Twice-Exceptional Learners’ Perspectives on Effective Learning Strategies

Colleen Willard-Holt¹, Jessica Weber¹, Kristen L. Morrison¹, and Julia Horgan¹

Abstract
This mixed-methods study investigates the perspectives of twice-exceptional students on learning strategies that have been recommended for them in the literature. Have the strategies recommended in the literature been implemented? Do students perceive the strategies to be beneficial in helping them learn? Participants represented a broad range of coexisting exceptionalities and ranged in age from 10 to 23 years. While mainly qualitative, this study was informed by a survey adapted from the Possibilities for Learning survey. Qualitative in-depth interviews provided rich descriptions of which learning strategies were facilitators and barriers. Findings indicated that participants perceived that their overall school experiences failed to assist them in learning to their potential, although they were able to use their strengths to circumvent their weaknesses. Implications for teachers included allowing twice-exceptional learners more ownership over their learning and more choice and flexibility in topic, method of learning, assessment, pace, and implementation of group collaboration.

Keywords
twice-exceptional learner, learning strategies, school experiences, qualitative, survey

In recent years, a relatively small but steady stream of research has been conducted in the area of gifted students with coexisting exceptionalities, also known as twice-exceptional learners. These students represent one of the most underserved and difficult to identify populations evident in schools because of a masking effect by one or both of these exceptionalities (Assouline, Foley Nicpon, & Whiteman, 2010; Foley Nicpon, Allmon, Sieck, & Stinson, 2011; Krochak & Ryan, 2007; Nielsen, 2002; Stein, Hetzel, & Beck, 2011; Yewchuk & Lupart, 2002). Evidence suggests that approaches that highlight and encourage these students’ abilities while supporting their coexisting exceptionalities are perhaps the best for meeting all their educational needs (Assouline & Whiteman, 2011; Baum, Cooper, & Neu, 2001; Baum, Rizza, & Renzulli, 2006; Franklin-Rohr, 2006; Schultz, 2012; Swanson, Van Tassel-Baska, Feng, & Chandler, 2007; Yssel, Prater, & Smith, 2010). Although overall programming recommendations have been suggested in the findings of these studies (Foley Nicpon et al., 2011; Nielsen, 2002; Olenchak, 1995; Reis & McCoach, 2002), very few studies indicate specific learning strategies found to be effective with twice-exceptional learners. Even fewer studies (e.g., Reis, Neu, & McGuire, 1997; Vespi & Yewchuk, 1992; Whitmore & Maker, 1985) have included the insights of the students themselves, favoring the observations of parents, guidance counselors, and teachers when making such recommendations (e.g., Schultz, 2012).

Work in this field began in the 1980s. Since that time, there have been significant changes in legislation and policy. While U.S. legislation and the inclusion of twice-exceptional students under Individuals with Disabilities Improvement Education Act (IDEA; 2004) are quite well-known, we will briefly provide some highlights of Ontario special education law, as this study was centered in Ontario. Bill 82 (Education Amendment Act, 1980) required all school boards to provide special education services, including programming for gifted learners. Each school board was to (and still does) determine its own identification procedures and programming options for gifted students, resulting in little consistency across the province. Twenty-five years later, education of gifted students is not given a great deal of emphasis, and that of twice-exceptional students is given even less. The Ministry document Education for All (Ontario Ministry of Education, 2005), designed to improve instruction in literacy and numeracy for elementary students with special education needs, mentions the term gifted three times, once in a single phrase about curriculum compacting and twice in the references. Special Education in Ontario Schools (Ontario Ministry of Education, 2008), a widely used text for professional development of teachers, devotes a paragraph to “twice exceptional” and is the sole resource located that uses

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the term. Twice-exceptional learners are included under the
category of “multiple disabilities.” The Special Education Companion (Ontario Ministry of Education, 2001) men-
tioned gifted students with learning and behavioral disabili-
ties but considered the exceptionalities in isolation from each
other, as Yewchuk and Lupart (2002) noted is common in the
field. Lack of an integrated approach presents one barrier
against fulfilling the potential of twice-exceptional learners;
other barriers exist.

Barriers to Fulfilling Potential

Another of the barriers encountered in the study of twice-
exceptional learners is the process for, and complications of,
identification. Currently, there exists no standard route for
identification, particularly in consideration of wide variances
in coexisting exceptionalities. Many studies have illustrated
the issue of “masking” as a main barrier to identification
(e.g., Foley Nicpon et al., 2011; Krochak & Ryan, 2007;
Whitmore, 1987; Yewchuk & Lupart, 2002). As research
suggests, the true academic potential of these learners may
be overshadowed by their disabilities, or on the other hand,
the students’ limitations may not be recognized as a conse-
quence of their high achievement. If students are marching
along with the pace of their peers, they may be overlooked as
having either gifts or disabilities (Foley Nicpon et al., 2011).
As one of Reis et al.’s (1997) participants described, “she
often felt as if she were two different people in the same
body: one who was competent and bright who was inside,
and another who blocked the smart person inside from com-
municating” (p. 472).

Teachers may be unaware of effective strategies for twice-
exceptional students or might even deny their existence out-
right (Foley Nicpon et al., 2011). Few would doubt the
coexistence of giftedness with some disabilities (e.g., blind-
ess and deafness as in the case of Helen Keller), yet they
remain skeptical about giftedness coexisting with learning
disabilities or attention deficit hyperactivity disorder
(ADHD; Schultz, 2012). As Schultz (2012) stated, teacher
professional development is needed, including “tangible,
real-life examples of variability in development” (p. 127) to
bring about change in meeting the needs of this group.
Teachers and twice-exceptional students alike would benefit
from research into effective learning strategies.

Suggested Strategies

A number of researchers present recommended teaching and
learning strategies for twice-exceptional learners. Assouline
and Whiteman (2011) proposed that academic acceleration
may be considered, but programming must also address
behavioral/social issues. Schultz (2012) highlighted the
importance of taking a student-centered approach that pro-
motes meeting all the students’ needs.

