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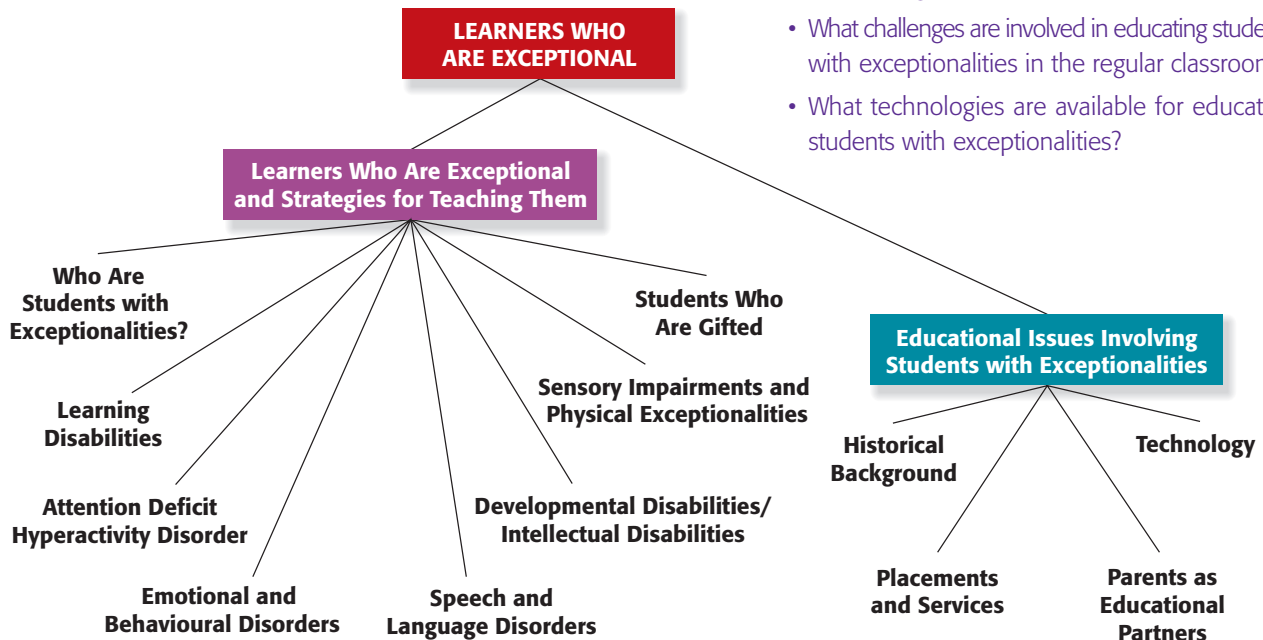
Learners Who Are Exceptional



Preview

For many years, public schools did little to educate students with exceptionalities. However, in the last several decades, legislation has mandated that students with exceptionalities receive a free, appropriate education. And increasingly, students with exceptionalities are being educated in the regular classroom. These are some of the questions we will explore in this chapter:

- What are the challenges of educating students with various exceptionalities and the best strategies for teaching them?
- Should students who are gifted be provided with special educational opportunities?
- What are the legal aspects of working with students who have exceptionalities?
- Should students with exceptionalities be taught mainly in the regular classroom or in a specialized setting?
- What challenges are involved in educating students with exceptionalities in the regular classroom?
- What technologies are available for educating students with exceptionalities?



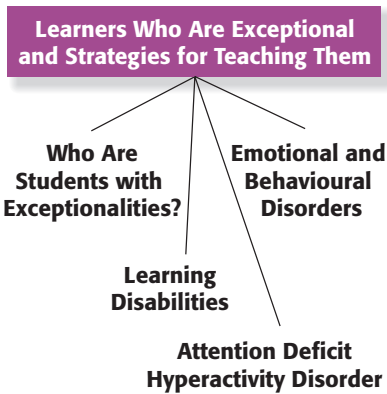
Teaching Stories: Kimberly Maich

Kimberly Maich is a special-education teacher in Newfoundland. Over the years, she has assumed many additional roles beyond special educator including language arts teacher, computer teacher, and vice principal. Here she describes her work with Samuel, a student she met while co-teaching Grade 3.

“Samuel looked like every other boy in the class. In reality, he was profoundly deaf in one ear (unilateral hearing impairment). While a teacher for the hearing impaired monitored his academic progress, Samuel was fully integrated into the classroom setting. We structured his academic program around the accommodations and modifications outlined in his Individual Support Service Plan (ISSP), which for the most part were relatively straightforward and easy to implement. For instance, we ensured that he was seated against the wall with his ‘good ear’ toward the class, we touched his shoulder when we wanted his attention, and we double-checked that he understood verbal directions. Samuel also wore an FM system, or what is commonly referred to as a phonic ear. The system requires the speaker

to wear a small clip microphone that feeds into a receiver headset. The system helped ensure that Samuel was not distracted by other sounds when we were speaking. Samuel removed his headset during whole-class discussions.

“Using the system also provided a unique opportunity to include other students in Samuel’s ISSP. The Walkman-like device quickly became a prized possession. When students made presentations (e.g., sharing narratives, performing a play) we allowed them to pass around the microphone so that Samuel would not miss the presentation. His peers enjoyed trying the microphone and were quite amazed that they could hear each other from afar without any wires or buttons to push. Everyone giggled at my jokes about needing to shut the microphone off when entering the bathroom or staff room. Allowing them to wear the microphone demystified the equipment and helped them gain an understanding of how Samuel ‘heard’ the world around him—it helped them accept Samuel as a valued member of the class.”



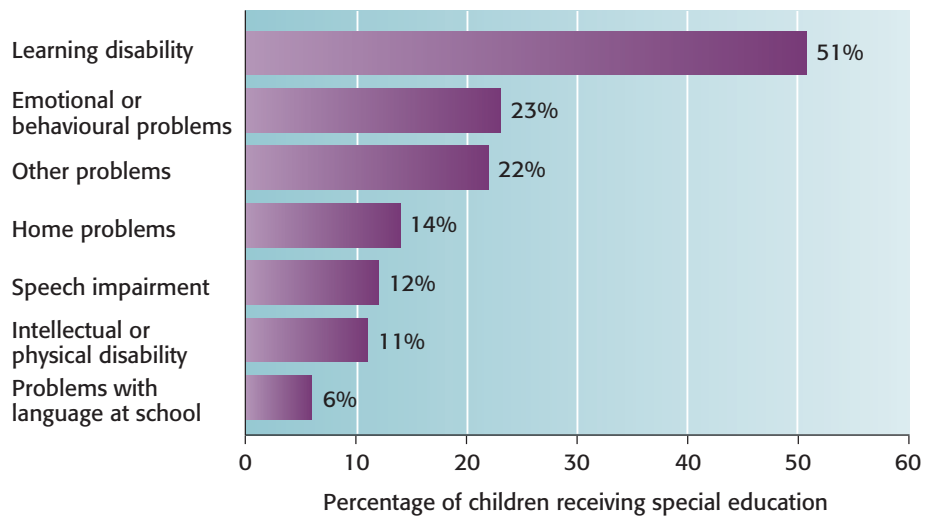
LEARNERS WHO ARE EXCEPTIONAL AND STRATEGIES FOR TEACHING THEM

Students with exceptionalities include students with disabilities and students who are gifted. Most often, the term “exceptionality” is associated with special education and some form of disability. However, students who are gifted are also identified as exceptional and may qualify for special-education resources. While we will discuss both types of exceptionalities in this chapter, our focus will be on students with disabilities.

Who Are Students with Exceptionalities?

Statistics Canada (1999) has estimated that 1 in every 10 elementary-school children receives some form of special education; approximately two-thirds of these students are male. Students receive special education for a variety of reasons, including sensory and physical handicaps, intellectual limitations, communication and behavioural disorders, and other problems that affect learning. These conditions may be mild or severe, chronic or acute, and contained or pervasive (Bohatyretz & Lipps, 1999). The majority of children who receive special education (approximately 59 percent) spend the greatest part of the school day in the regular classroom, from which they are periodically withdrawn to a special-education classroom or resource room for additional instruction or support. Some 16 percent of special-education students are never withdrawn from the classroom. A small number of students with exceptionalities (approximately 8 percent) are withdrawn full-time or attend residential schools. According to the parents of children who receive special-education services, the majority of children look forward to attending school and have as many friends as other children (Bohatyretz & Lipps, 1999).

Students with learning disabilities account for almost half of all students who receive special education (Figure 6.1). According to the Learning Disabilities Association of Canada (2002), learning disabilities include various disorders that may affect the acquisition, organization, retention, understanding, or use of verbal or nonverbal information. These disorders affect learning in individuals who otherwise demonstrate at least average abilities essential for thinking and/or reasoning. As such, learning disabilities differ from intellectual



Notes:

Respondents may belong to more than one category.

Co-efficients of variation for these percentages are between 17% and 33% and should be interpreted with caution due to the higher levels of error associated with these estimates.

Source: “Reasons why children receive special education,” adapted from the Statistics Canada, Longitudinal Survey of Children and Youth, School Component, 1994-1995.

FIGURE 6.1 The Diversity of Students Who Have an Exceptionality

limitations. Approximately one-quarter (23 percent) of students receive special-education services because they experience emotional or behavioural problems, while the rest receive support for a number of conditions including speech or language impairments and intellectual or physical disabilities.

The concepts of impairments, disabilities, and handicaps are distinct and can often be confusing. A *disability* involves a limitation of a person's functioning that restricts the individual's abilities (e.g., performing the activities needed to read or process information in a meaningful way); it is important to remember that the term "disability" does not mean or imply inability. *Impairment* refers to a loss or abnormality of body structure, physiological structure, or psychological function (e.g., loss of vision, restriction in hearing, or inability to relate to others). Finally, a *handicap* is defined as a condition or restriction imposed on a person who has a disability or impairment by society, the physical environment, or the person's own attitudes (e.g., access to facilities, transportation, employment).

Driven by the belief that all children can achieve their full potential if they are provided with appropriate opportunities, instructional methods, resources, and a supportive environment, educators and other professionals today choose to speak of "children with disabilities" or "children with exceptionalities" rather than "disabled children." This change in language is an important one, as it emphasizes the person and not the disability or handicap. Regardless of language, children with disabilities, impairments, and handicaps continue to be a major concern for classroom teachers. Henteleff (1997) notes that students with mild or moderate learning disabilities are increasingly not identified as such, and thus they may be lost in the general classroom setting and become marginalized. Even with the ideal of children's rights guaranteed or acknowledged in documents such as the UN Convention on the Rights of the Child (1990), the Canadian Charter of Rights and Freedoms (1982), and provincial education acts, approaches to and the application of special education across Canada vary from jurisdiction to jurisdiction.

In the following sections we look at some of the characteristics of specific exceptionalities and present appropriate teaching approaches for working with students who have them.

Learning Disabilities

Paula doesn't like kindergarten and can't seem to remember the names of her classmates or teacher. Bobby's Grade 3 teacher complains that his spelling is awful. Eleven-year-old Tim says that reading is really hard for him and that a lot of times the words don't make much sense. Each of these students may have a learning disability.

Characteristics According to the definition developed by the Learning Disabilities Association of Ontario (2001) and adopted by the Learning Disabilities Association of Canada (2002), children with learning disabilities demonstrate (1) impairments in one or more psychological processes related to learning despite having average to above-average intelligence, (2) unexpectedly low academic achievement, or at times average to above-average achievement attained only at the expense of unrealistically high levels of effort and/or educational support, and (3) no other diagnosed problem or disability, such as an intellectual disability (developmental delay).

Learning disabilities range in severity and interfere with the acquisition and use of oral language (e.g., listening, speaking, understanding), reading (e.g., decoding, comprehension), written language (e.g., spelling, written expression), and/or mathematics (e.g., computation, problem solving). Learning disabilities may also cause difficulties with organizational skills, social perception, and social interaction (Learning Disabilities Association of Ontario, 2002; Kamphaus, 2000; Keogh & MacMillan, 1996; Wong, 1998).

About half of all students identified as exceptional in Canada have a learning disability, making learning disabilities the highest incidence of exceptionality. According to school principals who participated in the Canadian National Longitudinal Survey of Children and Youth (1997), an average of 12 percent of school children have a learning disability. The incidence of learning disabilities may increase by another 3 to 5 percent with the

inclusion of students with attention deficit hyperactivity disorder (ADHD). In many provinces there is no separate category for children with ADHD, and they are often included in the general categories of learning disabilities or behavioural disorders. Because of the significant interest in ADHD today, we will discuss it specifically later in the chapter.

In both Canada and the United States, the number of children identified with a learning disability has increased dramatically (as high as 198 percent) over the past 15 years (Gresham, 1997; Winzer, 2002). Some experts say that the dramatic increase in children classified as having a learning disability reflects poor diagnostic practices and overidentification. They believe that teachers are sometimes too quick to label children with the slightest learning problem as having a learning disability instead of recognizing that the problem might rest in ineffective teaching (Nikiforuk, 1998). Other experts believe that the increase in children being classified as having a learning disability is justified (Hallahan, Kaufmann, & Lloyd, 1999).

Diagnosing a learning disability is a difficult task. A learning disability often encompasses co-occurring conditions that can include problems in listening, concentrating, speaking, reading, writing, reasoning, math, or social interaction. Thus, individual children with a learning disability can have very different profiles (Henley, Ramsey, & Algozzine, 1999; Hutchinson, 2002). Learning disabilities can also appear in association with such medical conditions as lead poisoning and fetal alcohol syndrome (Learning Disabilities Association of Ontario, 2001), or other disabilities such as communication disorders and emotional behavioural disorders (Learning Disabilities Association of Ontario, 2001; Glassberg, Hooper, & Mattison, 1999).

