onto his computer. This technology was available to all the students in the class but according to Scott he was the only student to make use of it. English assessments presented Scott with a challenge as they were based on 30% for an oral presentation, 20% for an in-class essay, 20% for a creative response, and 30% for a book-mark which was a mark that the teacher gave based on Scott's notebook. The book mark may include criteria such as presentation and the standard of work completed in the note book. Because of Scott's inability to write legibly his notebook had

very little work in it. “There was a book mark as one of the assessment items, and with all my note-taking problems I had basically an empty bookmark at the end of semester” (Scott). In Year 11 Scott’s poor book-mark lowered his overall result and he found the oral presentations very stressful, to the point of making him physically ill, despite his verbal abilities. All Scott’s schooling had been a struggle for him, which meant that he had low self-efficacy despite having the knowledge that he had remarkable talent in some areas. After some negotiation and as a result of having to change the assessment criteria for Scott, the teacher found it beneficial to change the criteria for the whole class. The book mark was changed to an at-home essay assessment. Scott’s final year of schooling was a success. Scott discusses how he felt about his last years at school;

> I used my strengths to best advantage, devising unusual topics for my orals and creatives and presenting my ideas using my visual spatial abilities to design advertising campaigns and pamphlets. I grew in confidence in the classroom, relating the discussion to outside events and expressing my rather political and strong opinions. One oral presentation I gave for a Fantasy class questioned the difference between fantasy and faith and opened up some enthusiastic class discussion. (Scott, 2008, personal communication)

School Perspectives

Scott relates that two teachers whom he had in elementary and high school were aware of his avoidance ploys and would not let him get away with such activities. His primary teacher, through discussions with him, made him aware that she knew what he was doing. ‘I told Scott that I knew what he was up to and suggested that he could use any method that worked for him to complete the required tasks” (Classroom teacher, personal communication, 2008). His grade 5/6 teacher fought for him to be placed in her class, which

was a class for gifted students. This teacher listened to Scott and his parents. She listened to the vocabulary that he was using and despite the fact that he couldn't write, couldn't form his letters properly, and was considered a learning assistance student, she could see beyond these inabilities to his potential. She provided the students with alternative methods of assessment and learning. "I provided alternative ways of assessing, oral presentations and lots of talking and I assured the students that assessment is not all written down." (Classroom teacher, personal communication, 2008). This teacher was very aware of the avoidance activities that Scott engaged in, and would not let him get out of completing work because of them. The students were encouraged to write as well as use the computer, and even draw or doodle instead of taking notes. His grade 5/6 teacher said that she had "high expectations, encouraged the students to achieve and developed their self-esteem." This was achieved by acknowledging Scott's disabilities and recognizing his academic giftedness. These two teachers continued to advocate for Scott throughout his upper elementary and high school years

A similar situation existed with the high school teacher at the support center he attended. Scott attended for interaction, support, and social development. He found the social skills sessions very challenging, but with encouragement he participated and developed socially. Students at this center usually attended for a limited period of time but the teacher observed the benefits to Scott of attending the school, and advocated for him to attend for the three high school grades that the school catered for. Scott again practiced his avoidance activities, but the teacher saw them for what they were and provided support for him. "He would avoid writing if he could, but I encouraged him telling him he could do it. I also ensured that there was a good match between the learning support teacher and Scott" (Scott's classroom teacher. 2008). Scott was not an easy student and sometimes demonstrated his

discomfort by having temper tantrums. His teacher noted that “if he became upset with a situation, he would throw a temper tantrum.”

Scott talked about often being bullied at school. His method of coping with the bullying was to stay off the playground. He would borrow a teacher’s newspaper and go to the library. From the age of nine years, Scott said he read the newspaper every day as a means of escape from the bullying. He said he had a quick wit and would use his verbal skills to lash out at his tormentors, both teachers and students. This did not endear him to his tormentors and in hindsight he would advise other students in a similar situation to: “try to avoid reacting or being provoked, join all the lunch time activities, volunteer to help in the canteen or go to the library.” He also states: “if you are being bullied or have no friends, you should remember there will always be a friend for you somewhere”. This is advice he would give to other students who found themselves in similar situations.

Scott participated in discussions with teachers and other professionals concerning the various interventions and any assistance or special programs that were implemented. Whilst some teachers were happy for Scott to participate in discussions and negotiations, others were not. According to his mother, “His math teacher was particularly hurtful and insensitive to his feelings, telling a room full of departmental officials, that she had just marked his exam paper and he had failed math and asked, ‘had he thought of doing something else as he was obviously no good at it’”.