Classroom strategies should be geared toward “develop-
ing strengths; providing classroom organization that is flex-
ible and collaborative to maximize goal-setting, self-direction,
group discussion, self-reflection, problem solving, and self-
evaluation; and providing curriculum and instruction that is
inquiry-based with a thinking focus” (Weinfeld, Barnes-
Robinson, Jeweler, & Shevitz, 2002, p. 228). There should
be a balance between nurturing students’ strengths and com-
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Participants’ Voices

Although first-person accounts of twice-exceptional students
are found in the mass media (e.g., Collins, 2012; Fleischmann
& Fleischmann, 2012), only a few empirical studies have
included the students’ perspectives. An early phenomeno-
logical study by Vespi and Yewchuk (1992) focused on social
and emotional characteristics. Another phenomenological
case study (Willard-Holt, 1998) emphasized identification
issues related to diverse manifestations of giftedness in chil-
dren without oral expression abilities. Foley Nicpon et al. criticized the field for the paucity of
empirical evidence; this study seeks to take a small step in
that direction by investigating students’ opinions of the
effectiveness of these strategies. Twice-exceptional students’
voices have not been often represented in the literature.

finally, a qualitative case study by reis et al. (1997)
investigated “participants’ perceptions and experiences
which are in turn related to the individual’s external behav-
ior, in this instance, overcoming the obstacle of the learning
disability” (p. 465). the participants comprised 12 college or
university students with learning disabilities who were also
identified as having high IQ, most of whom had not been
identified as gifted or included in gifted programs in elementary or secondary schools. Methods consisted of interviews, written responses to open-ended questions, and analysis of testing data and school records. The two core categories emerging from the data were negative experiences in school and the integration of personal traits, and “environmental and learned strategies necessary to succeed” (p. 465). All of Reis et al.’s participants related negative school experiences that affected their self-concept, motivation, and academic success. Negative school experiences included repeated harsh interactions with teachers, late identification of their learning disabilities, and placement in self-contained special education settings. Reis et al. stressed the importance of positive intervening factors, such as identification of talent and abilities in outside-of-school experiences, parental support, personal qualities and strengths, compensation strategies, learning strategies, executive functions, and self-advocacy. It is important to note that Reis et al. defined learning strategies as including but not limited to “(1) methods of learning to study, (2) note taking, and (3) identifying key points” (p. 472). Reis et al. (1997) concluded that

Table 1. Learning Strategies for Twice-Exceptional Students.

<table>
<thead>
<tr>
<th>Strategies to enhance giftedness</th>
<th>Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use a variety of multiple intelligences and learning styles</td>
<td>Nielsen (2002)</td>
</tr>
<tr>
<td>Emphasize critical and creative thinking</td>
<td>Hua (2002); Nielsen (2002)</td>
</tr>
<tr>
<td>Provide in-depth explorations within interest areas</td>
<td></td>
</tr>
<tr>
<td>Arrange mentorships</td>
<td></td>
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<tr>
<td>Use interdisciplinary themes</td>
<td></td>
</tr>
<tr>
<td>Pose real-world problem-based learning experiences</td>
<td></td>
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<tr>
<td>Modify assignments to showcase gifts</td>
<td></td>
</tr>
<tr>
<td>Allow students to self-select projects</td>
<td></td>
</tr>
<tr>
<td>Provide for differential pacing in areas of strength and challenge</td>
<td>Willard-Holt (1999)</td>
</tr>
<tr>
<td>Differentiate assessment</td>
<td>Baum et al. (2001)</td>
</tr>
<tr>
<td>Provide open-ended challenges</td>
<td></td>
</tr>
<tr>
<td>Offer options to use strengths and preferred learning styles</td>
<td></td>
</tr>
<tr>
<td>Encourage students to use the methods of practicing professionals</td>
<td></td>
</tr>
<tr>
<td>Use metacognitive strategies</td>
<td>Hua and Shore (2008)</td>
</tr>
<tr>
<td>Have students set goals and make timelines</td>
<td>Hua (2002)</td>
</tr>
<tr>
<td>Use visual imagery, rhythm, and music</td>
<td>Silverman (1989)</td>
</tr>
<tr>
<td>Allow different pathways for learning</td>
<td>VanTassel-Baska and Stambaugh (2006)</td>
</tr>
<tr>
<td>Provide choice, interest, and creative product options</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Compensation strategies</th>
<th>Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allow extra time for tests and assignments</td>
<td>Nielsen (2002)</td>
</tr>
<tr>
<td>Use graphic organizers</td>
<td></td>
</tr>
<tr>
<td>Use separate spaces for tests</td>
<td></td>
</tr>
<tr>
<td>Help students develop self-advocacy</td>
<td></td>
</tr>
<tr>
<td>Provide opportunities for personal discussions</td>
<td></td>
</tr>
<tr>
<td>Teach stress management techniques</td>
<td></td>
</tr>
<tr>
<td>Use multiple modalities for instruction</td>
<td></td>
</tr>
<tr>
<td>Use differentiated strategies for acquiring information through other modalities than reading</td>
<td>Baum et al. (1991)</td>
</tr>
<tr>
<td>Develop techniques for organization and memory</td>
<td></td>
</tr>
<tr>
<td>Use technology to aid in expressive language</td>
<td></td>
</tr>
<tr>
<td>Use adaptive technology and cueing</td>
<td>Assouline and Whiteman (2011)</td>
</tr>
<tr>
<td>Develop study skills, such as decoding, note taking, and organization</td>
<td>Jeweler, Barnes-Robinson, Shevitz, and Weinfield (2008)</td>
</tr>
<tr>
<td>Provide multisensory experiences</td>
<td></td>
</tr>
<tr>
<td>Provide clear expectations</td>
<td>Pereles et al. (2009)</td>
</tr>
<tr>
<td>Modify or reduce the number of activities required to meet a standard</td>
<td>VanTassel-Baska and Stambaugh (2006)</td>
</tr>
<tr>
<td>Give concrete examples of abstract concepts</td>
<td>Whitmore and Maker (1985); Yssel et al. (2010)</td>
</tr>
<tr>
<td>Give students the opportunity to meet and work with other twice-exceptional students</td>
<td>Nielsen (2002); Yssel et al. (2010)</td>
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</table>
students to realize their potential, since what is really needed is the acquisition of compensation strategies. (p. 477)

The current study was inspired by Reis et al. (1997) in that perspectives of twice-exceptional students on their learning were examined through qualitative methods. The differences between our study and that of Reis et al. include our population (larger variety of coexisting exceptionalities and broader age range), our use of a survey to inform the qualitative data, our more inclusive definition of learning strategies to include any method used to construct understanding. Our research questions were

**Research Question 1:** What learning strategies have twice-exceptional students used and found most beneficial?

**Research Question 1a:** Do the findings from previous studies hold true for this group of participants with greater variation in age and types of coexisting exceptionalities?

**Research Question 1b:** Is an adaptation of a survey previously used with gifted students useful for twice-exceptional students?

**Research Question 2:** Have school experiences of twice-exceptional students improved since the Reis et al. study of 1997?

With the progress made in legislation and policy in Canada and the United States, one would expect that the needs of twice-exceptional learners would be better met. This study provides one beginning step toward increasing the empirical knowledge base for twice-exceptional learners, as urged by Foley Nicpon et al. (2011).

**Method**

This mixed-methods study used a sequential exploratory design (McMillan, 2012) in which a survey informed qualitative interviews. A phenomenological conceptual framework provided the lens to access the lived experiences of the participants (Van Manen, 1997).