About four times as many boys as girls are classified as having a learning disability (Winzer, 2002). This gender difference has been given various explanations, such as greater biological vulnerability for boys, greater instance of language and reading difficulties for boys, and referral bias (i.e., boys are more likely to be referred by teachers because of their disruptive, hyperactive behaviour).

The most common problem for children with a learning disability involves reading, especially the phonological skills needed to understand how sounds and letters combine to make words. **Dyslexia** is a severe impairment in the ability to read. As well, children with a learning disability often have difficulties in handwriting, spelling, or composition (dysgraphia). They may write extremely slowly, their writing products may be virtually illegible, and they may make numerous spelling errors because of their inability to match up sounds and letters.

In previous decades, difficulties in math were given little attention. Increasingly, though, math is being recognized as an academic area in which learning disabilities occur. Students with **dyscalculia** (a learning disability in math) may make an abundance of computational errors or use inefficient strategies in solving math problems.

Current classification of learning disabilities involves an “either/or” determination: A student either has a learning disability or does not have a learning disability. Yet, in reality, learning disabilities vary in their intensity (Reschly, 1996; Terman et al., 1996). Severe learning disabilities, such as dyslexia, have been recognized for more than a century and are relatively easy to diagnose. However, most children with a learning disability have a milder form, which often makes them hard to distinguish from children without a learning disability. In the absence of nationally accepted criteria for classification, there continues to be considerable variability in the identification of students with a learning disability from one province to the next, and even one teacher to the next.

Although learning disabilities may change in their expression (or observable difficulties) and severity as individuals mature and as environments change, they are lifelong (Learning Disabilities Association of Ontario, 2001). Conflicting ideas exist with respect to the future of students with learning disabilities. While some researchers report positive educational, occupational, and social/ interpersonal outcomes, others indicate higher high-school dropout rates, unemployment, underemployment, and social/ emotional difficulties (Adelman & Vogel, 1998; Hocutt, 1996; Pueschel et al., 1995; Wagner & Blackorby, 1996). Presumably, the quality of supports and services provided to these students will greatly influence their future success.

Improving outcomes for students with learning disabilities is a critical and challenging task for educators. At this time, there is no one intervention or program that is effective for all students with learning disabilities (Terman et al., 1996; Winzer, 2002).

Identification Diagnosing a child with a learning disability, especially in a mild form, is very difficult. A student with a learning disability typically does not look disabled, can communicate verbally, and does not stand out in a crowd (Larsen, 1997). Some teachers may mistakenly leap to the conclusion that a student has a learning disability when a particular teaching strategy or approach proves ineffective.

The classroom teacher usually makes the initial suggestion that a student may have a possible learning disability, ideally in consultation with other professionals in the school such as a learning-resource teacher or a special-education teacher. Medical examinations and hearing and vision tests are used to eliminate the possibility of a physical disorder. The student then completes a number of psychological evaluations (to verify normal intelligence) and educational assessments (e.g., oral reading, reading comprehension, math, general knowledge) to confirm a learning disability (Overton, 2000; Winzer, 2002). Tests of visual motor skills, language, and memory may also be used for diagnosis.

In the early-childhood years, disabilities are often identified in receptive and expressive language. Input from parents and teachers is considered before making a final diagnosis. For many school systems, the trigger for assessing students with learning disabilities is a two-grade-level lag in reading (Purcell-Gates, 1997). This approach can be a major impediment to identifying disabilities at the age when help can be the most effective—during the first two years of elementary school. If the two-grade lag is rigidly interpreted, many children do not receive assistance even if they are showing clear signs of a learning disability. To promote the early identification of students with possible learning disabilities, the Learning Disabilities Association of Ontario has launched a Web-based teaching tool that includes a screening tool (Dynamic Screening & Intervention Model; Simner, 2001) and resource data bank (see Figure 6.2). Teachers can use the tool to complete systematic observations, develop profiles for at-risk students, and plan intervention activities.

Intervention Strategies Many interventions have focused on improving students' reading ability (Fitzgerald & Shanahan, 2000; Gunning, 2002; Lyon & Moats, 1997). In the primary grades, emphasis is placed on developing phonemic awareness; most students with reading disabilities demonstrate insufficiently developed phonemic awareness, with phonemic awareness being the predictor of reading ability in the middle grades (Cunningham & Stanovich, 1997). Most students with learning disabilities respond favourably to these interventions (e.g., Martinussen, Kirby, & Das, 1998; Schneider et al., 1999).

Children with severe phonological deficits that lead to poor decoding and word-recognition skills respond to intervention more slowly than children with mild to moderate reading problems (Torgesen, 1995). Also, the success of even the best-designed reading intervention depends on the training and skills of the teacher (Moats & Lyon, 1996).

Unfortunately, not all children who have a learning disability that involves reading will receive early intervention. Students whose learning disabilities go unrecognized do not benefit from standard interventions and require more time and effort in any subsequent remediation (Lyon, 1996; Torgesen et al., 1997). In older students, insufficiently developed phonological awareness is often followed by difficulties in reading comprehension and writing (Abbott & Berninger, 1999; Graham & Wong, 1993; Lovett & Steinbach, 1997). Effective remedial programs must be comprehensive, explicit, continuous, address all the major components of reading (phonic decoding, fluency, vocabulary, spelling, composition),



“Your feelings of insecurity seem to have started when Mary Lou Gurnblatt said, ‘Maybe I don’t have a learning disability—maybe you have a teaching disability.’”

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Learning Disabilities Association of Ontario

The Web Based Teaching Tool

An Early Intervention Screening Tool for SK-1 Educators

Learning Disabilities Association of Ontario – Search Pages for Early Intervention Screen.

Start Search

Or search for Teaching Materials below

Teaching Materials:

Teaching materials are educational programs and other products used to assist a teacher in the implementation of curriculum.

(Please Note: If no search options are made then no results will be returned. However, the more checkboxes you select, the slower the search results will appear.)

1. Choose Resource language Preference(s):

- English
- French

2. Choose Curriculum Area(s):

- Social Skills
- Motor Development
- Organizational Skills
- Reading and Writing Skills
- Oral language
- Mathematical Abilities
- Phonological Awareness

3. Choose Learning Environment(s):

- Partners
- Take Home
- Small Group
- Large Group
- Independent
- One to One
- Whole Class

4. Choose Teaching Material Type(s) and/or cost(s):

- | | |
|--|--|
| <p>Teaching Material Types:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Workshop <input type="checkbox"/> Kit <input type="checkbox"/> Video <input type="checkbox"/> Audio Cassette <input type="checkbox"/> Chalkboard <input type="checkbox"/> Web Site <input type="checkbox"/> CD <input type="checkbox"/> Software <input type="checkbox"/> Game <input type="checkbox"/> Book <input type="checkbox"/> Program | <p>Teaching Material Cost Range:</p> <ul style="list-style-type: none"> <input type="checkbox"/> \$100+ <input type="checkbox"/> \$50-100 <input type="checkbox"/> \$0-50 <input type="checkbox"/> Ministry Licensed |
|--|--|

5. Choose Psychological Process(es):

- Processing Speed
- Executive Functioning

<http://www.earlyintervention.ca/servlet/resources>

Teacher's School Readiness Inventory

Instructions: Using the five point rating scale below, rate the child on each of the following items. Add all of your ratings to obtain the child's total score.

1. In-class distractibility, attention span and memory span: Is the child distracted by other children; does the child have difficulty remembering and following instructions and remembering the details of content of materials presented in class?

1 = highly distractible	2	3	4	5 = very good attention span
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

2. Verbal fluency: Does the child tend to use precise words and convey abstract ideas reasonably well when asked to describe events?

1 = poor verbal fluency	2	3	4	5	5 = very good verbal fluency
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

3. Interest and participation: Does the child show interest, enthusiasm, and eagerness to participate in various classroom activities and does the child readily convey this overall sense of enthusiasm to other children or to adults?

1 = very unenthusiastic	2	3	4	5	5 = very enthusiastic
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

4. Letter Identification skills: Approximately how many upper case letters can the child name correctly?



Learning Disabilities Association of Ontario
Early Intervention Screening Tool Kit for K-1 Educators – Promoting Early Intervention for Learning Disabilities

Teacher: Ms. Tamara J. Bahr

Student: Harry H. Potter

Screenings

- 1) TSRI Screening
 - Teacher's School Readiness Inventory
 - 2) Step Two
 - Yopp Singer or Rosner
 - 3) Observational Checklists
 - Phonological Awareness
 - Mathematical Abilities
 - Oral Language
 - Reading and Writing Skills
 - Organizational skills
 - Motor Skills
 - Social Skills
- All Current Results

Student Profile

Name: Harry H. Potter
Date of Birth: January 1, 1992
School: Idao Test School

Edit this Student Record

FIGURE 6.2 The Learning Disabilities Association of Ontario's Web-based Teaching Tool to Promote the Early Identification of Students with Possible Learning Disabilities

and incorporate metacognitive and/or motivational techniques to encourage independent reading (Fooman et al., 1997; Gaskins et al., 1996; Torgesen et al., 1997).

Deficits in basic reading skills are the most common target of intervention studies because they are the most frequent form of learning disability, are identifiable, and represent an area about which we have considerable knowledge (Lyon, 1996). Interventions for other types of learning disabilities have been developed, but they have not been as extensively researched.

Analysis of intervention studies with children with learning disabilities suggests that a combination of direct-strategy instruction and the provision of metacognitive information produces the greatest gains (Bulter, 1995, 1998; Swanson & Hoskyn, 1998). This type of instruction is especially effective for enhancing students' reading comprehension,

vocabulary, and creativity. Other effective instructional components include small interactive groups, technology, and augmentation of teacher instruction (such as homework). Nikiforuk (1998) believes that good learning is the foundation for any education, and good learning requires good teaching. Moreover, good teaching is based on the assumption that all children can be taught. Unfortunately, according to critics such as Nikiforuk, poor children and students with exceptionalities are often the recipients of poor-quality instruction. He argues that schools and teachers can teach most children how to read and write, but it requires providing teachers with adequate professional development and making schools accountable.

Attention Deficit Hyperactivity Disorder

Matthew has attention deficit hyperactivity disorder, and the outward signs are fairly typical. He has trouble attending to the teacher's instructions and is easily distracted. He can't sit still for more than a few minutes at a time, and his handwriting is messy. His mother describes him as very fidgety.

Characteristics Attention deficit hyperactivity disorder (ADHD) is a disability in which children consistently show one or more of the following characteristics over a period of time: (1) *inattention*, (2) *hyperactivity*, and (3) *impulsivity*. ADHD is typically associated with activity and attentional difficulties that start before the age of seven (Barkley, 1998). Children who are *inattentive* have difficulty focusing on any one thing and might become bored with a task after only a few minutes. They often ignore details, make careless errors, and lose or forget things. These students have difficulty following instructions, completing activities, and staying organized. Children who are *hyperactive* show high levels of physical activity and almost always seem to be in motion. They often fidget and squirm and move about the classroom at inappropriate times. They experience difficulties working or playing quietly and are often described as talking constantly and excessively. Impulsivity is another symptom of hyperactivity. Children who are *impulsive* have difficulty curbing their reactions and often do not think before they speak or act (e.g., blurting out answers in the classroom, not waiting their turn, or interrupting others).

Children with ADHD may also have a variety of subtype symptoms that can confound and complicate treatment. For example, Barkley (1998) suggests that learning disabilities, particularly reading impairments, may be a subtype category for ADHD students. The hyperactivity component may also be categorized as *pervasive* (occurring at home and school) or *situational* (only in one setting). Some researchers have argued that motivation, not attention, is the problem in ADHD. Benninger (1989) argued that ADHD arises out of an inability to self-regulate, an impairment of the ability to recognize and respond to consequences, or an insensitivity to reinforcement or punishment. Usually the ADHD diagnosis includes individualized testing for cognitive abilities and achievement, medical screening, and behavioural checklists (Hutchinson, 2002). While a physician is required to make the diagnosis of ADHD, parents and teachers are increasingly asked to provide input. Children must present six or more symptoms within either the inattention or hyperactivity-impulsivity categories as described in the DSM-IV (Diagnostic and Statistical Manual of Mental Disorders; American Psychiatric Association, 1994). These symptoms must be present for at least six months and to a degree that is developmentally deviant by the age of seven.

There is controversy about the increased diagnosis of ADHD (Terman et al., 1996). Some experts attribute the increase mainly to heightened awareness of the disorder. Others are concerned that many children are being misdiagnosed without undergoing extensive professional evaluation based on input from multiple sources.

Through the Eyes of Teachers



Understanding Students with Learning Disabilities

I hated going to school. I cried every night and literally made myself sick. I thought school was my parents' way of punishing me. I felt inadequate, feared failure, and rarely took risks. One evening, I begged my mother to help me be "normal." I was identified with a learning disability when I was 11 years old.

As a teacher with a learning disability, I reflect on these memories frequently. I promised myself that I would never let a child hate learning or believe that he or she was incapable of success. I understand and empathize with students who are struggling, feel isolated, stupid, misunderstood, or frightened. I am always trying to present information to them in a meaningful way.

Catherine Kitchura
Teacher Candidate with a Learning Disability
York University



Many children with ADHD show impulsive behaviour, such as this child who is jumping out of his seat and throwing a paper airplane at other children. How would you handle this situation if this were to happen in your classroom?

Signs of ADHD can be present in the preschool years. Parents and preschool or kindergarten teachers might notice that the child has an extremely high activity level and limited attention span. They might say the child is “always on the go,” “can’t sit still even for a second,” or “never seems to listen.” Many children with ADHD are difficult to discipline, have little tolerance for frustration, and have problems in peer relations. Other common characteristics of children with ADHD include general immaturity and clumsiness.