Scott noted that he found participating in the discussions about his work and assessment options helped him achieve, even though at times he found the discussions difficult. He said that participation in these discussions provided him with a sense of ownership and made him realize that there were other professionals willing to help him. As a result, he wanted to please them, and in doing so, improved his achievement levels, which

then boosted his self-confidence. Scott stated that “I would use my strengths to best advantage by devising unusual topics for my assessment tasks and presenting my ideas using my spatial abilities. This helped me gain confidence in classroom discussions and in expressing my opinions.” He stated that his advice to parents and other students would be that all students with disabilities should be involved in the planning and decision making about them. “In order for intervention to work people need to know the student’s perspective and the student needs to support the decisions that are made”. As his confidence grew in the latter years of high school, so did his levels of achievement. He achieved a score in his final exams that was high enough to gain him admission to university to study Environmental Science.

Scott had decided to take a year off from study after finishing school and worked to save money and to buy a car. At the time this study was conducted, he was working in the retail industry and continued to achieve at a high level. “At work I can organize goods onto the bays – my bays were used as the industry standard in a company manual - and I am always called on to solve tricky storage problems” (Scott).

Family and External Community Responses.

According to his family, there have been many highs and lows as Scott has developed into the person he is today. Throughout the experience they have demonstrated courage and belief in themselves, in Scott, and in the people who have supported them, both professionally and emotionally. Scott’s mother stated “that we cannot thank all of the people who have encouraged and helped him enough.”

The relationship among the siblings has been affected by Scott’s disability and his efforts to cope with its effects. Scott and his older brother were very close during his early years, but as time passed, Scott found the mental and physical strain of coping with school, his disability and the constant intervention therapies, as well as maintaining a relationship

with his older sibling very difficult. He began to withdraw from this relationship and isolate himself. His older brother found this situation very difficult and missed the close relationship they had once shared. This brother's pain, at his sibling's withdrawal from the relationship at the age of 11 years, in order to deal with everything that was happening to him, was expressed in a poem written by his older brother.

> I am a lover, a child with a new toy,
> a blind man seeing, a deaf man hearing,
> a mother's eyes staring at a new born child.
>
> I am happiness,
> My Brother and I.
>
> It was then that the storm came.
> I could sense it brewing on the edge of my conscious mind,
> there was no escape from the storm,
> a dark, seething mass of cloud inside.
>
> We were caught in that storm,
> My Brother and I.

Scott mentioned that he felt quite upset after his brother wrote this poem, as he would have liked a better relationship than the one his brother described, but he just was not capable of it at the time.

His parents have had to balance their family and working life to provide for the needs and support of their three children. They have had to advocate for Scott and fight many battles to ensure that he was given opportunities to reach his potential, but it may be that his brother has not been given the same opportunities to develop. The occupational therapist and

the teachers who supported Scott, all stated that without his parents and their sustained efforts for Scott, he would not have gone as far as he did.

Discussion

Six themes emerged as the interview and documentary data were triangulated. In the discussion that follows, each theme will be explained with summary evidence across data sources and connections of the theme to previous research on twice exceptionality will be discussed in terms of this specific case.

Theme One: The severity of the disability greatly and negatively impacts the child's self-efficacy, self-direction, and socialization. According to his own reflections and those of his family, Scott needed liberal access to counselling, self-advocacy for how he could learn best, and training support for how to socialize with peers. If not for the professionals in his life, he would not have achieved the self-direction he has come to develop. What professionals provided was not only medical mediation for some symptoms of the disabilities, but also compensatory strategies for overcoming psychological issues that might have deterred his full development of his talents. These professionals helped Scott realize that he was "worth the effort". If not for Scott's parents, these professionals would not have supported Scott as well as it happened to turn out. A recent article in the special issue on twice exceptionality by Neumeister, Yssel, and Burney (2013) noted that mothers were quick to identify their child's disabilities as well as intellectual capabilities and took responsibility for seeking out alternative support for both finding alternative strategies for overcoming areas of challenge and for developing their child's talents.

Theme Two: Means for specifically identifying what a child's multiple exceptionalities might be is generally received with mistrust. Scott was tested multiple times to demonstrate his intellectual abilities, but without these confirmations, it seems

evident that his educators would have never provided him with even some access to advanced learning. The physical assessments conducted were not undertaken in a similar manner, but more for resolving physical issues that hindered his progress in learning and functioning. It seems clear that the controversies surrounding discrepancies between ability and performance, the "masking" controversy argued by McCoach et al (2001) have not paved the way towards evidence-based practice. Certainly Scott had the "benefits" recommended as best practice by McCoach et al (2001) through full-battery assessment, but those results were not used with any consistency in planning his academic progress in school. In fact, his intellectual ability proved to be a barrier, to some extent, in being provided with a consistent Individual Learning Plan in his school years.