**Participants**

Criteria for participating consisted of the following: enrollment in Grades 5 to 12 or at the college/university level (both male and female); identified as gifted via the procedures in place at their schools, as well as identified as having one or more of a variety of disabilities (sensory, neurological, physical, autism spectrum, emotional, behavioral, and/or specific learning disability). Procedures used to identify students for gifted programming varied somewhat but generally included teacher nomination and scores at or above the 98th percentile on achievement and ability tests (e.g., full scale IQ of 130 on Wechsler Intelligence Scale for Children–IV [WISC-IV]). Diagnosis of the coexisting exceptionalities followed accepted protocols using *Diagnostic and Statistical Manual of Mental Disorders, fourth edition (DSM-IV)* and/or medical procedures. Identification of specific learning disabilities required a comprehensive assessment by a registered psychologist and was based on criteria from *DSM-IV* and the Learning Disabilities Association of Ontario. The report must indicate “a significant delay in one or more basic academic skills (e.g., reading, writing, mathematics); adequately developed thinking and reasoning abilities; and information processing problems important for learning” (Nusca, n.d., p. 1).

To identify participants, we used a purposeful sampling strategy using “maximum variation” (Lincoln & Guba, 1985, p. 102) of age within the target span and type of coexisting exceptionalities. Participants were recruited via social media, websites devoted to giftedness and to specific disabilities, advocacy organizations, and school district gifted coordinators and teachers. In most cases, parents contacted the primary researcher by phone or e-mail. The first author corresponded with the participant or his/her parent to assure that the criteria for inclusion were satisfied.

Most participants resided in or near a medium-sized city in southeastern Ontario. Two participants from the United States (one in North Carolina and one in Georgia) had previously been in contact with the first author regarding their challenges as twice-exceptional students; they learned about the study and volunteered to participate. Given that neither school district policies and regulations nor governance of gifted programming was the focus of the study, we reasoned that students’ reactions to learning strategies should not be affected by location and allowed them to participate. Sixteen participants of western European descent responded to the initial call for volunteers and began the online survey; 14 (87.5%) of these students completed the online survey, 12 consented to be interviewed, and 11 of these interviews were completed. Participants’ ages ranged from 10 to 23 with a mean of 16.2 and a median of 14; 80% of the participants were male (see Table 2 for more information).

**Instruments**

Two methods of data gathering were used: a 114-item online Possibilities for Learning survey (adapted with permission from Kanevsky, 2011) and a 30- to 60-minute interview. Kanevsky employed several methods to enhance the content validity of the original measure: deriving the items from Maker’s differentiation strategies (Maker, 1982; Maker & Nielson, 1995; Maker & Schiever, 2010); generating an item pool later examined for clarity and adherence to differentiation principles by experienced educators, graduate students, and gifted students; and conducting multiple rounds of pilot testing. Kanevsky’s analysis resulted in nine clusters of items: pace, collaborative learning, choice, curriculum content, evaluation, open-ended activities, expert knowledge,
In addition to demographic information, the adapted survey consisted of a series of learning strategies. Adaptation of the survey consisted of reordering topically and rephrasing the items from the format of “I like talking with my teacher about my favorite subject” to “Talking with my teacher about my favorite subject.” The response regime was changed from a Likert-type scale to a two-pronged system of indicating very, somewhat, and not beneficial by the participant. During the interviews, we orally presented these case studies to the participants who were encouraged to elaborate on them, respond to them, or correct them. We probed responses that seemed internally contradictory or dissimilar to responses of the other participants.

### Analysis

We analyzed survey data for frequencies and patterns of responses. We analyzed interview data using analytic methods to identify common themes and patterns in the responses. The analysis involved coding responses into categories based on the strategies used by the participants. The strategies included the use of compensatory strategies, executive function, and learning strategies. The data was analyzed to identify the most and least beneficial teaching strategies they had experienced. The strategies were categorized based on their perceived usefulness and effectiveness in supporting twice-exceptional students.

### Procedures

Following approval from the university’s research ethics board, the first author sent the participants the link to the online survey, which contained the participant consent form. We e-mailed the parent consent form and participants returned it in person at the interview or scanned and e-mailed it to the first author.

At the completion of the online survey, participants were asked if they would consent to an interview. Those who answered affirmatively were asked for their contact information, whereupon the interviews were arranged. Nine occurred in person, one via Skype, and one via telephone. The interviews lasted an average of 39.6 minutes, ranging from 28.6 minutes to 1 hour. In several cases, we sent follow-up questions for clarification via email. In all but one case we recorded the interviews; in that case, we took careful notes and paraphrase here, including quotes only when notes were written verbatim. Recordings were selectively transcribed; additional information about selection of interview excerpts for transcription is found in the analysis section.

For each participant, we prepared a case study that summarized the strategies considered very beneficial and not beneficial by the participant. During the interviews, we orally presented these case studies to the participants who were encouraged to elaborate on them, respond to them, or correct them. We probed responses that seemed internally contradictory or dissimilar to responses of the other participants.
induction (Goetz & LeCompte, 1984), open coding (Strauss, 1987), and constant comparison methods (Glaser & Strauss, 1967). Responses to each interview item were sorted and compared across participants.

At least two researchers listened to all the interview recordings and through analytic induction–derived tentative categories. Researchers then met and compared their tentative categories; where categories were common to at least three researchers, we determined to selectively transcribe relevant excerpts of interviews. Sections of interviews selected for transcription comprised elaborated descriptions of strategies that had been employed and their effectiveness, and responses that detailed participants’ perceptions about how their school experiences had enabled them to learn or inhibited them from learning to their potential.

**Trustworthiness**

Trustworthiness was supported in this study by triangulating data from two methods (survey and interview), multiple participants, and multiple researchers; and performing a member check. We used a maximum variation strategy to determine the subset of participants for the member check. According to Lincoln and Guba (1985), “knowledgeable individuals from each of several interested source groups” are selected to perform a member check (p. 315). From our single source group, two individuals were chosen for maximum variation (Lincoln & Guba, 1985, p. 102) in age, gender, exceptionality, and availability during the time period during which the member check was conducted. The participants read and commented on a draft of the findings. Neither suggested corrections, and both supported the validity of the findings, as the male participant summarized,

The paper rings true to me—it’s interesting to see what other people somewhat like me have to say in response to the questions that I was asked, and it’s equally interesting to compare what they have experienced versus what I have experienced. (Member check, January 3, 2013)

In addition, a reliability check (Lincoln & Guba, 1985) was conducted by a qualitative researcher who was unfamiliar with the data. This researcher coded 12 excerpts from the transcripts, and 10 of her codes (83%) were initially in agreement with those of the authors. On further discussion, we agreed that one of these excerpts could have been dual coded, resulting in a final agreement level of 92%.