Although signs of ADHD are often present in the preschool years, their classification often doesn’t take place until the elementary-school years (Guyer, 2000; Pueschel et al., 1995). The increased academic and social demands of formal schooling, as well as stricter standards for behavioural control, often illuminate the problems of the child with ADHD (Whalen, 2000). Teachers typically report that these students have difficulty working independently, completing schoolwork, and organizing work, and that they require greater amounts of supervision than their peers. Restlessness and distractibility also are often noted. These problems are more likely to be observed in repetitive or taxing tasks, or tasks that students perceive to be boring (such as completing worksheets or doing homework). These students are often described as being more talkative and intrusive than others. They often interrupt others and present themselves as bossy and socially immature. Such children may have few friends and tend toward rough play when interacting with classmates.

It was previously believed that ADHD decreased in adolescence, but now it is believed that this often is not the case. Estimates suggest that ADHD decreases in only about one-third of adolescents. Increasingly, it is recognized that these problems also can continue into adulthood.

Definitive causes of ADHD have not been found. For example, scientists have not been able to identify causal sites in the brain. However, a number of causes have been proposed, such as low levels of certain neurotransmitters (chemical messengers in the brain), prenatal and postnatal abnormalities, and environmental toxins such as lead. Heredity might play a role, as 30 to 50 percent of children with ADHD have a sibling or

Teaching Strategies

For Students Who Have Learning Disabilities and ADHD

- ✓ Use explicit or direct teaching methodologies
 - state lesson objectives verbally
 - present objectives visually (e.g., board, overhead projector)
 - repeat and “break down” instructions for classroom assignments and homework activities
 - use concrete examples to illustrate abstract concepts
 - provide students with immediate and specific feedback about the use of appropriate learning processes and skills (see Chapter 8)
- ✓ Activate and use students’ relevant prior knowledge
 - use students’ experiences as a starting point for instruction
 - connect learning to real-life experiences
 - use literature that relates to students’ interests and hobbies
 - provide students with choices and allow them to engage in self-determination whenever possible
- ✓ Provide accommodations as required
 - remember that accommodations do not alter the amount of learning that students need to demonstrate, but rather provide them with opportunities to demonstrate that knowledge
 - seek the advice and resources of the special-education resource teacher whenever possible
 - design assessment tasks that allow students to demonstrate their knowledge in a variety of ways
 - alter teaching and assessment practices to better facilitate students’ learning (e.g., underline key concepts, answer two out of three questions, use untimed tests, give extra time)
- ✓ Provide modifications as required
 - make adjustments with respect to the nature of the academic work in an effort to increase students’ confidence and feelings of success (e.g., oral report versus written report)
 - seek the advice and resources of the special-education resource teacher whenever possible
 - clarify that accommodation and modification practices provide all students with equal chances to learn versus providing some students with unfair learning advantages
- ✓ Facilitate students’ organizational and study skills
 - encourage students to adopt effective organizational and study skills by modelling these skills
 - incorporate organizational and study skills into classroom routines (e.g., use long-term and short-term calendars, break projects into steps)
- ✓ Facilitate students’ reading and writing skills
 - refer students to an appropriate professional for diagnosis of reading and/or writing difficulties
 - provide advance notice for reading and writing assignments
 - provide class time for reading and writing assignments
 - allow students to use relevant compensatory technology (e.g., hand-held electronic dictionaries, talking word processors, taped books)
 - use peer and adult tutors (see Chapter 9)
- ✓ Use behaviour-management techniques when necessary
 - develop behaviour-management plans for individual students as required (see also Chapter 7)
 - follow the principles of positive reinforcement
 - provide meaningful and specific feedback frequently

parent who has the disorder. It is important to note that there is no convincing evidence that social factors, diet, or poor parental management/parenting style cause ADHD (Bas-sarath, 2001; Woodrich, 1994).

Medication and ADHD The problem behaviours of some children with ADHD can be temporarily controlled with prescriptive stimulants (Swanson et al., 1993). Two classes of medications are commonly used to treat children with ADHD: psycho-stimulants and antidepressants, with the former being the more widely used (Hutchinson, 2002). The most commonly prescribed stimulants include Ritalin, Dexedrine, and Cylert. In Canada, Ritalin consumption increased significantly from 1990 to 1997 (Maté, 2000), leading some critics to believe that physicians are too quick to prescribe the stimulant to children (Clay, 1997). A child should be given medication only after a complete assessment that includes a physical examination. Typically, a small dose is administered as a trial to examine its effects. If the child adequately tolerates the small dose, the dosage might be increased. Teachers may be called upon to administer medication when a dosage is required during the school day. The teacher plays an important role in observing whether the medication level is too high, making the child dazed and lethargic.

Current best practice in the management of ADHD combines psychological intervention (e.g., cognitive-behavioural management, family counselling), specific teaching pedagogy, and medical interventions. It is important for teachers and parents not to convey to children with ADHD the message that medication is the answer to all of their academic difficulties (Hallahan & Kaufmann, 2000). Children with ADHD should be encouraged to take responsibility for their behaviour in addition to any help that medication may provide them.

Emotional and Behavioural Disorders

Most children have emotional problems at some time during their school years. A small percentage have problems that are so serious and persistent that they are classified as having an emotional or behavioural disorder. **Emotional and behavioural disorders** consist of serious, persistent, and pervasive problems that involve relationships, aggression, depression, and fears associated with personal or school matters, as well as other inappropriate socioemotional characteristics. In Canada, 6 to 10 percent of school-aged children are identified with emotional or behavioural disorders (Dwort & Rathgeber, 1998; Smith et al., 2001). These students represent just under one-quarter of all those receiving special-education services. In general, the instances of emotional and behavioural disorders are lowest in the early elementary grades and highest in the late elementary and early secondary grades, with a subsequent decrease in the later secondary-school years (Hallahan & Kauffman, 1997).

There is no single definition of emotional and behavioural disorders, and students demonstrate varied characteristics (Council for Exceptional Children, 1998). Accordingly, a variety of terms have been used to describe emotional and behavioural disorders, including *conduct disorder* (e.g., disruptive, aggressive to others), *socialized aggression* (e.g., delinquency, truancy, gang membership), *attention problems/immaturity* (e.g., easily distractible, poor concentration, impulsive), *anxious/withdrawn* (e.g., self-conscious, reticent, insecure), *psychotic behaviour* (e.g., hallucinations, verbal gibberish), and *motor excess* (e.g., hyperactive, hypertalkative). Students with emotional and behavioural disorders often demonstrate symptoms consistent with several of these categories (Smith et al., 2001).

Autism and Asperger Syndrome **Autism and Asperger syndrome (AS)** are lifelong developmental disorders that affect children's social interactions, language, and behaviours. In general, autism is the more severe of the two disorders. Some children with autism never learn to speak; others show communication and social irregularities (Mesibov, 2000). The majority of children with autism demonstrate some level of developmental disability. In a very small number of cases children with autism present *splinter skills*, such as incredible calendar skills or artistic abilities (Hutchinson, 2002). Some display autistic behaviours many times a day, others more sporadically. Social deficits include

failing to make eye contact and rarely seeking others for interaction or affection. Communication deficiencies include poor synchrony and lack of reciprocity in conversation, as well as stereotyped, repetitive use of language. Stereotyped patterns can include compulsive rituals and self-stimulatory actions such as rocking, spinning, and finger flicking. Autistic individuals also can become distressed over small changes in their environment. Rearrangement of events or even the furniture can cause children who are autistic to get extremely upset, reflecting their inflexibility in adapting to new routines. Individuals with Asperger syndrome present severe impairments in social interactions and demonstrate repetitive patterns of behaviours and activities. However, they will usually demonstrate age-appropriate language, as well as cognitive and self-help behaviours and skills (Hutchinson, 2002).

There is no separate disability category for autism or Asperger syndrome in most parts of Canada. Instead, these students are often identified with developmental disabilities, communication disorders, or learning disabilities (Smith et al., 2001). Autism and Asperger syndrome are also included under the terms “spectrum of autistic disorders” and “pervasive developmental disabilities” (Hutchinson, 2002). Autism is a relatively rare disorder, occurring in 4 to 5 persons out of 10,000 births. Males are three times more likely than females to be affected (Hashimoto, 1989). Children with this condition are usually identified before three years of age. The prevalence of Asperger syndrome is more difficult to estimate, with many of these children being included under the diagnosis of autism. Autism and Asperger syndrome are organic disorders; children born with rubella and fragile X syndrome are more likely to develop autism than others (Smith et al., 2001). There is no evidence that family socialization causes autism or Asperger syndrome (Rutter & Schopler, 1987).

Students with autism and Asperger syndrome benefit from well-structured classrooms, individualized instruction, or small-group instruction (Pueschel et al., 1995). Since students with autism and Asperger syndrome are *hypersensitive* to sensory stimuli and are easily distracted and anxious, they function best in classrooms where auditory and visual distractions are minimized. As with children who have developmental disabilities, applied behavioural analysis procedures sometimes have been effective in helping autistic children learn more effectively (Alberto & Troutman, 1995). These students also benefit from explicit teaching and modelling of social skills, social interaction, and social cognition (Steiner-Bell, 1998). Keyboards, sign boards, and other visual aids may also be used to help students with autism to communicate.

Aggressive, Out-of-Control Behaviours A small proportion of children who are classified as having emotional and behavioural disorders and who engage in disruptive, aggressive, defiant, or dangerous behaviours are removed from the classroom; approximately 80 percent of students with emotional and behavioural disorders are educated in their regular schools (Smith et al., 2001). These children are much more likely to be boys than girls, and are more likely to come from communities characterized by poverty (Hutchinson, 2002). Students with a serious emotional and behavioural disturbance are more likely than any other students with a disability to initially be classified as having a disability-related problem during the secondary-school years. However, the majority of these students began to show signs of their emotional problem in the elementary-school years (Wagner, 1995).

When students present severe emotional and behavioural disorders, teachers often enlist the services and supports of community mental health organizations and other institutions. Classroom teachers and special educators spend a great deal of time and energy helping these children adapt to the classroom environment and develop effective learning and social skills (Hocutt, 1996; Wagner, 1995).

In Chapter 3, we discussed juvenile antisocial behaviour, school violence, rejected students, and improving students’ social skills. Many of the comments and recommendations we made there apply to children with a serious emotional disturbance. In Chapter 7, Behavioural Approaches, Social Cognitive Approaches, and Teaching, and Chapter 12, Managing the Classroom, we will say more about strategies and plans for effectively working with students who show emotional and behavioural problems.

Depression, Anxiety, and Fears Some children turn their emotional problems inward. Their depression, anxiety, or fears become so intense and persistent that their ability to learn is significantly compromised. All children feel depressed from time to time, but most get over their despondent, down mood in a few hours or a few days. However, for some children the negative mood is more serious and longer-lasting. **Depression** is a type of mood disorder in which the individual feels worthless, believes that things are not likely to get better, and behaves lethargically for a prolonged period of time. When children show these signs for two weeks or longer, they likely are experiencing depression. Poor appetite and not being able to sleep well also can be associated with depression.

Depression is much more likely to appear in adolescence than in childhood and has a much higher incidence in girls than in boys (Culbertson, 1997). Experts on depression say that this gender difference is likely due to a number of factors. Females tend to ruminate on their depressed mood and amplify it, whereas males tend to distract themselves from the negative mood; girls' self-images are often more negative than those of boys during adolescence (Nolen-Hoeksema, 1990; Davis & Nolen-Hoeksema, 2001).

Be vigilant in recognizing the signs of depression in students. Because it is turned inward, depression is far more likely to go unnoticed than aggressive, acting-out behaviours. If you think that a student has become depressed, talk with the student's parents and discuss the possibility of obtaining professional counselling. Cognitive therapy has been especially effective in helping individuals become less depressed, as have some drug therapies (Beckham, 2000; Coyne, 2000; Mahoney, 1991).

Anxiety involves a vague, highly unpleasant feeling of fear and apprehension (Kowalski, 2000). It is normal for children to be concerned or worried when they face life's challenges, but some students have such intense and prolonged anxiety that it substantially impairs their school performance. Some students also have personal or school-related fears that interfere with their learning. If a student shows marked or substantial fears that persist, discuss the matter with the parents and recommend professional counselling or clinical help. Some behavioural therapies have been especially effective in reducing excessive or inaccurate anxiety and fear (Baldwin & Baldwin, 1998). More information about anxiety appears in Chapter 11, *Motivating Students to Learn*.

In this section, we explored a number of ideas about learning disabilities, attention deficit hyperactivity disorder, and emotional and behavioural disorders. A review of these ideas is presented in Summary Table 6.1. Next we will study students who have less common exceptionalities.

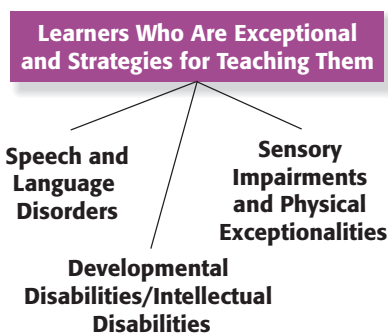
Speech and Language Disorders

There are many types of speech and language disorders. **Speech and language disorders** include a number of speech problems (such as articulation disorders, voice disorders, and fluency disorders) and language problems (difficulties in receiving information and expressing language). Approximately 12 percent of students who receive special-education services have a speech or language impairment.

Exploring Specific Speech and Language Disorders **Articulation disorders** are problems in pronouncing sounds correctly. A child's articulation at six or seven years is still not always error-free, but it should be by age eight. A child with an articulation problem might find communication with peers and the teacher difficult or embarrassing. As a result, the child might avoid asking questions, participating in discussions, or communicating with peers. Articulation problems can usually be improved or resolved with speech therapy, though it might take months or years.

Voice disorders are reflected in speech that is hoarse, harsh, too loud, too high-pitched, or too low-pitched. Children with cleft palate often have a voice disorder that makes their speech difficult to understand. If a child speaks in a way that is consistently difficult to understand, refer the child to a speech therapist.