Theme Three: The resources, both physical, psychological, academic, and medical, not to mention the personnel involved, directly affect the multi-exceptional child's academic achievement as much as the child's own capacity and disability do. Many researchers have been quite specific on specific classroom resources, professional and therapeutic resources that must be integrated within a child's learning plan (e.g., Bees, 1989; Foley Nicpon, 2011; Willard-Holt, Weber, Morrison, & Horgan, 2013).

Theme Four: Classroom accommodations allow for a child to thrive academically and socially – or not. Consider the pattern of accommodation that occurred or did not occur for Scott over his K-12 years. For a single good year, there might be two to three non-productive years when the significant educators in his school setting did not understand or chose not to understand what he had to contend with. The two teachers Scott and his mother reflected on were a rarity across his K-12 years, with all his other teachers refusing to acknowledge that Scott was gifted and could achieve when provided with adjustments. This meant that no accommodations for his disabilities and no support for his

giftedness would be provided. Scott was sometimes well liked by the other students at these schools, especially when a teacher had acknowledged and tried to support both his giftedness and his learning disabilities. Previous research by Mann (2006) and Nielsen (2002), for example have described the direct impact teachers have upon twice exceptional students when the classroom context is consistently caring, student-centered, and balanced between addressing the strengths and developing compensatory strategies for these students in their learning.

Theme Five: Teacher and school attitudes about the twice exceptional child and the child's abilities and disabilities contribute directly to the child's adjustment to school and talent development. Students such as Scott, who demonstrate learning disabilities and academic giftedness, present a challenge to the education system. In the absence of school support, parents are generally the ones who identify the contradictions in their child and who go to great expense to ensure that their child has the opportunities to achieve. Scott's story exemplifies the role of the primary caregiver in the child's ultimate school success as concluded in the recent work of Neumeister, Yssel and Burney (2013).

Theme Six: School success can be acquired by the twice exceptional child when there is sufficient support in place that is coupled with the personal motivation of the child him or herself through a creative problem solving process that is ongoing. While many teachers are willing to work with parents to find educational solutions for these children, some may be confused by these students and deny they exist and therefore determine not to provide appropriate educational programs for them.

Scott's journey was made more difficult and traumatic, due to the lack of support by many, if not most, of his educators. The idea that a student can be gifted and have learning disabilities has not been widely accepted. It is clear more research and awareness raising

needs to be undertaken so that students such as Scott have a chance to reach their academic potential. Scott is currently enrolled at university and is undertaking his studies by distance education. He has a part time job as an environmental officer with the local municipal council. He has obtained his driver's license and bought his own car. As his job is some distance from home he is even considering moving out and having a place of his own. He is a young man determined to have a bright and fulfilling future.

Conclusions

Although one cannot draw strong recommendations from a single case study, much of what has been described in depth here provides readers with a picture of what could have been done to make Scott's educational journey more productive and less stressful. In the wisdom of hindsight, these issues should have been addressed.

1. Scott's school administration and teachers needed training in how to interpret and implement this student's plan such that both disabilities and abilities were addressed. A good first step in ensuring that twice exceptional students will find support in the school setting would be to require undergraduate level training in gifted and special education of all pre-service teachers. Currently at Australian universities only special education training is compulsory, and this often does not include a gifted education component. Teachers would have understanding and knowledge of how to address the giftedness components as well as the special education components in an Individual Education Plans (IEP), as well as in less formal plans, such as 504s, which would be of benefit for students such as Scott.
2. The professionals in Scott's life needed to work as a team to provide the best outcomes for his academic, psychological, physical, and social development. The school counselor, teachers of the gifted, as well as special needs and other

relevant professionals, such as speech therapists, need to work together and be involved in identifying and planning for these students. As an individual learning plan is developed amongst these professionals, the plan should include the use of assistive technology. This technology might include programs such as Dragon speak, Co-Writer, and the LiveScribe Pen. Technological aids are continually being developed and are an essential tool for students with twice exceptionality.