**Findings**

**Quantitative Findings**

The main purpose of the survey was to inform the interview process. Psychometric properties of the adapted instrument have yet to be determined. The small sample size coupled with the large number of items obviates conducting a factor analysis. Nor would calculating an overall internal consistency be appropriate, because several distinct factors are likely to be involved. Given that items were reworded, the response regime changed, and several items changed, the Cronbach’s alpha coefficients found by Kanevsky (2011) would not apply.

Thus, we will provide descriptive statistics only, and these findings must be considered very preliminary. There were 18 strategies deemed “very beneficial” by two thirds or more of the participants (see Table 3). This is slightly more conservative than the 60% cut off used by Kanevsky (2011). We suggest clusters of items that logically cohere. Fourteen of these strategies may be clustered under two broad headings: having control over one’s own learning and complex ideas and ways of thinking about them. While the items in “control over one’s learning” were mostly distributed among Kanevsky’s categories of choice, pace, and evaluation, three of the five items (asterisked) in “complex ideas and ways of thinking about them” matched Kanevsky’s manipulating ideas category.

There were 16 items that 50% or more of participants indicated they had not used but were still thought by one-third or more to be potentially very beneficial (see Table 4). Given that, contrary to the directions, several participants did not in any way indicate the potential efficacy of those strategies that they had not used, the percentages in the table may be considered low estimates.

Again, most (13) of the items cluster around two main ideas: choice/flexibility and learning from experts. Two items from each cluster (asterisked) match with Kanevsky’s (2011) similarly titled category. There is a logical overlap between the “control over learning” cluster in Table 3 and “choice/flexibility” one in Table 4. The fact that the “complex ideas” cluster from Table 3 does not appear in Table 4 indicates that these strategies have indeed been included in the participants’ school experiences.

**Qualitative Findings**

In preparation for each interview, the researchers analyzed the participant’s survey. The responses were categorized by how beneficial the strategies were perceived to be, then topically grouped together into a case study and presented for verification or clarification to each participant in the interview. As an example, we present here part of the case study for Adam. This is representative of how the case studies were presented to all participants and shows how we grouped the strategies from the survey and what types of clarifying questions were inserted. All statements below were made by the interviewer, with pauses between sentences for Adam’s confirmation or clarification:

When you are doing an assignment, you like to have clear expectations, and know how much time you have for it, and how you are going to be marked for it. You like to have the ability to explore a topic after the class moves onto something else, and to
look at topics of your own interest at your own pace. You mentioned that you learn well from books, but do you do research on the internet at all? You like to learn with numbers; you like to learn about facts; you like to learn from books and at your own speed. You like to have choices in how you learn and how to show your learning. You have benefited from learning study skills like note-taking and organization. You have used your strengths to get around your weaknesses; can you give me an example of that? . . . This one is interesting, because you said you like to find creative solutions to real-world problems, but you say you don’t like creative projects, so what is going on with that? (Individual interview, November 23, 2012)

Adam’s case study went on in this vein for another 5 minutes; the complete case study discussion lasted for 11 minutes, with question probes and responses interspersed. Following are the main categories to emerge from the case studies as well as from the other interview questions.

Table 3. Strategies Marked “Very Beneficial,” by Percentage of Participants.

<table>
<thead>
<tr>
<th>Item no.</th>
<th>Item</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>90</td>
<td>Knowing how you will be marked before you begin an assignment</td>
<td>92.9</td>
</tr>
<tr>
<td>21</td>
<td>Knowing how much time you have on an assignment</td>
<td>86.7</td>
</tr>
<tr>
<td>9</td>
<td>Pursuing topics of interest to you at your own pace</td>
<td>80.0</td>
</tr>
<tr>
<td>12</td>
<td>Having time to think and process information</td>
<td>73.3</td>
</tr>
<tr>
<td>30</td>
<td>Using the Internet to research your favorite topic</td>
<td>73.3</td>
</tr>
<tr>
<td>94</td>
<td>Discussing your mark with your teacher</td>
<td>71.4</td>
</tr>
<tr>
<td>85</td>
<td>Having choice in the way you learn</td>
<td>69.2</td>
</tr>
<tr>
<td>11</td>
<td>Conferencing with the teacher individually</td>
<td>66.7</td>
</tr>
<tr>
<td>13</td>
<td>Asking for extra help</td>
<td>66.7</td>
</tr>
<tr>
<td>*46</td>
<td>Understanding the ways that ideas are connected to each other</td>
<td>85.7</td>
</tr>
<tr>
<td>*47</td>
<td>Understanding how and why things happen</td>
<td>85.7</td>
</tr>
<tr>
<td>*45</td>
<td>Understanding complicated ideas and problems</td>
<td>78.6</td>
</tr>
<tr>
<td>60</td>
<td>Taking apart (analyzing) big problems or ideas</td>
<td>78.6</td>
</tr>
<tr>
<td>82</td>
<td>Getting concrete examples to explain abstract ideas</td>
<td>71.4</td>
</tr>
<tr>
<td>Other</td>
<td>Learning with words (reading, writing, listening, speaking)</td>
<td>78.6</td>
</tr>
<tr>
<td>80</td>
<td>Explaining your thinking to other students</td>
<td>71.4</td>
</tr>
<tr>
<td>97</td>
<td>Even when you get a good mark, hearing about ways it could be improved</td>
<td>71.4</td>
</tr>
<tr>
<td>26</td>
<td>Listening to experts talk</td>
<td>66.7</td>
</tr>
</tbody>
</table>

Table 4. Strategies Not Used, but Thought to Be Very Beneficial.

<table>
<thead>
<tr>
<th>Item no.</th>
<th>Item</th>
<th>Percentage not used</th>
<th>Percentage very beneficial</th>
</tr>
</thead>
<tbody>
<tr>
<td>Choice/flexibility</td>
<td>Having a flexible schedule at school that changes with your interests</td>
<td>81.3</td>
<td>37.5</td>
</tr>
<tr>
<td>18</td>
<td>Having the freedom to move around the classroom or school while learning</td>
<td>62.5</td>
<td>31.3</td>
</tr>
<tr>
<td>22</td>
<td>Negotiating deadlines</td>
<td>60.0</td>
<td>60.0</td>
</tr>
<tr>
<td>23</td>
<td>Freedom to work on an assignment until you decide you are finished</td>
<td>80.0</td>
<td>40.0</td>
</tr>
<tr>
<td>25</td>
<td>Freedom to explore a topic even after the class has moved on</td>
<td>66.7</td>
<td>40.0</td>
</tr>
<tr>
<td>*58</td>
<td>Learning things that are different from what anyone else in your class is learning</td>
<td>57.1</td>
<td>42.9</td>
</tr>
<tr>
<td>89</td>
<td>Choosing who will hear or see what you have learned</td>
<td>76.9</td>
<td>38.5</td>
</tr>
<tr>
<td>*96</td>
<td>Deciding how your work will be marked</td>
<td>64.3</td>
<td>35.7</td>
</tr>
</tbody>
</table>