Fluency disorders often involve what is commonly called "stuttering." Stuttering occurs when a child's speech has a spasmodic hesitation, prolongation, or repetition. The anxiety



SUMMARY TABLE 6.1

Learning Disabilities, Attention Deficit Hyperactivity Disorder, and Emotional and Behavioural Disorders

What are the characteristics of students with learning disabilities?	<ul style="list-style-type: none"> • Normal or above normal intelligence • Difficulties in at least one academic area • Difficulties are not attributed to a diagnosed problem or disorder (i.e., cerebral palsy) • Difficulty with reading is the most common learning disability • Often experience difficulties with handwriting, spelling, composition, and math • Dyslexia is a severe impairment of the ability to read and spell; dyscalculia is an impairment of the ability to pick appropriate strategies for mathematics.
How are learning disabilities identified and treated?	<ul style="list-style-type: none"> • Classroom teacher usually suggests possibility of a learning disability • Specialists provide formal evaluation and diagnosis • Many learning disability interventions target reading skills • Success of learning disability interventions depends on the skills and training of the teacher
What is attention deficit hyperactivity disorder (ADHD)?	<ul style="list-style-type: none"> • A disability in which students consistently demonstrate inattentive, hyperactive, and/or impulsive behaviours • Although signs of ADHD may be present in early childhood, diagnosis of ADHD usually does not occur until the elementary-school years. • Many experts recommend a combination of academic, behavioural, and medical interventions
What are emotional and behavioural disorders?	<ul style="list-style-type: none"> • Severe, persistent difficulties with relationships, aggression, depression, phobias, or other socioemotional behaviours • Depression, anxiety, and fears can become so intense and persistent that students' ability to learn is significantly compromised
What is autism/Asperger syndrome?	<ul style="list-style-type: none"> • Autism and Asperger syndrome involve deficiencies in social relationships, abnormalities in communication, and restricted, repetitive, and stereotyped patterns of behaviour. • Autism is an organic brain dysfunction; there is no evidence that it is caused by family socialization. • Students with autism and Asperger syndrome benefit from a well-structured classroom and individualized instruction.

many children feel because they stutter often just makes their stuttering worse. Speech therapy is recommended.

Language disorders involve significant impairments in children's receptive (e.g., listening) and expressive (e.g., speaking) language (Boyles & Contadino, 1997). Language disorders therefore involve difficulties in understanding and expressing thoughts in correct sentences (OAFCCD, 1996). These impairments can negatively affect a child's ability to be educated. Treatment by a language therapist generally produces improvement in the child with a language disorder, but the problem usually is not eradicated (Goldstein & Hockenberger, 1991). Language disorders include difficulties in these areas:

Teaching Strategies

For Students Who Have Receptive and Expressive Language Disorders

Receptive Language Disorders

- ✓ Use a multisensory approach
 - supplement verbal information with written and/or visual materials and directions
- ✓ Monitor the speed at which information is presented
 - slow down and repeat information and directions
 - have students reiterate directions before starting a task
- ✓ Provide students with extra response time
 - allow students with receptive language disorders 10–15 seconds longer to respond than their peers

Expressive Language Disorders

- ✓ Focus on content of message versus delivery of message
- ✓ Provide alternative formats for students to demonstrate knowledge
 - allow students with expressive language disorders to present information in a written format versus a verbal one
- ✓ Provide students with choices or provide the initial sound in word-finding problems
 - phrase questions as a choice among alternatives (e.g., “Is this a *wat*, or is this a *rat*?”) versus as an open-ended response (e.g., “This is a *rat*, not a *wat*; say *rat*”)
- ✓ Prepare students for verbal question-answering
 - tell students when you will be calling on them
 - allow students preparatory time to formulate a response
 - provide students with extra time when responding

- Expressing ideas clearly
- Phrasing questions properly to get the desired information
- Understanding and following oral directions
- Following conversation, especially when it is rapid and complex

These difficulties involve both receptive and expressive language.

Receptive language consists of linguistic information that is received by the brain. Children with a receptive-language disorder have a glitch in the way they receive information. Information comes in, but the child’s brain has difficulty responding to it quickly, which can cause the child to appear disinterested or aloof.

Once a message is received and interpreted, the brain needs to form a response. **Expressive language** involves the ability to express one’s thoughts. Some children can easily understand what is said to them, but they have difficulties when they try to form a response and express themselves.

There are several observable characteristics of children who have an oral expressive-language disorder (Boyles & Contadino, 1997):

- They might appear shy and withdrawn, and have problems interacting socially.
- They might give delayed responses to questions.
- They might have a problem finding the correct words.
- Their thoughts might be disorganized and disjointed, frustrating the listener.
- They might omit integral parts of the sentence or information needed for understanding.

Many children with language disorders also experience learning difficulties. For instance, children who experience difficulty with the production of speech sounds may have under-

No one means all he says, and
yet very few say all they mean,
for words are slippery and
thought is viscous.

Henry Brooks Adams
American Historian and Author, 19th Century

developed phonemic awareness, which in turn may impede their early reading and spelling attempts. Difficulties with receptive language may result in impaired comprehension across subject areas. Students who experience speech and language disorders typically receive therapy from a speech and language pathologist, with parents, teachers, and other school volunteers providing follow-up exercises (Reid, 1996). Teachers can play important roles in promoting the social and academic well-being of children with speech and language disorders in the classroom. Teachers can create an accepting environment by not allowing other students to tease or mock these children; by modelling effective speech patterns when talking to students with language disorders (e.g., speaking clearly, pausing appropriately, using straightforward language and simple grammatical sentences); and by focusing on the content of students' speech rather than on how it is produced (Nelson & Sturm, 1997).

TYPE OF DEVELOPMENTAL DISABILITY	IQ RANGE
Mild	55–70
Moderate	40–54
Severe	25–39
Profound	Below 25

FIGURE 6.3 Classification of Developmental Disabilities Based on IQ

Developmental Disabilities/Intellectual Disabilities

Characteristics The most distinctive characteristics of **developmental disabilities**, or what are sometimes called **intellectual disabilities**, are *limited intellectual functioning and adaptive skills*. Long before formal tests were developed to assess intelligence, individuals with developmental disabilities were identified by a lack of age-appropriate skills in learning and in caring for themselves. Adaptive skills include skills needed for self-care such as dressing, toileting, feeding, self-control, and peer interaction. The low intelligence and low adaptiveness should be evident in childhood, and should not follow a long period of normal functioning that is interrupted by an accident or other type of brain injury.

Classification and Types of Developmental Disabilities In the past, people with developmental disabilities were identified as either *mild*, *moderate*, *severe*, or *profound* based on their IQ range (mild = 55–70; moderate = 40–54; severe = 25–39; profound = below 25) (see Figure 6.3). However, because categorizations based on IQ ranges are not perfect predictors of functioning, the American Association of Mental Retardation (1993) developed a new classification system based on the degree of support required for individuals to function at their highest level (Hallahan & Kaufman, 2000). As shown in Figure 6.4, the new categories include *intermittent*, *limited*, *extensive*, and *pervasive*. These

Intermittent	Supports are provided "as needed." The individual may need episodic or short-term support during life-span transitions (such as job loss or acute medical crisis). Intermittent supports may be low- or high-intensity when provided.
Limited	Supports are intense and relatively consistent over time. They are time-limited but not intermittent. Require fewer staff members and cost less than more intense supports. These supports likely will be needed for adaptation to the changes involved in the school-to-adult period.
Extensive	Supports are characterized by regular involvement (e.g., daily) in at least some setting (such as home or work) and are not time-limited (for example, extended home-living support).
Pervasive	Supports are constant, very intense, and are provided across settings. They may be of a life-sustaining nature. These supports typically involve more staff members and intrusiveness than the other support categories.

FIGURE 6.4 Classification of Developmental Disabilities Based on Levels of Support



FIGURE 6.5 A Child with Down Syndrome

What causes a child to develop Down syndrome?

new definitions have not yet been adopted by Ministries of Education across Canada, where general practice is to identify students with developmental disabilities as either *mild* or *severe*.

Mild Developmental Disabilities About 2 percent of Canadians have mild developmental disabilities (about eight students for every 400 school-aged children). The most commonly identified form of mild developmental disability is Down syndrome, which is genetically transmitted (see Figure 6.5). The majority of these children receive all their instruction in the regular classroom. While students with mild developmental disabilities experience difficulty attaining the academic skills associated with their grade level, they are usually able to live independently and develop into self-sufficient adults. In general, students with mild developmental delays pass through the same cognitive, language, and social developmental stages as other students, but at a much slower rate. These students usually demonstrate delays in short-term memory and attention. They can experience delays in fine motor coordination and present less developed expressive and receptive vocabularies. They may demonstrate poor social adjustment, appearing immature or shy, refusing to cooperate, or being less prepared to initiate and pay attention during conversation (Hutchinson, 2002).

Severe Developmental Disabilities Considerably fewer individuals are diagnosed with severe developmental disabilities compared to mild developmental disabilities. About one in every 1,000 Canadians are diagnosed with this disability. The category of severe developmental disabilities now includes what was previously identified as moderate, severe, and profound. Accordingly, the amount of care that these individuals will require varies dramatically, with some individuals requiring life-long care and support. Like children with mild developmental disabilities, students with severe developmental disabilities may experience difficulties focusing their attention and retaining information; they may be easily frustrated and act impulsively; they may demonstrate poor physical dexterity and coordination; and they may act inappropriately in social situations. Furthermore, they experience these difficulties to a greater extent than children with mild developmental disabilities (Hutchinson, 2002). Children with severe developmental disabilities are also more likely to show signs of other neurological complications such as cerebral palsy, epilepsy, hearing impairment, visual impairment, and other metabolic birth deficits that affect the central nervous system (Terman et al., 1996). At school, these students often receive a modified curriculum that is functional (focused on the acquisition of life skills) and community-based (Farran & Shonkoff, 1994).

Teachers can do a great deal to facilitate the learning and socialization of children with mild and severe developmental disabilities, starting by promoting a classroom environment that is inclusive and inviting. Teachers can help other students understand that *equity does not mean sameness*. Other teaching strategies are listed in Teaching Strategies For Use with Students Who Have Developmental Disabilities.

Brain Damage Brain damage can result from many different infections and environmental hazards (Das, 2000; Hallahan & Kaufmann, 2000). Infections in pregnancy, such as rubella (German measles), syphilis, herpes, and AIDS, can cause developmental disabilities in the child. Meningitis and encephalitis are infections that can develop in childhood. They cause inflammation in the brain and can produce developmental disabilities.

Environmental hazards that can result in developmental disabilities include head injuries, malnutrition, birth injury, and chemical substance abuse on the part of the pregnant woman. **Fetal alcohol syndrome (FAS)** involves a cluster of abnormalities, including developmental disabilities and facial abnormalities, that appear in the offspring of mothers who drink alcohol heavily during pregnancy.

Sensory Impairments and Physical Exceptionalities

You might have students in your class who have sensory or physical disabilities.



The currently accepted description is “children with exceptionalities” rather than “disabled children” or “handicapped children.” Why the changes in terminology?

Visual Impairments Some students might have mild vision problems that have not been corrected. If you notice students squinting a lot, holding books close to their face to read them, rubbing their eyes frequently, and complaining that things appear blurred or that words move about on the page, refer them to the appropriate school professionals to have their vision checked (Boyles & Contadino, 1997). Many will only need corrective lenses. However, a small portion of students (about 1 in every 1,000 students) have more serious visual problems and are classified as visually impaired. This includes students who have low vision and students who are blind.

Children with **low vision** have a visual acuity of between 20/70 and 20/200 (on the familiar Snellen scale in which 20/20 vision is normal) with corrective lenses. Children with low vision can read large-print books or with the aid of a magnifying glass. Children who are **blind** cannot use their vision in learning and must use their hearing and touch to learn. Approximately 1 in every 1,000 students in Canada is visually impaired. Of these students, approximately 80 percent are print users, with the remaining children being potential Braille users (Gillon & Young, 2002). Many children who are visually impaired have normal intelligence and function very well academically with appropriate supports and learning aids. However, multiple disabilities are not uncommon in visually impaired and blind students. Students who have multiple disabilities often require a range of support services to meet their educational needs.

An important task in working with a student who has visual impairments is to determine the modality (such as touch or hearing) through which the student learns best (Bowe, 2000).

When developing and implementing a curriculum suitable for students with visual impairments and blindness, teachers will need to work closely with the vision teacher and other professionals and paraprofessionals. Generally, teachers will need to provide modifications and accommodations with respect to the presentation of information (e.g., increased use of verbal directions, enlarged print), classroom environment (seating arrangements, open spaces, consistent placement of furniture), resources (e.g., large-print books, Braille texts, note takers, adaptive technologies including speech-activated word processors), and assessment practices (e.g., additional time for tests and homework, verbal rather than written tests) (Bayha, 1998; Gillon & Young, 2002).

*I pass, like night, from land to land;
I have strange power of speech;
That moment that his face I see,
I know the man that must hear me:
To him my tale I teach.*

Samuel Taylor Coleridge
British Poet and Author, 19th Century

Teaching Strategies

For Use with Students Who Have Developmental Disabilities

- ✓ Teach to students' levels of intellectual functioning
 - remember that students with developmental disabilities will function intellectually at a lower level than other students in the class
 - individualize instruction to meet the needs of each student
 - move to a lower level if students do not respond appropriately to the provided level of instruction
 - consider the vocational skills that students will need for employment and modify the curriculum accordingly
- ✓ Provide concrete examples
 - provide clear and simple directions
 - reiterate instructions frequently
- ✓ Provide opportunities for frequent practice
 - break larger tasks into a series of smaller ones
 - repeat each step several times
 - allow students to overlearn a concept to facilitate retention
- ✓ Be sensitive to students' self-esteem
 - avoid comparisons with other students
 - encourage other students to be accepting and tolerant of those with developmental disabilities
- ✓ Set positive expectations for students' learning
 - remember that students with development disabilities can achieve academically
 - set goals that maximize learning
 - include parents of students with developmental disabilities when making programming decisions
- ✓ Use the principles of applied behaviour analysis
 - use positive reinforcement to improve students' maintenance, social, and academic skills
 - use principles of behaviour management and techniques (Chapter 7)
- ✓ Use the services of educational assistants and volunteers
 - use the services of school-based personnel and volunteers from the community to increase the amount of one-on-one instruction that students with developmental disabilities receive

Hearing Impairments A hearing impairment can make learning very difficult for children. Children who are born deaf or experience a significant hearing loss in the first several years of life usually do not develop normal speech and language. You also might have some children in your class who have hearing impairments that have not yet been detected. If you have students who turn one ear toward a speaker, frequently ask to have something repeated, don't follow directions, or frequently complain of earaches, colds, and allergies, consider having the student's hearing evaluated by a specialist, such as an audiologist (Hutchinson, 2002; Patterson & Wright, 1990).