3. As parents of a twice exceptional child are the most accurate as well as first identifiers of a child's behavioural characteristics, schools and professionals need to heed the information they provide. Continuous assessment to "confirm" what has already been established wastes time, money, and effort on the part of all who are involved. The impact of this constant re-confirmation can be shown to have a negative impact on the child undergoing the process. As the child matures, parents and professionals should include the child in the decision making concerning both therapies and education. Students can help themselves as well. Being involved in the planning of their education will provide students with a sense of ownership and belonging. Many of these students have an excellent understanding of what they are good at. They need to use these strengths to their advantage and negotiate with their teachers to undertake work that focuses on these strengths. Scott also suggests that students get a part time job as it provides valuable experience, independence and money, all of which can help build self-esteem and help them get a picture of how they can be successful in the adult world when school is over.

Speech therapists, occupational therapists, and psychologists are just some of the professionals required to support and help twice exceptional students. These are valued members of the community and, in consultation with teachers and school authorities, can

ensure that these students are provided with the opportunities to reach their full potential and be valuable members of society. As Scott pointed out, “Having people listen to me and respect my opinions really helped me to achieve. I was always involved in the decision making about my education even though it was very difficult for me. It was good to know there were people who cared and wanted to help me. (Scott)

References

Assouline, S. G., Foley Nicpon, M., Allman, A., Sciek, B., & Stinson, R. D. (2011). Empirical investigation of twice-exceptionality: Where have we been and where are we going? *Gifted Child Quarterly, 55(1),* 3-17.

Assouline, S. G., Foley Nicpon, M., & Whitman, C. (2010). Cognitive and psychosocial characteristics of gifted students with written language disability. *Gifted Child Quarterly, 54,* 102-115.

Assouline, S. G., & Whiteman, C. (2011). Twice-exceptionality: Implications for school psychologist in the post-IDEA 2004 era. *Journal of Applied School Psychology, 27,* 380-302. DOI: 10.1080/15377903.2011.616576.

Barton, J. M., & Starnes, W. T. (1989). Identifying distinguishing characteristics of gifted and talented learning disabled students. *Roeper Review, 12(1),* 23-29.

Baum, S. (1988). An enrichment program for gifted learning disabled students. *Gifted Child Quarterly, 32(1),* 226-230.

Baum, S., Cooper, C. R., & Neu, T. W. (2001). Dual differentiation: An approach for meeting the curricular needs of gifted students with learning disabilities. *Psychology in the Schools, 38(5),* 477-490.

Baum, S., Emerick, L. J., Herman, G. N., & Dixon, J. (1989). Identification programs and enrichment strategies for gifted learning disabled youth. *Roeper Review, 12(1),* 49-53.

Baum, S., & Owen, S. V. (1988). High ability learning disabled students: How are they different? *Gifted Child Quarterly,* 32(3), 321-326.

Baum, S., Owen S. V., & Dixon, J. (1991). *To be gifted and learning disabled: From identification to practical intervention strategies.* Melbourne: Hawker Brownlow Education.

Bees, C. (1998). The GOLD program: A program for gifted learning disabled adolescents. *Roeper Review, 21(2),* 155-161.

Berninger, V. W., & Abbot, R. D. (2013). Differences between children with dyslexia who are and are not gifted in verbal reasoning. *Gifted Child Quarterly, 57,* 223-233. DOI:10:1177/--16986213500342.

Bisland, A. (2004). Using learning-strategies instruction with students who are gifted and learning disabled. *Gifted Child Today, 27(3),* 52-58.

Boodoo, G. M., Bradley C. L., Frontera, R.L., Pitts, J.R., & Wright, L.B. (1989). A survey of procedures used for identifying gifted learning disabled children. *Gifted Child Quarterly, 33(3),* 110-114.

Brody, L.E., & Mills, C.J. (1997). Gifted children with learning disabilities: A review of the issues. *Journal of Learning Disabilities, 30(3),* 282-296.

Crim, C., Hawkins, J., Ruban, L., & Johnson, S. (2008). Curricular modifications for elementary students with learning disabilities in high-, average-, and low-IQ groups. *Journal of Research in Childhood Education, 22,* 233-245.

Foley Nicpon, M. (2013). Progress in the path of understanding. *Gifted Child Quarterly,* 57 (4), 207-208.

Foley Nicpon, M., Allmon, A., Sieck, B., & Stinson, R. D. (2011). Empirical investigation of twice exceptionality: Where have we been and where are we going? *Gifted Child Quarterly,* 55(1), 3-17.

Hannah, C. L., & B. M. Shore (1995). Metacognition and high intellectual ability: Insights from the study of learning-disabled gifted students. *Gifted Child Quarterly, 39(2),* 95-109.

