

TEACHER EDUCATION SERIES

**STUDENTS AT RISK
IN THE CLASSROOM**

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About the Teacher Education Series

Canadian Faculties of Education enrol teacher candidates in concurrent or consecutive education courses or in-service programs aimed at professional development of practising teachers. While each of these programs has its own set of unique learning objectives, all teacher candidates share the quest for up-to-date information covering current educational research and teaching trends.

The Pearson Teacher Education Series is a modular publishing program covering hot and timely topics, such as the use of technology in education, gender equity issues, and integrating Aboriginal culture into your educational practice. These new and cutting-edge modules, authored by leaders in the field of education, all follow the same format, highlighting theories and examples, practical applications for the classroom, and case studies.

Continue to visit the Pearson Teacher Education Series throughout the year as it will continue to grow over time.

About the Authors

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Kim has been a general and special education teacher in both public and private settings, worked as a consultant for school districts, and provided professional development opportunities across Western Canada. For the last 19 years she has been an instructor at Thompson Rivers University sharing her expertise with both pre- and in-service teachers. Research interests include inclusive and special education, interventions for reading and math disabilities, learning disabilities, universal design for learning, teacher dispositions, and teacher education admission procedures.

Dr. William (Bill) Roberts received his B.A. from Reed College, where he majored in philosophy. He completed his M.A. (in physiological psychology) and Ph.D. (in developmental psychology) at Simon Fraser University, where he studied under Janet Strayer and Elinor Ames. After teaching at Mount Saint Vincent University in Halifax and York University in Toronto, he was washed ashore by the tides of fate at Thompson Rivers University in British Columbia (wlroberts@tru.ca).

His research has focused on the family roots of children's competence in preschool and elementary school, particularly on parents' warmth and responsiveness to emotional distress and their links to children's peer interactions and self-regulation. He has collaborated with several notable Canadian researchers in the area of child development, including Janet Strayer (empathy), Debra Pepler (aggression), and Clyde Hertzman (early experience). His work (see <http://faculty.tru.ca/wlroberts/index.html>) has been cited in over 500 publications, including many textbooks.

Bill has also authored (and placed in the public domain) software for recording and analyzing children's behaviour in natural settings (such as homes, schools, and playgrounds; see <http://sourceforge.net/projects/behavioraldata/files>).

Bill is the current editor of the *Canadian Journal of Behavioural Science* and a consulting editor for *Developmental Psychology*.

Introduction

The aims of the Students at Risk module are to offer teacher candidates and in-service teachers a practical guide to understanding some of the most common behaviours that interfere with learning in the classroom, their origins, and some useful strategies for helping students who face these challenges.

This text is not designed to be a handbook for teachers who are teaching in special education settings. Rather, it is intended for general education teachers who are working in inclusive educational environments. The principles of universal design for learning, multiple intelligences, and response to intervention that are introduced in this text are extremely useful constructs for use in any general education setting.

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LEARNING OBJECTIVES

1. Identify three types of antisocial behaviour and discuss their causes, prevalence, and differences across age and gender.
2. Provide examples of under-controlled and over-controlled behaviour, and discuss causes, prevalence, and differences across age and gender.
3. Explain why some students enter the school system with relatively low levels of diverse cognitive skills.
4. List eight types of diagnosed “high-incidence” disorders that result in at-risk behaviour, and discuss their causes, prevalence, and differences across age and gender.
5. Explain four protective factors that seem to guard against the adverse outcomes of at-risk behaviour.
6. Identify three ways that the learning experience can be maximized according to the universal design for learning (UDL) approach to inclusive education.
7. Identify Gardner’s eight common intelligences and discuss how they apply in a classroom setting.
8. Identify and discuss the three tiers of the response to intervention (RTI) approach to inclusive education.

PART ONE TYPES OF AT-RISK BEHAVIOUR

1. WHAT BEHAVIOURS PLACE A CHILD AT RISK IN THE CLASSROOM?

The school environment requires diverse skills from children and adolescents—not only cognitive skills, but equally important, social skills and self-management skills. And skills from all these areas need to be deployed together. To master a new classroom lesson, for example, requires not only a set of cognitive skills and the possession of relevant background information, it also requires that students actively cooperate with their teachers. This involves more than mere compliance. Students need to believe that the lesson is worth knowing.¹ It is this belief that allows them to focus on the task, and that motivates them to apply the skills they already have, to persevere in the face of challenges and difficulties, to evaluate their own progress, and to ask for help when they need it. These same self-management skills are required to meet the challenges of the informal curriculum: to interact successfully with peers; to learn how to organize and sustain mutual play and to work together; and to negotiate differences and resolve conflicts in ways that are satisfying and useful—solutions that will work over the long term.