Learning from experts

| 27       | Talking with experts                            | 60.0 | 53.3 |
| 28       | Having a mentor                                 | 60.0 | 33.3 |
| 66       | Learning by doing research with help from an expert who is not your teacher | 85.7 | 35.7 |
| *87      | Hearing an expert’s thoughts about your work    | 71.4 | 35.7 |
| *95      | Having your work marked in the same way an expert’s would be judged | 78.6 | 35.7 |

Other

| 19       | Using learning centers                         | 62.5 | 31.3 |
| 105      | Being taught metacognitive strategies (how to monitor your own thinking) | 64.3 | 28.6 |
| 113      | Spending time with peers who are twice exceptional | 50.0 | 35.7 |
Identification as Twice Exceptional. In the case of three of the participants, both exceptionalities were diagnosed at the same time, during the course of a psychological evaluation. In four other cases, the giftedness was identified first. Gavin’s hearing impairment and Gary’s neurological/physical exceptionalities were evident before the age of 1 year, and the intellectual abilities were identified later. Both Gaston and Amanda struggled to have their learning disabilities and attention deficit disorder [ADD]/ADHD identified and recognized as “real things.” In fact, neither of these young women had a diagnosis until they entered university. Gaston said:

[n]o teacher has ever really commented, “Oh she’s not paying attention” because I understood the concepts basically without them really teaching them to me. . . . My parents don’t believe in ADD like at all so I felt kind of that adults in general, you know, didn’t really think it was a thing, they thought I was just not trying hard enough. (Individual interview, November 14, 2012)

Amanda was tested three times for a learning disability by the end of high school, but the results were inconclusive, which she attributed to the coexisting gifted diagnosis: “Even though it showed low levels of concentration, because I’m good with reading comprehension, I was still able to pass all their tests with ease, and then they couldn’t draw any conclusions from that.” (Individual interview, December 17, 2012).

She said of her ADHD that she would sometimes have to “tell people ‘yes, it’s a real thing, and yes, medication helps.’”

Joel explained that his disability got in the way of being in enrichment classes:

I don’t like how it’s . . . they test you by marks across the board for putting you in enrichment. You know, because I don’t do very well in visual arts, as you might expect, and that really skews my average so they don’t let me in. (Individual interview, December 18, 2012)

Edwin also believes his obsessive–compulsive disorder (OCD) impedes the expression of his abilities:

OCD really affects me in my everyday life but it also is just a burden when I’m trying to exceed my expectations. . . . Having OCD just really can ruin my need and love to learn and study and be studious, but I feel like that’s totally stunting how much I can really produce and become successful as a person. (Individual interview, November 22, 2012)

Gary has continuing difficulties in having any of his exceptionalities addressed. When he transferred from a private school to a public one in Grade 6, he was not allowed into the gifted program because there was a rule that students had to be in the district for 1 year first. He is still not considered to be twice exceptional by his school because of a technicality.

From the experiences of the participants, it appears that the difficulties that were described in the literature by Whitmore and Maker as early as 1985 are still to some extent present, though it is encouraging that the gifted aspect was identified earlier than the second exceptionality for several participants. Of course the more crucial question is how well schools have addressed twice-exceptional students’ learning.

Learning to their potential. While most participants felt that the gifted programming they had experienced, if any, had often been their most beneficial learning environment, 10 of the participants were either ambivalent or flatly stated that the majority of their school experiences had not helped them to learn to their potential. These comments are representative:

The lack of being able to choose in which direction I want to go has sort of confined my learning endeavors to my own time, which is kind of irritating because there’s a lot that I want to learn and being forced to learn these tedious things that I don’t particularly enjoy kind of “learns me out,” and removes a bit of my will to pursue something just for the sake of pursuing it. (Bob, individual interview, November 14, 2012)

I don’t think my school provided any barriers that I wasn’t able to overcome myself. I think they did as much as I needed them to do, and that was it, nothing more, nothing less. (Gavin, individual interview, November 23, 2012)

These little enrichment experiences definitely have been helping me learn to my full potential . . . but I haven’t actually gotten near what I can learn. (Joel, individual interview, December 18, 2012, his emphasis)

Giftedness I don’t think was really addressed past grade 4. I was identified and that was kind of the end of it because I was in a mainstream class. There was no way for me to really push past my peers. (Travis, individual interview, December 12, 2012)

The lone outlier in the responses to this question was Edwin, who distinguished between how the classes and the social milieu were helping him learn to his potential:

Classes—I’ve learned a lot, but I don’t think it’s given me much experience. I think I get a lot of experience in how to handle situations and how I can be a productive worker from social, well I call it experiments. . . . You find out what’s wrong and what’s right and how to speak to people and how you can bring your idea across without hurting people. (Individual interview, November 22, 2012)

The participants did not seem angry about the lost opportunities for learning; rather, they were resigned or somewhat dismayed. They did have some strategies to keep their coexisting exceptionalities from further interfering with their learning.

Using strengths to circumvent weaknesses. One of the common recommendations found in the literature for
twice-exceptional learners is to teach them to use their strengths to circumvent their weaknesses. Participants were able to give a number of examples of how they had accomplished this:

I can just avoid that problem [inattention] and there will be no repercussions, I can just look it all up myself and I will do well. (Bob, individual interview, November, 14, 2012)

In English class doing poetry, I could not think of any of the general sets of analogies I could really use, so I went back to my interests that I know lots about and made a poem that made lots of analogies to computer programming. (Adam, individual interview, November 23, 2012)

I’m very keen on asking for help and asking the people around me to give me a hand, and I think the ability to work well with other people has been the biggest strength I have that has helped me get around my difficulties. (Gavin, individual interview, November 23, 2012)

For me reading and writing is a big strength, and working memory is a big challenge, so if I need to participate in a discussion or a presentation or something, I’ve got to sit and write it out first or make notes for myself rather than try to think off [the top of] my head. (Amanda, individual interview, December 17, 2012)

Most of these varied examples came readily to the participants’ minds, suggesting that it was a typical mode of operation. In Amanda’s case, she explicitly stated that she had come on this strategy on her own; it was unclear in most other cases if this strategy had been suggested to the participants or if they had devised the strategy for themselves. This would be an avenue for future research. Participants balanced their coexisting exceptionalities through strategies designed to accommodate for their weaknesses.