Many children with hearing impairments receive supplementary instruction. Educational approaches to help students with hearing impairments learn fall into two categories: oral and manual. **Oral approaches** include using lip reading, speech reading (a reliance on visual cues to teach reading), and whatever hearing the student has. **Manual approaches** involve sign language and finger spelling. Sign language is a system of hand movements



Through the Eyes of Students and Parents

Learning the True Meaning of Inclusion

Gloria Christianson has learned a lot about inclusion over the past 19 years. Her son, Scott, was born deaf and blind with a variety of cognitive and physical exceptionalities that left him in a wheelchair and challenged his everyday functioning.

When Scott entered the school system, Gloria realized that there were many parents, teachers, and students who were afraid of him. But she also realized that there were students who were not afraid of him and that Scott was capable of developing and sustaining true friendships. She wanted Scott to be included fully in his friends' worlds, and for them to be included in his.



Scott's friends were an essential part of his inclusion in school and life. They understood Scott at a personal level that many adults, including some of his teachers, couldn't. They became Scott's advocates. They were included in his IPRC meetings and helped develop his individual education program. They willingly learned deaf-blind signing and they were the ones who introduced him to his new teachers and classmates and taught them how to communicate with him.

They demanded that Scott's experiences not be unreasonably different or separated from their own. For example, Scott's high school had an elevator that could be used only by educational assistants and their charges. Scott's friends lobbied the principal arguing that it was unfair and unnatural to interrupt their discussions with Scott so that he could be left with his educational assistant to use the elevator while they ran to meet him on another floor. Fortunately, the principal recognized the importance of adapting school policies to meet Scott's interests, rather than having Scott adapt to them. From then on, Scott's friends were allowed to ride the elevator with him.

Scott graduated from high school with his friends in September 2002, and his friends were with Scott when he passed away in October 2002. Scott's friends never treated him as someone "special"—he was just one of the gang.

Gloria and Scott Christianson
Ontario

that symbolize words. Finger spelling consists of "spelling out" each word by signing each letter of each word. A total-communication approach that includes both oral and manual approaches is increasingly being used with students who are hearing impaired (Hallahan & Kaufmann, 2000; Heward, 1996).

A number of medical and technological advances also have improved the learning of children with hearing impairments (Boyles & Contadino, 1997). These advances and technologies include cochlear implants (a surgical procedure), placing tubes in the ears (a surgical procedure for middle-ear dysfunction), hearing aids and FM amplification systems, and telecommunication devices, such as the teletypewriter-telephone and RadioMail (using the Internet).

Teachers will also need to adapt their teaching and communication strategies when working with students who have hearing impairments. Specifically, teachers should always

demonstrate patience, speaking slowly and providing students with ample time to process information. Teachers should focus on speaking distinctly versus shouting and be conscious of reducing distractions and background noises whenever possible. They should also be aware of their body position when speaking with students with hearing impairments, making sure that they are facing students and that their mouths, lips, and facial features are not obscured (Himber, 1989).

Physical Disabilities and Chronic Medical Conditions Physical disabilities in children can include orthopaedic impairments, such as cerebral palsy and epilepsy. Many children with physical disabilities require special education as well as related services, such as transportation, physical therapy, school health services, and psychological services.

Orthopaedic Impairments *Orthopaedic impairments involve restrictions in movement because of muscle, bone, or joint problems.* Depending on the severity of the restriction, some children might have only limited restriction, others might not be able to move at all. Some children cannot control the movement of their muscles. Orthopaedic impairments can be caused by prenatal or perinatal problems, or they can be due to disease or accident during the childhood years. With the help of adaptive devices and medical technology, many children with orthopaedic impairments function well in the classroom (Boyles & Contadino, 1997).

Cerebral palsy *is a disorder that involves a lack of muscular coordination, shaking, or unclear speech.* The most common cause of cerebral palsy is lack of oxygen at birth. In the most common type of cerebral palsy, which is called spastic, children's muscles are stiff and difficult to move. The rigid muscles often pull the limbs into contorted positions. In a less common type, *ataxia*, the child's muscles are rigid one moment and floppy the next moment, making movements clumsy and jerky.

Computers especially can help children with cerebral palsy learn. If they have the coordination to use the keyboard, they can do their written work on the computer. A pen with a light can be added to a computer and used by the student as a pointer. Many children with cerebral palsy have unclear speech. For these children, speech and voice synthesizers, communication boards, talking notes, and page turners can improve their communication.

Epilepsy *Epilepsy is a nervous disorder characterized by recurring sensorimotor attacks or movement convulsions.* Epilepsy comes in different forms (Barr, 2000). In one common form, called *simple absent seizures* (petit mal), seizures are brief in duration (often less than 30 seconds) and they might occur anywhere from several to a hundred times a day. Often they occur as brief staring spells, although motor movements such as twitching of the eyelids might appear. In another common form of epilepsy labelled *tonic-clonic* (grand mal), the child loses consciousness and becomes rigid, shakes, and displays jerking motions. The most severe portion of tonic-clonic seizure lasts for about three to four minutes. Children who experience seizures are usually treated with one or more anti-convulsant medications, which often are effective in reducing the seizures but do not always eliminate them. When they are not having a seizure, students with epilepsy show normal behaviour. If you have a student in your class who has a seizure disorder, become well acquainted with the procedures for monitoring and helping the child during a seizure. Also, if a student seems to “space out” a lot in your class, especially under stress, it might be worthwhile to explore whether the problem is boredom, drugs, or potentially a neurological condition. One individual was diagnosed with mild epilepsy late in high school after he had several accidents while learning to drive. The only prior indication was that he did poorly on some of his tests in school and said that he seemed to just space out on them. His teachers thought he was malingering, but the spacing out likely represented the beginning signs of mild epilepsy.

In this section we explore a number of ideas about speech and language disorders, developmental/intellectual disabilities, sensory impairments, cerebral palsy, and epilepsy. A review of these ideas is presented in Summary Table 6.2. In the next section, we will discuss students who are gifted.

SUMMARY TABLE 6.2

Students with Speech and Language Disorders, Developmental/Intellectual Disabilities, Sensory Impairments, and Physical Exceptionalities

<p>What are speech and language disorders?</p>	<ul style="list-style-type: none"> • Articulation disorders involve difficulty pronouncing words correctly. • Voice disorders involve speech that is too hoarse, loud, or high- or low-pitched. Children with a cleft palate often have voice disorders. • Fluency disorders generally involve stuttering. • Language disorders involve significant impairments in children's receptive (ability to interpret information) and expressive (ability to express thoughts) language.
<p>What are developmental/intellectual disabilities and how are they classified?</p>	<ul style="list-style-type: none"> • Developmental or intellectual disabilities involve limited intellectual functioning and adaptive skills. • Mild, moderate, severe, and profound were former classifications used when describing developmental disabilities. Intermittent, limited, extensive, and pervasive are new classifications based on the level of support required to function. • Currently students with developmental disabilities are classified as either mild or severe, with the latter category including the former designations of moderate, severe, and profound. • Children with mild developmental disabilities experience difficulty attaining the academic skills associated with their grade level. • Children with severe developmental disabilities are likely to have other neurological complications such as cerebral palsy, epilepsy, and visual or hearing impairments.
<p>What are visual impairments?</p>	<ul style="list-style-type: none"> • One in every 1,000 students in Canada is visually impaired. • 80 percent of these students read large-print books or read with the aid of a magnifying glass; 20 percent of the students are potential Braille users.
<p>What are hearing impairments?</p>	<ul style="list-style-type: none"> • Classroom indicators of possible hearing impairment include turning one ear toward a speaker, asking for things to be repeated, following spoken directions, and complaining of earaches, colds, or allergies. • Oral approaches to helping students with hearing impairments include lip reading and speech reading. • Manual approaches include sign language and finger spelling. • Medical and technological advances for helping students with hearing impairments include cochlear implants, surgery, hearing aids, and telecommunication devices such as the Teletype telephone and Internet Radio Mail.
<p>What is cerebral palsy?</p>	<ul style="list-style-type: none"> • Cerebral palsy is an orthopaedic disorder that involves a lack of muscular coordination, shaking, or unclear speech. It is most often caused by a lack of oxygen at birth. • The most common type of cerebral palsy is called spastic, in which muscles are stiff and difficult to move and often pull limbs into contorted positions. • Ataxia is a less common form, in which muscles are rigid one moment and floppy the next. • Computers with special keyboards or light pointers are helpful for children with cerebral palsy for written work and communication.
<p>What is epilepsy?</p>	<ul style="list-style-type: none"> • Epilepsy is a nervous disorder characterized by recurring sensorimotor attacks or movement convulsions. Treatment usually involves one or more anticonvulsant medications. • There are two forms of epileptic seizures: simple absent seizures and tonic-clonic. • Simple absent (petit mal) seizures are brief in duration (30 seconds) and may occur from several to several hundred times a day, with symptoms such as brief staring or twitching of eyelids. • Tonic-clonic (grand mal) seizures involve losing consciousness and rigid shaking or jerking motions that can last up to three or four minutes.

Learners Who Are Exceptional and Strategies for Teaching Them

Students Who Are Gifted

Students Who Are Gifted

The final form of exceptionality we will review is quite different from the disabilities and disorders we have discussed so far. While it is estimated that children who are gifted or otherwise “developmentally advanced” (Keating, 1990) comprise between 3 and 5 percent of students in Canadian schools (Hutchison, 2002), there is no universally accepted definition or measure of giftedness for all provinces or territories. The definition of giftedness most frequently cited in North America is the Marland definition, adopted by The United States Office of Education in 1972 (Alberta Learning, 2000). This definition relies on the professional diagnosis of children who, by virtue of outstanding abilities, are capable of high performance or potential in any one or more of the following areas: general intellectual ability, specific academic aptitude, creative or productive thinking, leadership, or visual and performing arts.

Traditionally, giftedness has been identified using standardized tests and intelligence measures including IQ categories such as mildly gifted (IQ of 115–129), moderately gifted (IQ of 130–144), highly gifted (IQ of 145–159), and extraordinarily gifted (IQ of 160+). Increasingly, however, the single-criterion identification of giftedness such as using IQ scores has given way to the use of multiple-criteria identification using a variety of sources including teacher nominations, behavioural checklists, parent nominations, peer nominations, and self-nominations (Alberta Learning, 2000). These changes, in part, reflect changes in the definitions of giftedness that incorporate newer and broader conceptions of intelligence, such as Gardner’s theory of multiple intelligences (Davidson, 2000; Gardner & Hatch, 1989; Gardner, 1983), Renzulli’s enrichment triad model (MacRae & Lupart, 1991; Renzulli & Reis, 1985) and Gagné’s differentiated model of gifted and talented (Gagné, 1997; 1993).

Gardner’s theory of intelligences is presented in Chapter 4; we will now look briefly at Renzulli and Gagné’s contributions to the definition of giftedness. According to Renzulli’s enrichment model, gifted students demonstrate higher than average ability in three important areas: cognitive abilities (high verbal fluency, the ability to generalize and abstract information, excellent retention), task commitment (goal setting, perseverance, and sometimes perfectionism, which can be detrimental), and creativity (curiosity, questioning, combining and transforming ideas). Renzulli’s model suggests that students who are gifted learn in different ways than other children. Gifted children tend to learn at a faster rate, process information better, have better recall, and possess better awareness of strategies and when to use them than other children.

Gagné’s model (1993) of differentiated giftedness and talent provides another valuable perspective on giftedness by making a clear distinction between giftedness and talent. Gagné (1993) defines *giftedness* as the possession and use of untrained and spontaneously expressed natural abilities (aptitudes or gifts), in at least one ability domain, to a level that places a child among the top 15 percent of his or her age peers. *Talent* is the systematic development of these natural gifts to a level of mastery in at least one field of human activity that places a child’s achievement within the upper 15 percent of age peers who are active in that field. The Gagné model describes five aptitude domains: intellectual, creative, socio-affective, sensorimotor, and “others” (e.g., extrasensory perception).

Gagné (1993, 1997) argues that natural abilities are the basic elements or talents, and teachers can provide a systematic approach to learning and training that is needed to develop raw ability into high-performance talent. Students’ natural abilities can be readily observed in the tasks they are asked to perform in school. For example, intellectual abilities are needed to learn to read, creative abilities are needed to produce original work in art or music, and physical abilities are needed in sports or metal-working classes. Gagné also argues that children cannot be talented without first being gifted. However, it is possible to have above-average natural abilities that are never developed into talents, as evidenced by the academic underachievement of some intellectually gifted children. The Gagné model also notes that intrapersonal factors (e.g. motivation, temperament, and personality) and environmental factors (e.g. surroundings, life events, parents, teachers, siblings, peers, and chance) may exert positive or negative influences on the process of talent development.



Wesley Chu is a student who is gifted in the domain of music. He is precocious, marches to the tune of a different drummer, and has a passion to master his domain.

The Gardner, Renzulli, and Gagné models of intelligence, giftedness, and talent have all contributed to the growing recognition and acceptance of the notion of different kinds of giftedness. This includes a greater acceptance of the idea of “dual exceptionalities,” where individuals may be both gifted and have a learning disability.