With the need for diverse skills come diverse problems. As we will see below, many different types of problems can disrupt successful functioning in the classroom and place students at risk for learning difficulties.² Moreover, they often overlap, so that a student and teacher are confronted by a constellation of difficulties, not just a single problem. Aggressive children, for example, often have difficulty attending to and focusing on tasks, regulating their emotions, and maintaining positive social relationships with other children. Aggressive adolescents have to deal with academic failure; social rejection by nonaggressive, prosocial peers; the abrasive social relationships that exist in the deviant peer groups that do accept them; and, possibly, growing contact with police and the juvenile justice system (Farrington, 2005; Loeber & Hay, 1997). Although some problems affect children

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Sascha Burkard/Fotolia

¹As Piaget noted, good students do not learn whatever they want, but want to learn whatever is presented (Smith, 2009).

²Children are said to be “at risk” when they belong to an identifiable group that has a higher-than-average probability of an adverse outcome (in our case, academic difficulties and school failure). Often demographic variables (such as low income or Aboriginal status) are used to identify groups that are at risk. However, we have chosen not to focus on demographic variables because they are not direct causes in themselves. Rather, we will focus on behaviours (such as aggression) that have a direct impact on children’s interactions and learning in the classroom.

and adolescents only as individuals, most often, given the social setting of the classroom, difficulties spill over and affect peers as well.

In the next section, we will briefly describe the types of behaviour that are most common and problematic in the classroom and how they change over the course of development from primary to high school. We will then briefly consider the diverse types of causes that underlie these diverse behaviours, as well as some of the characteristics that they share. With this knowledge in hand, we will be able to consider classroom interventions.

A. ANTISOCIAL BEHAVIOURS

Although *antisocial behaviours* are quite diverse (Frick et al., 1993), they share the defining characteristics of terminating social interactions and disrupting social relationships. (*Prosocial behaviours*, in contrast, maintain or extend interactions and strengthen relationships.) In elementary school classrooms and on school playgrounds, the most common forms of antisocial behaviour are

- disruptive, noncompliant behaviour,
- physically aggressive behaviour (including bullying), and
- verbal or social aggression (for example, insults, exclusion, negative gossip, and ridicule).

In contrast, as children move into high school, the following trends occur:

- Openly defiant or disruptive behaviour declines.
- Physical aggression declines among most adolescents and in most neighbourhoods. However, a small group of highly aggressive youth, usually boys, begin to use weapons, engage in group conflicts, and assault teachers and strangers as well as peers (Loeber & Hay, 1997).
- Social aggression increases and is extended to new domains, such as dating aggression and sexual harassment. Exclusion and negative gossip are now amplified by the use of social media on the internet (Pervnet, 2014).

We will now explore these changes in more detail.

I. DISRUPTIVE, NONCOMPLIANT BEHAVIOUR It is useful to consider cooperative and noncompliant behaviour together, as they constitute the extremes of a single dimension. Both grow out of early relationships in the family and are then carried into the wider social contexts of the school.

Beginning in infancy and toddlerhood, parents who are affectionate and responsive to their children's behavioural initiations and emotional distress have children who become securely attached and reasonably compliant (Sroufe, Egeland, Carlson, & Collins, 2005). *Secure attachments* (present for about 60 percent of parent-child dyads) are relationships that are marked by mutual positive affect, mutual responsiveness, and mutual cooperativeness (Bowlby, 1982). Because the parent is responsive to the child's feelings, desires, and agency (that is, because the parent is willing to negotiate and accommodate), the child experiences adult requests for compliance as reasonable and fair, rather than coercive, and comes to respect and internalize them (Piaget, 1932/1997). This outcome is sometimes called *receptive compliance* (Kuczynski & Parkin, 2008). This is the pathway that, with continued parental warmth and responsiveness, leads to later self-regulation and cooperative social relationships with classmates and teachers in elementary school and, ultimately, high school (Sroufe et al., 2005)

Various problematic patterns of early parenting lead to later noncompliance and difficulties with self-regulation. Early care that is inconsistent (nonresponsive at some times but

intrusive at other times) leads to *resistant attachments* (present in about 10 percent of parent–child dyads). As toddlers, these children are both clingy and resentful. In preschool and early elementary school they are dependent, seeking excessive contact with teachers, and they have difficulty adjusting to novelty or change (Sroufe et al., 2005). The fluid, rapidly changing circumstances present in peer interactions are also challenging for them. As children, and even as adolescents, they show a tendency to focus on one or two friends, and to be preoccupied with these relationships.