Compensatory strategies/accommodations. While compensatory strategies and accommodations are somewhat different, the participants did not distinguish the two. Common compensation strategies mentioned by the participants (and also found in the literature) included using a computer to word process documents or other “electronic strategies to decrease physical output [like] dictation or typing” (Gary, individual interview, December, 9, 2012), having extra time for assignments or tests; shortening or skipping some assignments based on importance; going to a separate space for tests or just for a break; learning study skills; and developing the ability to organize oneself and manage one’s time.

In terms of more specific accommodations for exceptionalities, Amanda mentioned using an application for her iPhone (iStudiez Pro) and materials found on a course management system to accommodate her learning disability, Gary indicated large print and more white space on a page, and Gavin discussed his FM system, captioning, and

preferential seating to address his hearing impairment. However, teachers’ responses to exceptionalities sometimes needed fine-tuning:

I have, in the past, run across teachers that haven’t been able to put together what my weaknesses are, and so when I ask for help, they kind of give me that generic response as opposed to something that is specific for me. (Gavin, individual interview, November 23, 2012)

Other participants described some of their specific compensatory techniques:

I need to be told this, written this, and then instructed how to do this, and then I must do it myself in order to remember it. I almost need all four kinds of components in order to get this in my brain. (Pablo, individual interview, November 21, 2012)

Probably studying and reading while listening to music has been one of the biggest things for me. Umm, to be able to explain it to someone has also been a huge help in many situations. (Travis, individual interview, December 12, 2012)

All the participants seemed to well-understand the way in which they best learned, and most were quite willing to advocate for themselves to maximize their learning. Several participants were ambivalent about using accommodations but realized the importance to their future learning:

I feel bad I have to learn [study skills] now; I should have already learned them. But I will have to at some point to cope with more intensive learning. (Gary, individual interview, December 9, 2012)

My conscience kind of argues against me, but apparently I’m supposed to [use accommodations] and it’s good that I do. . . . I don’t like the idea that I am sort of running away from this issue that I have, which is sitting still and absorbing information that I might not necessarily be interested in, because I guess I’m going to have to do that at one point or another. (Bob, individual interview, November 14, 2012)

Some believe that accommodations are only reluctantly provided. Gary believes the district provides selective accommodations, just the “bare minimum on their part” (Individual interview, December 9, 2012). Travis described an incident with a high school physics teacher, which fortunately was not the norm in his experience:

One teacher was so stubborn when it came to giving any extra help to anyone. . . . When I went through the school’s special ed office to get extra time or a formula sheet or something like that for exams, he fought tooth and nail to make sure that didn’t happen. (Individual interview, December 12, 2012)
Two participants stated that no accommodations were being used; Frank stated that he was “managing pretty well” (Individual interview, November 22, 2012) and Edwin feared going public with his OCD because of the potential stigma. Others avoided accommodations as much as possible:

It was always seen as a bad thing to not be with the class, not be progressing at the same rate so I never wanted to be singled out . . . so to get more time, I didn’t want to do that. (Gaston, individual interview, November 20, 2012)

I guess I’ve always been trying to, I want to say prove to myself, but that’s the thing: that I can do what everyone else is doing. (Gavin, individual interview, November 23, 2012)

I usually felt weak going to a teacher saying I need more time; or I need this resource or that resource . . . . I wanted to go through school being a normal student and doing everything the same way as the other students. (Travis, individual interview, December 12, 2012)

Thus, the participants had experience with quite a wide range of compensatory strategies and accommodations that were employed with varying consistency and appropriateness. Most participants related minimal use of these strategies and preferred to address their exceptionalities through choice and flexibility in how they learned.

Choice/flexibility. In the context of what best helped them to learn, the strongest category to emerge was choice and flexibility. When asked about the major barriers to his learning, Bob summed up the category nicely:

Lack of control over the direction where I go . . . . I really do love learning quite a bit, right? . . . . and it seems a shame that something so interesting as being, all the wrong parts are being focused on I guess . . . . or at least I don’t get to choose what it is because I’m sure being able to choose what it is would be just as beneficial as all these individual little things that are already selected for me to learn about. (Individual interview, November 14, 2012)

Similarly, in answer to the question, “If you could design your perfect school what would it look like?” Adam commented, “I was thinking a bit more in the tech stuff. Umm, overall I think that you would, think that you should get more choice, as long as there are guidelines for each choice . . . . I like having a breakdown of each part of the assignment” (Individual interview, December 17, 2012). Adam agreed with this sentiment, saying, “I do well when it’s ahh, the parameters of the assignment are set and I can do research and learn how I want to learn” (Individual interview, November 23, 2012).

Thus, all the participants agreed that flexibility around how to show learning was desirable, especially if the boundaries are set, as Bob indicated,

I negotiate stuff relentlessly. They’re going to get tired of me eventually I swear . . . . it’s true . . . . I will try, and for good or ill, try to do as much as I can to see what I can get away with within the brackets of what they’ve told me to do . . . . It turns out if you just do everything well enough they don’t really care. (Individual interview, November 14, 2012)

These comments reinforce the suggestion of Baum et al. (2001) to differentiate assessment strategies for twice-exceptional learners. A final element of choice/flexibility related to pace of learning.

Pace. The participants were very aware of their optimal learning rates. Pablo said that he liked “working on an assignment until I decide it’s finished. . . . I really do like doing that, but unfortunately the environment that I work
in, which is school, of course, limits me from that” (Individual interview, November 21, 2012). Bob added his perspective on pacing of work: “The vast majority of the time I want to learn at my own speed which can vary from very quick in something that I’m very interested in, to very slow in something that I’m not” (Individual interview, November 14, 2012). Finally, Travis summarized by saying, “I like the material to be presented in a timely manner. Not rushing through it” (Individual interview, December 12, 2012).

Most participants preferred to set the pace of their own learning, but this was not the case for the two participants with ADD/ADHD. Amanda felt she needed someone to structure her learning, as her lack of organization ability would cause her to lose track of what she was doing. Gaston explained, “I would benefit from more time to process things and stuff like that, but knowing myself I don’t benefit from it. Meaning when I am given more time I don’t use it” (Individual interview, November 20, 2012).

It would seem it would be beneficial to allow these twice-exceptional learners to have control over how to pace their work (including choosing to have it structured for them). This is in keeping with the overall category of choice and flexibility.

**Collaborating on group work.** Participants’ feelings on group work fell mostly in the “sort of beneficial” range. Gary mentioned an example of a jigsaw activity in world history in which the group took “some of the responsibility off me and distribute[d] the responsibility among group members” thereby producing less stress (Individual interview, December 9, 2012). Travis used group work as a study strategy for his college courses:

> If I sit down in small groups and we go over math problems or anything else on a whiteboard, on a big surface, and we explain it to each other, teach each other, that is usually one of the better tactics that I’ve found. (Individual interview, December 12, 2012)

Gavin used peers as a resource, but preferred individual assignments.