Canadian Wesley Chu is no stranger to the child prodigy scene. Shortly after his third birthday, Wesley started playing the piano. One year later, Wesley became the youngest person to achieve all nine grades at the Royal Conservatory of Music. By the age of five, he became the youngest person to pass his Grade 10 music exam and composed his first composition, “Sonatina in C Major.” He performed his second composition, “The Playground,” before the Queen of England as part of Canada Day festivities in Ottawa. At seven, he released a five-song CD. When Wesley turned nine, he signed a worldwide recording contract with Warner Classics International, and at age ten released his first major-label CD, *Wesley’s World*.

This native Albertan has appeared on many television shows, including the *VII Annual Vatican Christmas Concert*, where he met his Holiness Pope John Paul II and performed his original composition “Christmas in Bethlehem” with the prestigious Orchestra Sinfonica Italiana and Piccoli Musici di Bergamo choir. In 2002, Wesley was invited to perform at the United Nations “Voices and Visions” concert honouring Nelson Mandela. When asked about his plans for the future, Wesley responded “I want to be an astronaut, a scientist, a cartoonist, an inventor and ... a pianist.” (For more on Wesley, see www.wesleychu.com/biography.html.)

The Classic Terman Studies Lewis Terman (1925) followed into the adult years the lives of approximately 1,500 children whose Stanford-Binet IQs averaged 150. Their developmental outcomes were impressive. For the 800 men, 78 obtained doctorates (they include two past presidents of the American Psychological Association), 48 earned M.D.s, and 85 earned law degrees. These figures are 10 to 30 times greater than the educational achievements of the 800 men of the same age chosen randomly as a comparison control group.

Of the 672 women studied, two-thirds graduated from college in the 1930s, and one-fourth attended graduate school (Terman & Oden, 1959). The gifted women in Terman’s study represented a cohort whose childhood, and most of their adulthood, was lived prior to the women’s movement and the prevalence of the dual-career couple and the single-parent family (Tomlinson-Keasey, 1993). Studies of gifted girls and women today suggest that they have a stronger confidence in their cognitive abilities than did their gifted counterparts in Terman’s study (Tomlinson-Keasey, 1997).

As a group, Terman’s gifted were intellectually precocious but they were not emotionally disordered or maladjusted. This finding also has appeared in a number of studies of children who are gifted—namely, that they are as well adjusted as, or are better adjusted than, children who are not gifted (Hutchinson, 2002; Smith et al., 2001; Winner, 1996). However, children who are extremely precocious (such as those having an IQ of 180 or higher) often show more adjustment problems than children who are not gifted (Keogh & MacMillan, 1996).

Steven Ceci (1990) has argued that an analysis of the Terman group’s development brings up an important point. It was not just their high IQs that gained them success. Many of Terman’s gifted came from upper-income families, and their parents had high achievement expectations for them and played a guiding role in their success. However, a few of the most successful gifted individuals in Terman’s study did come from low-income families. Thus, success in life for individuals who are gifted doesn’t require being born into material wealth.

Educating Students Who Are Gifted Underchallenged gifted children can become disruptive, skip classes, and lose interest in achieving. Sometimes these children just disappear into the woodwork, becoming passive and apathetic toward school (Rosselli, 1996).

Three program options for gifted children include (Hertzog, 1998):

- *Special grouping.* Historically, this has been the common way to educate children who are gifted. The special classes during the regular school day are called “pullout” programs (Schiever & Maker, 1997). Some special classes also are held after school, on Saturdays, or in the summer.

- *Acceleration and enrichment in the regular classroom setting.* The majority of students who are gifted spend most of the day in general-education classrooms where they may participate in either acceleration and/or enrichment programs. Acceleration allows students to move through the regular curriculum at a rapid pace. Enrichment programs provide students with topics, materials, experiences, and skills that are beyond the depth of coverage associated with the regular curriculum. Most enrichment activities include some form of acceleration (Gellens, 2002).
- *Mentor, apprenticeship, work/study, and/or community service programs.* Some experts believe these are important, underutilized ways to motivate, challenge, and effectively educate children who are gifted (Gellens, 2002; Pleiss & Feldhusen, 1995).

The wave of educational reform has brought into the regular classroom many strategies that once were the domain of separate gifted programs. These include an emphasis on problem-based learning, having children do projects, creating portfolios, and critical thinking. Combined with the increasing emphasis on educating all children in the regular classroom, many schools now try to challenge and motivate students who are gifted in the regular classroom (Hertzog, 1998). Some schools also include after-school or Saturday programs or develop mentor apprenticeship, work/study, or community service programs. Thus, an array of in-school and out-of-school opportunities is provided.

An ongoing debate focuses on whether students who are gifted should be placed in acceleration or enrichment programs (Feldhusen, 1997). An **acceleration program** moves students through the curriculum as quickly as they are able to progress. Acceleration programs include early entrance (to kindergarten, Grade 1, intermediate grades, secondary school, or university), skipping grades, taking extra courses or honours courses, and taking advanced-placement classes. **Curriculum compacting** is a variation of acceleration in which teachers skip over aspects of the curriculum that they believe students who are gifted do not need.

An **enrichment program** provides students with opportunities for learning that are usually not present in the curriculum. Enrichment opportunities can be made available in the regular classroom; through “pullout” to a special class; through a gifted education resource teacher who consults with the regular classroom teacher; through independent study in after-school, Saturday, or summer sessions and in apprenticeship and mentoring programs; and through work/study arrangements. One type of enrichment program, the *schoolwide enrichment model*, includes developing students’ critical and creative thinking skills, and giving them opportunities to select areas of study (Renzulli & Reis, 1997). Students are identified for this type of program by multiple criteria that include creativity and commitment.

Research evaluation of acceleration and enrichment programs has not revealed which approach is best (Winner, 1997). Some researchers have found support for acceleration programs (Kulik, 1992), although critics say a potential problem of grade skipping is that it places students with others who are physically more advanced and socio-emotionally different (Gross, 1993). Other researchers have found support for enrichment programs (Delcourt et al., 1994; Renzulli & Reis, 1997).

Ellen Winner (1997) argues that too often students who are gifted are socially isolated and underchallenged in the classroom. It is not unusual for them to be ostracized and labelled “nerds” or “geeks” (Silverman, 1993). A gifted student who is the only such child in the room does not have the opportunity to learn with students of like ability. Many eminent adults report that school was a negative experience for them, that they were bored and sometimes knew more than their teachers (Bloom, 1985). Winner recommends that these students be allowed to attend advanced classes in their domain of exceptional ability. For example, some especially precocious intermediate-grade students are allowed to take university classes in their area of expertise.

At this point we have studied a number of ideas about children who are gifted. A review of these ideas is presented in Summary Table 6.3 and elaborated in the Diversity and Education box. Next, we will continue our exploration of learners who have exceptionalities by examining the many changes that are taking place in their education.



Diversity and Education Economically Disadvantaged Gifted Students

Some critics argue that too many children in gifted programs are not really gifted, but are instead bright, cooperative, and, usually, white and middle-class. They believe that the mantle of brilliance is cast on many children who are simply “smart normal.” Others are concerned that some students who are potentially gifted, especially those who come from ethnic minority backgrounds or from economically disadvantaged backgrounds, are at high risk for not being identified as such. Young boys and adolescent girls also are at risk for being unrecognized. Teachers play a critical role in the initial identification of students who will be assessed for giftedness. As the reliance on informal as well as formal assessment measures grows, teachers are increasingly being called upon to add their insights and observations about students’ everyday performances (Smith et al., 2001).

Economically disadvantaged gifted students have more in common with other gifted students than they have with other children from low-income families (Begoray & Slovinsky, 1997). For example, many possess creativity and leadership skills and are accomplished at solving real-life problems (Begoray & Slovinsky, 1997). However, classroom teachers sometimes find it difficult to recognize economically disadvantaged gifted students because they are not trained to look for them.

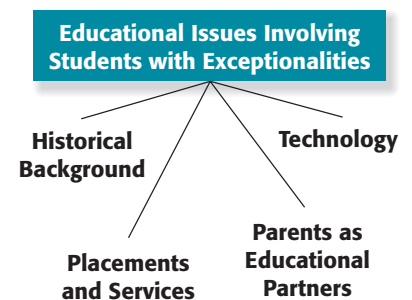
The Shad Valley Program is an example of gifted-education programming in Canada. This summer program for gifted high school students is offered annually at eight Canadian universities. The program, in operation since 1981, is designed to link high-school students with universities and introduce them to the communities of science, technology, and business (Shad, 2002). The program places students in challenging work terms that complement university workshops and seminars. Research data from the program, focusing on the participation of high-achieving females who have potential in the sciences (Lupart & Wilgosh, 1997), suggest that these female students view their participation as a unique and valuable opportunity to collaborate and network with their peers. This program model is heralded as an exemplary method for the promotion of a gender-balanced science culture in Canada (Lupart & Wilgosh, 1998).

EDUCATIONAL ISSUES INVOLVING STUDENTS WITH EXCEPTIONALITIES

The legal requirement that schools serve all children with an exceptionality is fairly recent. We will explore the legal aspects of working with children who have an exceptionality, profile the placements and services available for children with exceptionalities, discuss factors that affect the outcomes for children receiving special-education services, as well as examine the roles of parents and technology in educating these children.

Historical Background

The educational services provided to students with exceptionalities have changed dramatically over the past half-century. Prior to the 1950s, there was no obligation for Canadian schools to educate students with exceptionalities. Instead, the onus was on parents and caregivers to provide appropriate education for their children. As parents and support organizations became more vocal in demanding public schooling for children with exceptionalities, school boards began to develop segregated programs for these students. However the prevailing attitude with respect to special education in the 1950s remained one of



SUMMARY TABLE 6.3

Students Who Are Gifted

What are the characteristics of gifted students?

- Children who are considered gifted are those who have above-average intelligence and/or superior talent in some domain, such as art, music, or mathematics.
- Broader definitions acknowledge both demonstrated skills and potential abilities.
- Some students demonstrate outstanding abilities in more than one area; others demonstrate skills in specific areas or may have accompanying disabilities.
- Some critics argue that too many students in “gifted programs” aren’t really gifted but are instead bright, cooperative, and, usually, white.
- Others are concerned that students who are potentially gifted, especially young boys, adolescent girls, and students from ethnic minority groups or from socially and/or economically disadvantaged backgrounds, are at risk for being unidentified.

What were the findings from the Terman studies?

- These studies revealed the successful lives of many children who are gifted. Many of the Terman gifted not only had superior IQs but also came from high-income families in which their parents guided and monitored their achievement.

What programs exist for students who are gifted

- Educational programs available for children who are gifted include special grouping (“pullout” programs); acceleration, enrichment, mentor, and apprenticeship programs; and work/study or community service programs.

“looking after the less fortunate: one of social responsibility or liberal educational services as part of residential programs or as part of self-contained, isolated classrooms within a school.” These students rarely interacted with other students or teachers in the school (Smith et al., 1991). Curriculum designed for students with special needs during this period tended to focus on vocational training aimed at helping students find employment. Many students with exceptionalities who were less outwardly apparent or more behavioural in nature (the term learning disability was first used in 1963) were viewed as poor candidates for education, and public education for students who were gifted was a virtual nonentity until the 1970s (Weber & Bennet, 1999).

In the 1970s a series of landmark reports, for example *One Million Children: A National Study of Canadian Children with Emotional and Learning Disorders* (Roberts & Lazure, 1970) and *Standards for Education of Exceptional Children in Canada* (Hardy et al., 1971), were published questioning the value of special-education programs that paralleled regular education programs. Increasing public support for the integration of children with exceptionalities into the regular classroom slowly led to school boards mainstreaming or integrating students with exceptionalities into general education programs when it was deemed appropriate.

The 1970s were also marked by a series of court cases questioning the decisions of school boards to place students with exceptionalities in segregated classes. Legal advocacy has led to the increasing involvement of parents or their representatives in the day-to-day decision making associated with education for children with exceptionalities (Weber & Bennett, 1999). The mid-1970s in the United States saw the development of the Education for All Handicapped Children Act of 1975, which mandated that students with disabilities be provided an appropriate education designed to meet their unique needs in the least restrictive environment possible. The Act also required that students with disabilities be educated to the maximum extent appropriate with peers without disabilities (i.e., mainstreamed), and codified important practices such as consultation with parents and written individual education plans (IEPs) for students (Kayale, 2000). For Canadian educators

the Act highlighted the benefits and potential difficulties associated with implementing the least-restrictive environment; defining what the term “least-restrictive environment” means has led to many legal challenges.

By the 1980s, the national trend was moving from integration toward inclusion, which emphasized that students with exceptionalities should be fully included in school programs and activities (Smith et al., 1991). Inclusion differed from integration in several ways. One important differentiation was the underlying assumption that children with exceptionalities belong in the general classroom and that their schooling experiences should prepare them for the highest degree of independence possible (Liu & Pearson, 1999). In the 1980s, Canada also developed the Canadian Charter of Rights and Freedoms (1982), which constitutionally guaranteed the education rights of minorities and those with exceptionalities. In the early 1990s, Canada also ratified the United Nations’ Convention on the Rights of the Child (1989), which defined and outlined a number of children’s rights including the rights for children with exceptionalities to safety and education. While the Canadian Charter of Rights and Freedoms and Canada’s endorsement of the U.N. Convention on the Rights of the Child provide greater security and entitlement to children with exceptionalities, the struggle for equality and appropriate education is not over. Pellat (1997) notes that some provinces and territories have objected (and, thus, not complied) to the ratification of the U.N. Convention on the grounds that the promotion of children’s rights undermines parental authority. While Canada has moved forward in its understanding and approach to educating students with exceptionalities, there is still a long way to go.