Early parenting that is cool, physically rejecting, and unresponsive to children’s emotional distress results in *avoidant attachments* (present in about 15 percent of parent–child dyads). As a result of this history, these children avoid their parents when they are emotionally distressed, and often ignore them at other times. If these relationship characteristics persist, then by preschool, these children are liable to attack other children who are upset, and they are difficult and noncompliant with teachers (Sroufe et al., 2005). Like children with resistant attachment histories, those with avoidant attachment histories are more likely to display *situational compliance*. In contrast to receptive compliance, situational compliance depends on coercion and external controls, and is linked to later deception and evasion, rather than internalization and cooperation (Kuczynski & Parkin, 2008). Sustained by parental negativity and family interactions characterized by mutual coercion and low levels of positive affect and affection, patterns of conflict and noncompliance carry into elementary school and then into high school, where they are re-created and consolidated in new relationships and contexts (Kuczynski & Parkin, 2008).

The implications for classroom management are fairly straightforward. Teachers who are friendly and fair can more successfully be firm. Although warmth is thought to be especially important for teachers in the primary grades (Calder Stegemann & Roberts, 2013), the importance of being friendly and fair holds for high school teachers as well. Noncompliance and defiance usually indicate that children are experiencing serious relationship problems. If these problems are in the family, they can be difficult for teachers to address. However, as children grow older, teachers can help them understand that school (in contrast to home) is a benign environment and that it is in their interest to cooperate, and so create a relatively pleasant experience for themselves.

The need for intervention is underscored by longitudinal evidence that noncompliance and behaviour problems in elementary and high school are part of a long developmental process that leads to dropping out in high school. For example, Jimerson, Egeland, Sroufe, and Carlson (2000) reported that students who dropped out of high school, compared to those who graduated, experienced less responsive caregiving when they were toddlers. Less responsive caregiving, as outlined above, contributes to behaviour problems in elementary school, which in turn predict dropping out before the end of high school. Taken together, these variables correctly classified 75 percent of the students in their sample as dropouts or graduates. Measures of academic achievement and IQ did not provide any additional information on who would or would not drop out. Dropouts do struggle academically; but this appears largely to be a consequence of the social processes that lead them to withdraw from school.

II. PHYSICAL AGGRESSION Differences between *reactive* and *instrumental* aggression, which first emerge in kindergarten and Grade 1, are thought to be important. Reactive aggression, which is usually a response to being attacked, is characterized by intense emotional distress, including anger. In contrast, instrumental aggression (or *proactive aggression*, as it is sometimes called) is undertaken in order to achieve some goal and is relatively “cold-blooded.” Children characterized by reactive aggression are more inattentive and anxious, whereas instrumental aggression is associated with later delinquency (Dodge, Coie, & Lynam, 2006).

Gender differences in physical aggression are first apparent in preschool and increase as children become older, chiefly because girls become less physically aggressive over time.

However, girls do not forego physical aggression entirely. Both girls and boys report high levels of physical aggression with their siblings (Loeber & Hay, 1997); and adolescent girls in the Ontario Child Health Study reported surprisingly high levels of physical aggression, given their age. For example, 7 percent of adolescent girls reported physically assaulting other people, compared to 12 percent of adolescent boys (Pepler & Craig, 2005). Moreover, highly aggressive girls are just as aggressive as highly aggressive boys (in terms of frequency), and they share the same constellation of associated problems noted below for boys (Pepler & Sedighdeilami, 1998; Pepler & Craig, 2005). Thus, even though girls in general are less physically aggressive than boys in general, physical aggression can be a problem for some girls even into early and middle adolescence.