> I like the opportunity to use the people around me, but not be forced to work with them, if that makes sense. So if we’re all working on something similar, then I can ask them a question or ask them what they think but again, at the end of the day that work is still my responsibility, not the group’s responsibility. (Individual interview, November 23, 2012)

In contrast to most other participants, both Gary and Edwin preferred to have the teacher select the group members:

> [Teachers] let us choose the groups, and we have that power . . . whereas if you [teachers] found good matches that would be the most beneficial to the project, then that would work much better. (Edwin, individual interview, November 22, 2012)

Adam had another adjustment to suggest for group work.

> I have a different idea of how a group should function than many others. I would think that if it’s a group research, somebody does the research, somebody does the writing and somebody does the visual, instead of everyone doing part of the research and whatnot. (Individual interview, November 23, 2012)

Three participants mentioned that group work was compromised by their other exceptionalities: Amanda mentioned that group work is negatively affected by her difficulties with working memory, Gary by processing speed, and Gavin by hearing. Therefore, while some appreciated the opportunity to collaborate, others found it a barrier or put qualifications on it. As one participant put it in the member check, “With respect to group work, it has the potential to be amazing and the potential to be the worst experience ever. That’s probably why the results are so ambivalent” (Member check, January, 2, 2013).

The qualitative data provided a great deal of insight into the participants’ perspectives on the vagaries of identification, the success of school experiences in helping them to learn to their potential, and some strategies (such as using strengths to circumvent weaknesses and compensatory techniques) often noted in the literature as helpful to twice-exceptional learners. Their strong feelings about choice and flexibility pervaded the interviews, even in the ways that they would apply common strategies such as group work. The participants demonstrated a great deal of self-awareness about the ways in which to optimize their own learning.

**Discussion**

Taken together, the quantitative and qualitative data complement each other while providing different lenses on the efficacy of a number of learning strategies. Regarding the strategies marked “most beneficial” on the survey (see Table 3), researchers in the field of gifted education (e.g., Baum et al., 1991; Foley Nicpon et al., 2011; Nielsen, 2002; Silverman, 1989; VanTassel-Baska & Stambough, 2006; Willard-Holt, 1999) have long advocated the study of complex ideas, interconnections, and higher order thinking skills; it is therefore not surprising that this nexus of strategies was marked on the survey as very beneficial by the participants. The consensus on this cluster of items elicited little comment other than quick affirmatives during the interviews. Similarly, the group of items relating to learning from experts, reminiscent of Type III enrichment in the Renzulli triad model, was generally thought to be beneficial (see Table 4) but was not often used.

Our participants’ views of the efficacy of several other strategies, though not necessarily at variance with the
literature, were more nuanced. The most pervasive cluster of strategies in our study was choice/flexibility/control over one’s learning. Several items representing this cluster on the survey were found both on the list of most beneficial strategies (Table 3) and the beneficial but not used strategies (Table 4). Additionally, this category emerged strongly from the qualitative data. Participants would like to exert more control over what they study, how they learn, how quickly they learn, and how they demonstrate their learning. In short, they would like to be treated as mature learners. Some mentioned that they were allowed more control within the gifted programs they had experienced and regarded gifted programming as most facilitative of learning to their potential. However, this specialized programming had constituted only a minimum of the schooling experiences for only a fraction of the participants, and choice and flexibility were rarely available in the regular classroom. This category aligns with suggestions found in the literature reviews by Foley Nicpon et al. (2011) and Nielsen (2002) and the study of students in AP classes conducted by Schultz (2012), but emerged much more strongly for our participants.

Our participants did not regard collaborative work as a panacea. Rather, they would apply more flexibility in group settings: using group members as resources, parceling out specialized parts of the task, and/or teaching and learning from each other, in addition to more traditional ways of organizing group work. They suggested that the composition of the groups be carefully constructed by the teacher and that their other exceptionalities be taken into consideration. This is in line with Nielsen’s (2002) recommendation to develop students’ collaboration skills but provides empirical support and additional nuances to her suggestion.

The findings regarding learning strategies relate to six of Kanevsky’s (2011) nine clusters of items: choice, pace, evaluation, curriculum content, manipulating ideas, and expert knowledge. However, the categorization of the individual items does not exactly align. While the adapted survey shows promise for use with twice-exceptional students, more research is necessary.

Participants also described ways in which their coexisting exceptionalities hindered them from reaching their potential. One way in which this manifested was in the complexity around the issues of identification of exceptionalities and provision of specialized programming. In some cases, the giftedness was identified late because of the other exceptionality(ies), whereas in others the coexisting exceptionality was not recognized until university. This corresponds with the “masking effect” of multiple exceptionalities that has repeatedly been described in the literature for 25 years (Foley Nicpon et al., 2011; Krockak & Ryan, 2007; Whitmore, 1987; Yewchuk & Lupart, 2002).

Reis et al. (1997) discovered that negative school experiences (including negative teacher interaction, late identification, and placement in self-contained special education classes) were the greatest barriers for the participants. Our findings build on these results by uncovering how school experiences lacked necessary supports in order for participants to learn to their full potential. This was one of the greatest areas of frustration for participants in this study. Accommodations that would allow them to overcome the barriers related to exceptionalities were often either reluctantly provided or not available to them, which was somewhat surprising in light of the overall progress made in accommodating special learning needs. This did not seem to be related to the participant’s particular exceptionality. In several cases (Gaston, Travis, Gavin, and Edwin) participants avoided using accommodations because of a perceived stigma. Only two of the interviewed participants (Bob and Pablo) seemed to benefit regularly from accommodations. On the other hand, nearly all the participants seemed to benefit from compensatory strategies, such as study skills, organization, and time management; technology to assist in communication; and/or separate spaces for tests or destressing. These findings support strategies previously noted in the literature (e.g., Baum et al., 1991; Foley Nicpon et al., 2011; Nielsen, 2002; Reis et al., 1997; Silverman, 1989). Our participants almost universally used their strengths to circumvent their weaknesses. They appeared to have developed these alternative approaches through problem solving and applied them in a variety of contexts but whether these strategies were suggested by teachers or were self-developed is unclear.

The tangled web of causal and intervening factors related to multiple exceptionalities undoubtedly affected the totality of the participants’ learning experiences. Alarmingly, they almost unanimously described their schooling experiences as failing to help them learn to their potential. They disdained the steady diet of bits of predetermined information that they already knew or could easily teach themselves. Given the opportunity, they chose to challenge themselves with more complex and overarching concepts; if not given the opportunity at school, these participants relegated their “real” learning to their after-school hours. When provided with challenge and choice, they soared. Our participants were all successful in school, but what of those twice-exceptional students who do not have similar motivation or home environments that support learning?