Placements and Services

Obtaining Services for Students with Exceptionalities In Canada, prior to the 1970s, a medical model approach that relied heavily on formal assessments by outside professionals was central to obtaining services for learners with exceptionalities. Since then, teachers have played a more hands-on role in the obtaining of services for and assessment of their students (Weber & Bennett, 1999). Typically, when a teacher suspects that a child may have an exceptionality and may benefit from a modified program, the teacher will contact that student’s parents and discuss general behavioural or instructional processes that might resolve the difficulty. The teacher may also bring forward that student’s name, along with observations and other relevant documentation (e.g., samples of schoolwork, school records), to a team assembled to complete an assessment for the student and help with instructional planning and placement decisions. Usually, the team consists of the regular teacher, the special-education teacher (or resource teacher, special-education consultant, or school psychologist), the principal, and pertinent community members (e.g., a social worker, occupational therapist, and/or speech and language pathologist). The student’s parents—and, when appropriate, the student—are also invited to participate on this team. If a paraprofessional support person (educational assistant or resource teacher) has been assigned to work with the student, he or she will also serve on the team.

The primary purpose of this assessment is to identify a student’s strengths and learning needs. The assessment protocol may consist of both formal (e.g., standardized tests) and informal measures (e.g., curriculum-based assessment, observation, criterion-referenced testing) as deemed appropriate by the team or required by the school board (Smith et al., 2001). Specifically, the classroom teacher and other school-based members of the team usually carry out the informal assessments, while professionals in the community complete the formalized measures. In some communities where there are long waiting lists for assessment services, parents may elect to pay for the services of a professional. Based on the assessment findings, the appropriateness of the current instructional program is reviewed with the goal of implementing specific accommodations and/or modifications that will allow the student to experience optimal success in the general classroom. The assessment process continues with an evaluation of the effectiveness of these program accommodations and modifications, which in turn incite further decisions about curriculum modifications and the provision of special-education services. The results of this process are translated into an individualized education plan (IEP).

We, the peoples of the United Nations ...reaffirm faith in fundamental human rights, in the dignity and worth of the human person....

*Preamble to the Charter of the United Nations
June, 1945*



Increasingly, children with exceptionalities are being taught in the regular classroom, as is this child with a developmental delay.

- **Present level of functioning:** Provides an overview of the student's current performance level, including information gathered from formal and informal testing procedures
- **Long-term goals:** Specific, realistic, measurable goals that meet the direct needs of the individual learner. Goals may include items related to learning in the curriculum, independence in the community, and career planning.
- **Short-term goals:** The specific steps and processes required to achieve long-term objectives. Short-term goals may be written only after long-term objectives are identified and tasks analyzed for prerequisite knowledge and skills.
- **Instructional strategies, supports, and services:** These outline any changes to the instructional format and modifications to the curriculum. May include the use of assistive or adaptive technologies and other equipment as required. May also outline professional support services including occupational therapy or speech and language remediation.
- **Timelines:** Ideally, the IEP is implemented immediately after it is written. A date for formal review is usually set for the end of the school year in which the IEP was established or reviewed. Parents and other member of the school team will be invited to attend the review session.
- **Participants' roles and responsibilities:** Provides an overview of the roles and responsibilities of all individuals involved in the educational program including the classroom teacher, special-education teacher, parent, and student.
- **Evaluation procedures:** Outlines the assessment procedures that will be used to evaluate the effectiveness of the educational program. Assessment should be ongoing and occur in the learning environment.

The Individualized Education Plan (IEP) The individualized education plan—also known as the individualized program plan (IPP), the personal program plan (PPP), or the individualized student support plan (ISSP)—is the formal document that outlines the educational program for students with exceptionalities. Ideally, the school team prepares and regularly reviews the IEP in consultation with the student's parents. In most provinces and territories, an IEP is required whenever significant changes are made with respect to a student's learning expectations, curriculum, or teaching approaches (Hutchinson, 2002). Although the name and the specific format of the IEP may vary across provinces and territories, the plan is required to include the following components:

I have learned silence from the talkative, toleration from the intolerant, and kindness from the unkind; yet strange, I am ungrateful to those teachers.

Kahlil Gibran
Lebanese Poet, Philosopher, and Artist,
20th Century

The Regular Classroom Teacher With the increase in inclusion, the regular classroom teacher is responsible for providing more of the education of children with disabilities than in the past. The techniques outlined in *Teaching Strategies for Maintaining an Effective Inclusive Classroom* on page 193 can help you provide a more effective education for these children.

The Resource Teacher The resource teacher (sometimes called the learning assistance teacher, the learning program teacher, or the curriculum resource teacher) can provide valuable services for many children who have exceptionalities. Most children with exceptionalities spend the majority of their school day in a regular classroom and a small portion of their day in a resource room where a resource teacher works with them. In a typical arrangement, a student might spend a brief amount of time in the resource room and the remainder of time in the regular classroom. In many situations, resource teachers work with these students to improve their reading, writing, or mathematical skills.

It is important for the regular classroom teacher and the resource teacher to collaborate and coordinate their efforts. In some cases, the resource teacher will work with the student in the regular classroom setting rather than seeing the student in a resource room.

Teaching Strategies For Maintaining an Effective Inclusive Classroom

- ✓ Increase your knowledge base
 - become more knowledgeable about the types of students with exceptionalities in your classroom
 - keep up to date on the technology that is available for educating students with exceptionalities
 - read professional journals that specialize in the education of students with exceptionalities (e.g., *Exceptional Children*, *Teaching Exceptional Children*, *Journal of Learning Disabilities*)
 - join professional organizations that specialize in the education of students with exceptionalities (e.g., Council for Exceptional Children)
 - enrol in post-secondary and continuing-education courses that focus on students with exceptionalities and effective educational programming for them
 - encourage your school to provide increased support and training about how to teach children with exceptionalities
- ✓ Use relevant support services
 - carry out all components of students' individual education plans
 - become acquainted with and use available support services in your school and board
 - seek out potential support services in the community, including the use of volunteers
- ✓ Avoid using diagnoses as explanations
 - be cautious about using labels as causal explanations (e.g., "Larry has trouble reading because he has a learning disability," versus "Larry needs special help with reading")
 - evaluate students' progress and not their labels—labels have a way of staying with children even after students' performances have improved
 - use labels to consider the best conditions for improving students' learning and overall school experience
- ✓ Help all students understand and accept those with exceptionalities
 - provide all students with information about individuals with exceptionalities
 - provide opportunities for students without exceptionalities to interact positively with students with exceptionalities (e.g., peer tutoring and cooperative learning activities)
 - provide opportunities for students to help those with special needs
- ✓ Remember that all students benefit from effective strategies
 - be caring, accepting, and patient
 - hold positive expectations for all students' learning
 - help students with their social and communication skills as well as their academic skills
 - be enthusiastic about students' learning
 - monitor students' learning and provide prompt, effective, and explicit feedback

The Special-Education Teacher In Canada, some teachers have extensive training in special education. These teachers (sometimes called methods and resource teachers) will work with many students, including those who experience difficulties in school but who have not been identified as exceptional. Some children with exceptionalities will spend time with the special-education teacher for part of the school day and be mainstreamed



Through the Eyes of Teachers

Working Effectively with Paraprofessionals

Working with a teaching assistant, or educational assistant, sometimes can be a challenging and intimidating experience, especially for beginning teachers. Many paraprofessionals have worked in the school system for numerous years. As a teacher, you need to acknowledge the expertise and experience that paraprofessionals bring to your classroom.

When you first begin working with teaching assistant, spend some time getting acquainted. Ask about his or her background, special interests, and area(s) of expertise. Clearly express your commitment to your students' social, emotional, and intellectual well being, as well as your willingness to assume responsibility for all the children in your classroom, including those with exceptionalities.

It is critical to view your relationship with paraprofessionals as that of a team where all members work collaboratively to provide *all* students with optimal learning experiences. Working as part of a collaborative team means clearly identifying members' roles and responsibilities, participating in program planning, reviewing students' progress, and celebrating the successes of your students.

Dr. Vianne Timmons
Former Teacher and Dean, Faculty of Education
Vice President Academic Development
University of Prince Edward Island
Editor of *Exceptionality Education Canada*

the rest of the day. In an inclusive model, special-education teachers play a critical support role for regular classroom teachers, helping them develop and deliver programs for students with exceptionalities.

Professional and Paraprofessional Support Services In addition to regular classroom teachers, resource teachers, and special-education teachers, a number of other special-education personnel provide services for children with exceptionalities. These include teacher aides, psychologists, counsellors, school social workers, nurses, physicians, occupational therapists, physical therapists, and speech and hearing specialists. Transportation services may also be provided if needed.

Teacher aides (also known as educational assistants, or educational aides) can help the regular classroom teacher provide individualized instruction for students with exceptionalities. Some teacher aides are certified to work with students who have exceptionalities. Psychologists might be involved in assessing whether a student has an exceptionality and might be part of the team that creates the IEP. They and counsellors might also work with some students who have an exceptionality. School psychologists might make recommendations to teachers about ways that students with an exceptionality can learn more effectively. School social workers often help to coordinate family and community services for students with an exceptionality. Nurses and physicians might conduct medical assessments and/or prescribe medication for students with exceptionalities. Physical therapists and occupational therapists might be involved in helping students recover from remediable physical or cognitive impairments. Speech and hearing specialists may be included when their skills will help improve students' communication and listening skills.

Parents as Educational Partners

Educators and researchers increasingly recognize how important it is for teachers and parents to jointly guide the learning of children with exceptionalities (Williams & Cartledge, 1997). Refer to *Teaching Strategies for Communicating with Parents*, on page 195, for an outline of effective strategies.

Collaborative Consultation and Interactive Teaming In the last two decades, experts on educating children with exceptionalities have increasingly advocated more collaborative consultation (Idol, 1997; O'Shea & O'Shea, 1997). In **collaborative consultation**, *people with diverse expertise interact to provide services for children*. Researchers have found that collaborative consultation often results in gains for students, as well as improved skills and attitudes for teachers (Idol, Nevin, & Paolucci-Whitcomb, 1994).

Ideally, collaborative consultation encourages shared responsibility in planning and decision making. It also enables educators with diverse expertise to construct effective alternatives to traditional educational approaches (Pugach & Johnson, 1995). When collaborative consultation is used, many students remain in the regular classroom and the regular classroom teacher is actively involved in planning the students' education (Bryant & Bryant, 1998).

Increasingly, the term *interactive teaming* is being used (Thomas, Correa, & Morsink, 1995). Interactive team members are professionals and parents who collaborate to provide direct or indirect services to children (Coben et al., 1997). They share knowledge

Only from the alliance of one person working with another are great things born.

Antoine de St. Exupéry
French Essayist and Novelist, 20th Century

Teaching Strategies

For Communicating with Parents of Students with Exceptionalities

- ✓ Appreciate each student as an individual
 - discuss the student's strengths as well as areas of difficulty
 - focus on the student's positive-growth areas at the beginning and end of each conversation
- ✓ Place yourself in the parents' shoes
 - realize that parents often experience frustration, anger, and disappointment trying to help their children
 - relay compassion and an appropriate degree of hope for their children
- ✓ Provide parents with relevant information
 - engage parents in ongoing conversation about the nature of their child's exceptionality and implications for the child's schooling experience
 - work cooperatively with parents to establish realistic learning goals
 - discuss relevant resources that can be used to facilitate the student's schooling experience
 - discuss how popular magazines, newspapers, movies, television, and radio can sometimes provide inaccurate information about children with exceptionalities
 - encourage parents to discuss anything they read or hear pertaining to their child's exceptionality with you or other school personnel
 - share behaviour-management techniques with parents
- ✓ Avoid presenting yourself as the "expert"
 - recognize that each meeting with a parent is an opportunity to learn more about an individual student
 - recognize parents as equal partners
 - encourage parents to ask questions and express their emotions
 - acknowledge when you are unable to answer parents' questions and attempt to find the information for them
- ✓ Avoid stereotyping students
 - do research about the student, the exceptionality, and the available options
 - avoid making conscious or unconscious stereotypical judgments about students and their parents based on their socioeconomic status, ethnicity, family structure, religion, or gender
 - remember that conscious or unconscious biases undermine effective communication
- ✓ Reach out to parents to establish and maintain effective communication
 - inform parents that they play an important role in helping you and other school professionals understand and educate their children
 - recognize that parents know their children better than you do
 - support the attendance of parents at individualized education plan (IEP) sessions and other school meetings

and skills, teaching other members their expertise when appropriate. Actual team sizes vary, and teams change in composition depending on the complexity of the child's needs. Persons involved can include educational, medical, administrative, vocational, and allied health specialists, social services personnel, and parents.



Through the Eyes of Parents

Parents as Partners

Teachers need to keep parents informed and involved in their children's learning and development at school. Conversely, parents need to be willing to work with school staff and participate in events offered by the school. All of our boys' schools have offered training workshops, support groups, and information nights. We've learned a lot about how to help our sons become self-directed learners by taking part in these activities. Teachers are experts about learning, but parents are experts about their own children. Working together creates the best environment for student learning. We became involved in our sons' schools because we wanted to help them succeed in school and shape the environment that they grew up in.

Les and Susan Wagner
 Parents of Three Boys, Computer Entrepreneur & Nurse
 British Columbia

Technology

Two types of technology that can be used to improve the education of students with exceptionalities are instructive technology and assistive technology (Blackhurst, 1997). **Instructive technology** includes various types of hardware and software, combined with innovative teaching methods, to accommodate students' learning needs in the classroom. This technology can include videotapes, computer-assisted instruction, or complex hypermedia programs in which computers are used to control the display of audio and visual images stored on videodisc. The use of telecommunication systems, especially the Internet and its World Wide Web, hold considerable promise for improving the education of all students.

Assistive technology consists of various services and devices to help students with disabilities function within their environment. Examples include communication aids, alternative computer keyboards, and adaptive switches (see Figure 6.6). To locate such services, educators can use computer databases such as the Device Locator System (Academic Software, 1996).