Hishinuma, E. S., & S. T. Nishimura. (2000). Parent attitudes on the importance and success of integrated self-contained services for students who are gifted, learning disabled, and gifted/learning disabled. *Roeper Review, 22(4),* 241-250.

Johnson, B., & Christensen, L. (2004). *Educational research, quantitative, qualitative and mixed approaches* (2nd Ed). US: Pearson Education Inc.

Karnes, F. A., Shaunessy, E., & Bisland, A. (2004). Gifted students with disabilities: Are we finding them? *Gifted Child Today, 27(4),* 16-21.

Leggett, D. G., Shea, I., & Wilson, J. A. (2010). Advocating for twice-exceptional students: An ethical obligation. *Research in the Schools, 17* (2), 1-10.

McCallum, R. S., Bell, S. M., Coles, J. T., Miller, K. C., Hopkins, M. B., & Hilton-Prillhart, A. (2013). A model for screening twice-exceptional student (gifted with learning disabilities) within a response to intervention paradigm. *Gifted Child Quarterly*, 57(4), 209-222. DOI: 10.1177/0016986213500070.

McCoach, D. B., Kehle, T. J., Bray, M. A., & Siegle, D. (2001). Best practices in the identification of gifted students with learning disabilities. *Psychology in the Schools,* 38(5), 403-411.

Maker, C. J., & Udall, A. J. (1997). *Giftedness and learning disabilities*. http://www.ldonline.org/article/Gifted_and_Learning_Disabilities/6071. Accessed 13 May 2009.

Miles, M., & Huberman, A. M. (1994). *Qualitative data analysis*. (2nd ed). Newbury Park, CA: Sage Publications Inc.

Munro, J. (2002). Understanding and identifying gifted learning disabled students. *Australian Journal of Learning Disabilities, 7(2),* 20-31.

Neumeister, K. S., Yssel, N., & Burney, V. H. (2013). The influence of primary caregivers in fostering success in twice-exceptional children. *Gifted Child Quarterly, 57,* 263 -274.

Nielsen, M. E. (2002). Gifted students with learning disabilities: Recommendations for identification and programming. *Exceptionality, 10,* 93-111.

Olenchak, F. R. (2009). Effects of talents unlimited counselling on gifted/learning disabled students. *Gifted Education International, 25,* 143-162.

Olenchak, F.R., & Reis, S.M. (2002). *Gifted students with learning disabilities.* In M. Neihart, S. M. Reis, N. M. Robinson, & S. M. Moon (Eds), *The social and emotional development of gifted children* (pp. 177-191). Waco, TX: Prufrock Press.

Pereles, D. A., Omdal, S., & Baldwin, L. (2009). Response to intervention and twice-exceptional learners: A promising fit. *Gifted Child Today, 32* (3), 40-51.

Reis, S. M., & Ruban, L. (2005). Service and programs for academically talented students with learning disabilities. *Theory into Practice,* 44(2) 148-159.

Rogers, K. B. (2011). Thinking smart about twice exceptional learners: Steps to find them and strategies for catering to them appropriately. In C. Wormald, & W. Vialle (Eds). *Dual exceptionality* (pp. 57-70). Wollongong: University of Wollongong Printery.

Ruban, L., & Reis, S. M. (2005). Identification and assessment of gifted students with learning disabilities. *Theory into Practice,* 44(2) 115-124.

Schiff, M., Kaufman, A. S., & Kaufman, N. L. (1981). Scatter analysis of WISC- R profiles for learning disabled children with superior intelligence. *Journal of Learning Disabilities, 14*, 400-404.

Tallent-Runnels, M. K., & Sigler, E. A. (1995). Gifted students with learning disabilities. The status of the selection of gifted students with learning disabilities for gifted programs. *Roeper Review 17 (4)* 246-248.

Waldron, K. A., & Saphire, D. G. (1990). An Analysis of WISC-R Factors for Gifted Students with Learning Disabilities. *Journal of Learning Disabilities 23(8),* 491 – 498.

Weinfeld, R., B., Barnes-Robinson, L., Jeweler, S., & Shevitz, B. (2002). Academic programs for gifted and talented/learning disabled students. *Roeper Review, 24(4),* 226-233.

Willard-Holt, C., Weber, J., Morrison, K. L., & Horgan, J. (2013). Twice-exceptional learners' perspectives on effective learning strategies. *Gifted Child Quarterly* 57 (4) 247-262.

Yewchuk, C. (1983). Learning disabled/gifted children: Characteristic features. *The Mental and Retardation and Learning Disability, 11*, 128-133.