Conclusions and Implications

Don’t just assume that everyone learns in the same way. (Adam)

Adam’s admonition (Individual interview, November 23, 2012) rings very true for the participants in this study. The most preferred strategies included choice/flexibility in learning, assessment, and pace; using compensatory strategies and strengths to circumvent weaknesses; and collaborating in specific ways. The strategies indicated as beneficial by both the quantitative and qualitative findings are consistent with those found in the literature; however, we extended the
results to a broader range of participants, both in age range and type of coexisting exceptionalities, than in previous studies.

Another contribution of this study lies in the nuanced application of the strategies described by these twice-exceptional learners. Their learning was unlikely to be optimized using either strategies intended for gifted learners or those for learners with other exceptionalities. As noted by Foley Nicpon et al. (2011) and Nielsen (2002), twice-exceptional students require integrated approaches informed by both gifted and special education, but their learning is more than the sum of the parts. As revealed by the discussion on group work, there are complexities at work that would not be revealed by considering the multiple exceptionalities in isolation. Adjusting learning strategies from multiple perspectives would provide a more personalized approach. In addition, by providing accommodations and teaching compensation strategies more routinely to improve the ability of a wide range of students to show their best work, students will find them less ostracizing and be more inclined to take advantage of them.

An important and disturbing contribution of this study is the finding that, even with all the progress made in gifted education and special education over the past 15 years, twice-exceptional students still believe that schools are failing to help them reach their potential. While Reis et al.’s participants in 1997 all remembered harsh treatment by teachers, only Travis in our study evinced a strong negative experience in school; the others recalled not being challenged or their learning needs not being addressed. Teachers and school administrators had issues with identifying, accepting, and/or recognizing the importance of addressing either or both exceptionalities.

Limitations of this study include the demographic homogeneity of the participants, the small sample, and the limited nature of the interviews. All the participants were volunteers whose families were supportive of both the research and their children. Selective transcribing may have compromised the validity of the findings.

Another limitation is that the survey in its adapted form does not yet have established psychometric properties. However, some overlaps between our findings and those of Kanevsky (2011) suggest that the instrument has some potential for use with twice-exceptional students, given further revisions. Further investigation is warranted using factor analysis or item response theory with larger samples of respondents. This would improve the reliability and validity of the survey. It would be instructive to compare survey responses of expanded numbers of twice-exceptional learners with those of gifted students without coexisting exceptionalities. Extending the age range upward and downward and expanding the demographic base would allow for more robust recommendations. Further study of teachers’ roles in developing and implementing the strategies and accommodations would also augment our findings.

It was quite apparent that these participants were extremely self-aware of strategies that best helped them to learn. They were motivated learners and were not seeking to avoid doing work. Rather, they proclaimed a love of learning and yearned for more control over their academic pursuits. Their insightful potential for unique societal impact were striking, and it is imperative for teachers to work in concert with students, such as these participants to actualize their promise while helping them to enrich the intellectual life of the school as a whole.

Implications for Practice

While teachers are responsible for ensuring mastery of the curriculum mandated by the district, state, or province, we strongly recommend more flexibility in how the expectations are addressed in terms of teaching/learning methods, connectivity of concepts, assessment methods, and pace. One way of allowing more student ownership would be to present to the students the curriculum expectations and the levels at which they are expected to master them and ask the students to suggest learning projects and products in alignment with their interests and learning styles. Teachers of course would serve as the ultimate judges of whether the proposed work would suffice to fulfill the expectations. Similarly, group work needs thoughtful organization in composition, division of labor, and attention to coexisting exceptionalities.

Accommodations should be individualized to the students’ needs and normalized within the classroom setting to reduce the stigma of using them (Leggett et al., 2010). Participants commended the usefulness of compensation strategies, including study skills, use of technology, and development of time management and organization abilities. Finally, efforts must continue to make early identification of exceptionalities available and provide integrated services to enable twice-exceptional students to thrive.
Appendix A

Possibilities for Learning: Twice-Exceptional Version (Adapted and used by permission of Lannie Kanevsky, PhD)

Name: ______________________________ Date: ________________________

Current Level of Schooling _____________

For each learning strategy indicated below, you will answer two questions. First, circle U if it was Used in your schooling, or NU if it was Not Used. Then, circle VB if the strategy was (or would have been) Very Beneficial to your learning, SB if it was Sort of Beneficial, or NB if it was Not Beneficial.

*indicates strategies suggested in the literature for twice-exceptional learners.

<table>
<thead>
<tr>
<th>U</th>
<th>NU</th>
<th>VB</th>
<th>SB</th>
<th>NB</th>
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<tbody>
<tr>
<td>1. Working with one or more others when you get to choose your group.</td>
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<td>2. Working with one or more others when the teacher selects the groups.</td>
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<td>3. Working with one or more others who learn differently from the way you learn.</td>
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<td>4. Learning with one or more others who learn slower than you do.</td>
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<td>5. Learning with one or more others who learn as quickly as you do.</td>
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<td>6. Being taught and practicing skills, such as decoding, note-taking, organization, keyboarding, and/or writing.</td>
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<td>7. Learning about your own strengths and how to use them.</td>
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<td>8. Using your strengths to get around your weaknesses.</td>
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<td>9. Using compensation strategies (such as changing the way you respond in oral discussion, receive information, or do assignments, based on your exceptionality).</td>
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<td>10. Using technology to aid in communication.</td>
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<td>11. Having the teacher give you a signal or cue.</td>
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<td>12. Learning to advocate for your own needs.</td>
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<tr>
<td>13. Spending time with peers who are twice exceptional.</td>
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<td>14. Being viewed as gifted first, with the other exceptionality second.</td>
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Appendix B

Interview Protocol: Perspectives of Twice-Exceptional Learners on Schooling and Instructional Strategies

The purpose of this study is to develop an understanding of the perspectives of twice-exceptional learners on their school experiences, and the educational strategies and supports necessary to best meet their needs.

Questions:

1. When was your giftedness identified? Your other exceptionality?
2. What type of gifted programming have you experienced?
3. Was there any kind of programming for your other exceptionality?
4. Do you think your school experiences have helped you learn to your potential?
5. What strategies have best helped you learn?
6. What strategies have been the major barriers to your learning?
7. Do you feel your disabilities are addressed more than your strengths, or the other way around? How so?
8. Which specific accommodations have most helped you?
9. Could you please elaborate on (specific responses from the questionnaire).
10. Is there anything we haven’t asked that you feel would be important for us to know?

(continued)
Appendix B (continued)

Probes and follow-up questions might include

- Do you feel you have a choice in what and how you learn?
- Are you interested in what you are learning/learned at school?
- What are your specific goals for the future?
- What causes/caused you the most frustration when you were/are at school?

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