Teams of educators and other professionals often combine these technologies to improve the learning of students with disabilities (Elkind, 2000). For example, students who are unable to use their hands to operate a computer keyboard might use a voice-operated computer (assistive technology) that provides instruction from a software program that was designed to provide spelling instruction (instructional technology). To read about traditional and constructivist technologies, see the Technology and Education box on the next page.

At this point we have studied many ideas about educational issues involving children with exceptionalities. An overview of these ideas is presented in Summary Table 6.4. In the next chapter we will turn our attention to behavioural approaches, social cognitive approaches, and teaching.

Traditional and Constructivist Technologies for Students with Exceptionalities

Traditional applications of technology for working with students with exceptionalities involve the use of computer-based tutorials, drill and practice, and games. These applications are used to improve the decoding and vocabulary skills of children with learning disabilities, especially those who have reading problems. Game-type software is often used to motivate children with a learning exceptionality.

Increasingly, tutorial or drill and practice applications of technology are being replaced by constructivist computer-based learning environments. Such environments focus on developing students' understanding and thinking skills through the use of real-world problem-based simulations. For example, Science Court, an Ontario Ministry of Education licensed software program, has a module that is aimed at the Grade 6 curriculum and reviews scientific phenomena (e.g., electric current) in an entertaining and thought-provoking way. The software has many scenarios presented as cartoons, which lead students through a science problem that

eventually is resolved as a court case. The case can be solved by having students view the video, meet in small groups, talk about and plan a solution, and wait for the final verdict. The software is accompanied by time for student group work, completion of the worksheets, and doing an experiment (www.yrbe.edu.on.ca/~cecw/docs/software/profiles/ScienceCourt.PDF). The use of problem-based simulations and programs has been shown to be both motivational and fun for students (Kosakowski, 2000).

Other constructivist technology applications that can be used effectively with children with exceptionalities are cognitive organizers, for example Idea Fisher and Inspiration. Word prediction software, voice recognition software, and text reader programs can also be used to help individuals with exceptionalities write or work on a computer, use e-mail, and access the Internet (DiPetta & Woloshyn, 2000).



(a)

FIGURE 6.6 Special Input Devices

These special input devices can help students with physical exceptionalities use computers more effectively.

(a) A student uses a special input device attached to the student's head to send signals to the computer.

(b) Many students with physical disabilities such as cerebral palsy cannot use a conventional keyboard and mouse.

Many can use alternative keyboards effectively.



(b)



SUMMARY TABLE 6.4

Educational Issues Involving Students with Exceptionalities

What is the historical background around educating students with exceptionalities?

- Between 1950 and 1970 students with exceptionalities were either in residential education programs or isolated in special classrooms.
- Landmark reports in the 1970s questioned the value of segregated education programs and proposed services based on individual needs rather than categories of exceptionalities.
- The Canadian Charter of Rights and Freedoms (1982) and legal challenges around segregated classes led to mainstreaming and integration, as well as to more parental involvement in children's educational planning
- Mainstreaming involves the integration of students with exceptionalities into general education programs.
- Inclusion assumes that children with exceptionalities belong in general classrooms and that schooling should prepare students for the highest level of independence possible.

How are services for students with exceptionalities obtained?

- Classroom teachers play key roles in obtaining services for students with exceptionalities.
- Teachers contact professionals or paraprofessionals to carry out assessments.
- Parents and other members of the school team develop individualized education plans (IEPs).

What is an individualized education plan (IEP)?

- IEPs are personal program plans that outline learning expectations, curriculum, and teaching approaches for a student with an exceptionality.
- IEPs include short- and long-term goals, supports and services, timelines, participants' roles, and evaluation procedures.

What is an inclusive classroom?

- Inclusion supports the assumption that students with exceptionalities belong in the classroom and that their schooling experiences should prepare them for the highest degree of independence possible.
- The regular classroom teacher is supported by special-education support personnel.
- Students are provided with an increased understanding of and acceptance for others.

What are the roles of resource teachers, special-education teachers, professionals, and paraprofessionals?

- Resource teachers provide individual services for students with exceptionalities.
- Special-education teachers have extensive training in special education and also work with students who experience difficulties in school but who have not been identified as exceptional.
- Special-education teachers support regular classroom teachers and help them develop and deliver programs for students with exceptionalities.
- Professionals and paraprofessionals support and work collaboratively with the classroom teacher.

What are instructive and assistive technologies, constructivist applications, and the World Wide Web?

- Instructive technologies (or instructional technologies) are applications of technology for teaching and learning (e.g. computers and audio/visual equipment)
- Assistive technologies are defined as devices that are used to help compensate for or overcome learning difficulties (e.g. speech synthesizers, text-readers, and books on tape).
- Constructivist applications are interactive uses of technology that promote understanding and thinking skills, often through the use of real-world simulations.
- The World Wide Web and other information and communication technologies assist isolated or homebound students to develop a sense of community and belonging.

Before the school year starts, Mr. Drago always holds a “get-acquainted” meeting with the parents of his incoming kindergartners. He does this so that he can explain what the children will be doing in kindergarten, his educational philosophy, his expectations, and the procedure for dropping students off at school. Especially important, this meeting provides parents with an opportunity to ask questions and voice any concerns they may have. This is what he typically hears from parents:

“Joaquim still naps in the afternoon. Is there any way we can have him changed to the morning class?”

“Ashley has severe asthma. She’ll need to have her nebulizer close by in case she has an asthma attack. Do you know how to use one?”

“I just know that Stephen won’t be able to sit still for very long. Do you allow the children to move a lot?”

“I sure hope you give the kids a lot of time to be active. Maura won’t be able to sit still for long, either.”

“Alex is very advanced for his age. What can you do to challenge him?”

“Amanda is advanced, too.” “So is my Tony.”

“Well, John seems to be behind. I just don’t know what to do with him. He doesn’t speak very well.”

Mr. Drago listens respectfully to each concern or question and provides the following response: “I’ll do everything I can to ensure your children have a good year in my class. All children are different and learn at different rates, so I’m not too worried about a child who is a little behind or ahead. I think we’ll all do fine together.”

The school year begins uneventfully. The children enjoy playing with each other and appear to have adjusted to school nicely. Mr. Drago uses the children’s free-play time to observe them. While there are obvious differences between the children, he has specific concerns only for Maura, Stephen, and Alex. Their lack of attention and inability to sit still during story time is beginning to be a bit disruptive. Mr. Drago makes a note to himself to talk to their parents about this behaviour. Each day at the beginning of class, the students have calendar time. Mr. Drago marks off the day of the month on the calendar with a large X and discusses the weather. He then writes a statement on the blackboard describing the day’s weather. On the tenth day of school, he writes on the

board “Today is sunny and hot.” He then reads the statement to the students so that they might begin to make word associations: “Today is sunny and warm.”

Alex quickly shouts out, “That’s not what you wrote! You wrote today is sunny and hot.” Mr. Drago is astounded.

Later, during free-play time, he asks Alex to sit with him. Alex looks longingly at the trucks, but grudgingly complies. “Alex, will you read this book to me?”

“Sure,” replies Alex, and does so flawlessly.

“Do you have this book at home?” asks Mr. Drago.

“Yep. Lots of others, too.”

“How about this one? Do you have it?”

“Nope.”

“Well then, suppose you try to read this one to me.”

“Okay, but then can I go play with the trucks?”

“Certainly.”

Alex reads the book to Mr. Drago, missing only a few words, and then rushes off to play with the trucks.

The next day during calendar time, Mr. Drago asks the class, “If today is the fifteenth day of the month and there are thirty days in the month, how could we find out how many days are left?”

The children call out, “We could count the days that don’t have X’s on them.”

“Very good,” replies Mr. Drago.

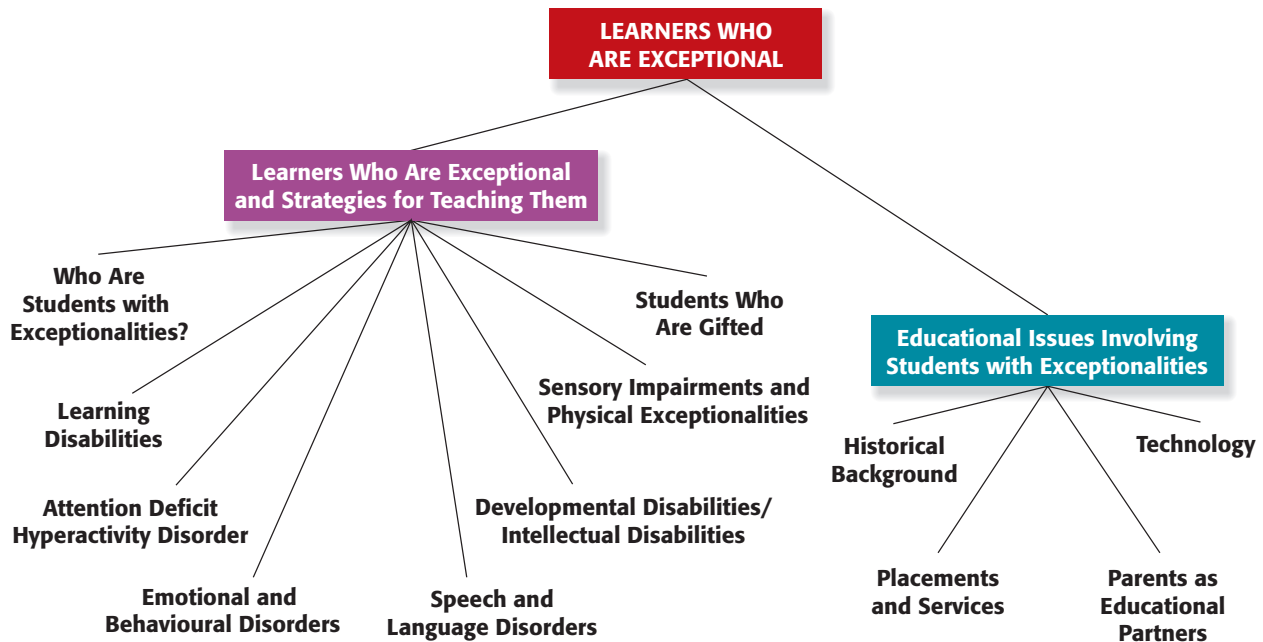
Alex looks puzzled. “What’s wrong, Alex?” asks Mr. Drago.

“Why don’t we just subtract?” he asks.

What are the issues in this case?

- How should Mr. Drago approach the parents of the students he believes might be gifted?
- Is it appropriate for him to recommend testing of any of the children? Why or why not?
- If Alex can already read and subtract, are there other skills he has likely mastered? If so, what might they be? How might this impact his experiences in kindergarten?
- How might Mr. Drago best program for a child like Alex?

CHAPTER REVIEW



To obtain a detailed review of this chapter, study these four summary tables:

SUMMARY TABLE 6.1	Learning Disabilities, Attention Deficit Hyperactivity Disorder, and Emotional and Behavioural Disorders	page 177
SUMMARY TABLE 6.2	Students with Speech and Language Disorders, Developmental/Intellectual Disabilities, Sensory Impairments, and Physical Exceptionalities	page 185
SUMMARY TABLE 6.3	Students Who Are Gifted	page 190
SUMMARY TABLE 6.4	Educational Issues Involving Students with Exceptionalities	page 198



KEY TERMS

dyslexia 168	depression 176	developmental disabilities/ intellectual disabilities 179	cerebral palsy 184
dyscalculia 168	speech and language disorders 176	fetal alcohol syndrome (FAS) 180	epilepsy 184
attention deficit hyperactivity disorder (ADHD) 171	articulation disorders 176	low vision 181	acceleration program 188
emotional and behavioural disorders 174	voice disorders 176	blind 181	curriculum compacting 188
autism 174	fluency disorders 176	oral approaches 182	enrichment program 188
Asperger syndrome 174	language disorders 177	manual approaches 182	collaborative consultation 194
	receptive language 178	orthopaedic impairments 184	instructive technology 196
	expressive language 178		assistive technology 196



PROFESSIONAL DEVELOPMENT/PORTFOLIO ACTIVITIES

1. Role Reversal

Place yourself in the role of a parent who has just been notified by the school that your child has a learning disability. In your portfolio, write down your thoughts on the following questions: What feelings are you likely to be having as a parent? As a parent, what questions do you want to ask your child's teacher? Now, write down how you, as the teacher, will respond to these questions.

2. Individual Education Planning

Teachers who work with children with exceptionalities typically develop an individualized education plan (IEP) for each child. What is an IEP? Find sample IEPs from local schools

and discuss in class how all students could benefit from receiving the type of feedback presented in an IEP. How could you use an IEP as a model for tailoring your instruction to meet the needs of all students?

3. An ADHD Strategy

Imagine that you have two students in your classroom who have been diagnosed with ADHD. Research and write a report on some of the strategies for helping these children succeed in the classroom. Why is family support so important? As the classroom teacher, what actions will you take to maintain ongoing communication with the family? Place your finished report in your portfolio.



INTERNET ACTIVITIES

1. Internet Resources for Special Needs

A number of Canadian and international organizations have created special-needs Websites for teachers. Find three such Websites and report to the class on what they offer teachers in terms of resources and tools for working with students in your classroom.

online world. What specific tools or software might students with learning difficulties benefit from? Search for these tools on the Web and make a list of the resources and sites that you find. Share this list with your class or include it in your portfolio.

2. Technologies for Living

The Internet provides a variety of resources and tools for helping students with exceptionalities participate fully in the

Connect to the Online Learning Centre at www.mcgrawhill.ca/college/santrock to explore possible answers.



Visit the *Educational Psychology* Online Learning Centre at

www.mcgrawhill.ca/college/santrock

to access Websites related to the above Internet Activities as well as chapter quizzes, a searchable glossary, and other learning and study tools.