Although physical aggression declines for most children, for a few, mostly boys, aggression and bullying consolidate and become more frequent and more intense over the primary and intermediate grades (Loeber & Hay, 1997). Because they are frequently abrasive in their social interactions, these children tend to be rejected by nonaggressive, prosocial children, and so begin to associate with other aggressive, abrasive children as early as the primary grades. These deviant peer groups are thought to play an important role in consolidating and extending the aggressive behaviour of the children who comprise them.

By the intermediate grades, cruelty to other children or to animals emerges; and by adolescence, aggressive behaviours can result in injury or even death, not only because adolescents are stronger, but because they begin to use weapons (Loeber & Hay, 1997). These trends are of long standing. For example, in the United States, it was reported as early as 1993 that the proportion of students carrying weapons doubled from Grade 6 to Grade 9, from about one quarter of students to nearly half (Loeber & Hay, 1997). Cairns and Cairns (1994) reported that over 80 percent of the boys in their sample had access to firearms, and half of those under the age of 16 reported owning a gun of their own.

Thanks to gun control legislation, this problem is not as acute in Canada. The homicide rate for children under the age of 15, approximately four per million in Canada in the 1990s, is roughly 14 times lower than the rate in the United States (Canadian Paediatric Society, 2005). Although remaining small in absolute terms, the Canadian homicide rate does increase dramatically with age. For example, in 2009, homicides from all causes increased from 4 per million for children aged 10 to 14 to 29 per million for children aged 15 to 19 (Statistics Canada, 2012). Approximately 80 percent of these deaths (53 of 66, across all Canada) involved boys.

Despite restricted access in Canada, weapons are a concern, because although aggressive children typically fight with children of the same gender during elementary school, during adolescence, as we noted earlier, highly aggressive boys begin to rape strangers and assault teachers. Organized gangs also emerge at this time, and group fights lead to more, and more serious, injuries (Loeber & Hay, 1997). Fortunately (for teachers), serious violence is relatively rare at school—the majority of child and adolescent homicide victims are killed by family members (Canadian Paediatric Society, 2005).

For most children, in contrast to highly aggressive children, physical aggression declines over the course of elementary school and reaches fairly low levels by the end of high school (Prevnet, 2014). However, over this time, the nature of aggression changes. During preschool, children are chiefly aggressive for *instrumental* purposes—that is, to achieve desired objects or goals. But over the course of elementary school, aggression becomes increasingly *hostile*—that is, directed towards particular persons—and is more often elicited by perceived threats and insults, trends that increase during adolescence (Dodge et al., 2006).

The chief difference between school-age children identified as aggressive and those identified as nonaggressive by teachers (and classmates) appears to turn on self-regulation. In observational studies, both groups are aggressive on school playgrounds (e.g., Pepler, Craig, & Roberts, 1995); but children identified as aggressive are also aggressive in the classroom,

whereas nonaggressive children are not. Thus, by late elementary school (and even more during high school), nonaggressive children are able to regulate their behaviour according to context. For this group, noncompliance also declines over the primary grades, further evidence of the growth of self-management skills. In contrast, disruptive, noncompliant behaviour remains a characteristic of highly aggressive children (Loeber & Hay, 1997).

III. SOCIAL AND VERBAL AGGRESSION *Verbal aggression*, like physical aggression, involves face-to-face confrontation, but the assault is verbal, comprised of threats, ridicule, and insults. In contrast, *social aggression* (also called *indirect aggression* or *relational aggression*) is covert. Characterized by exclusion, ostracism, collusion, negative gossip, and character defamation, it can be difficult to identify those who perpetrate it. This obscurity prevents both retaliation by the victim and regulation by adults (Pepler & Craig, 2005).

While there are no gender differences in verbal aggression, some studies report that girls engage in more social aggression than boys, beginning in early adolescence (Dodge et al., 2006). Xie, Cairns, and Cairns (2005) suggest several reasons why this should be so. Following puberty, girls are, in general, less strong than boys, making physical aggression less attractive to them. In addition, girls tend to be more concerned with relationships and social status, giving them both a motivation and a method: social aggression requires social networks. Girls also, more than boys, focus on intimacy and self-disclosure in their friendships, thus giving them more opportunities to betray trust. Finally, Xie and colleagues argue, girls perceive social aggression to be as hurtful as physical aggression, whereas boys perceive it to be less so.³ These factors, combined with its covert nature, make social aggression very attractive for some girls.

Developmental changes in verbal and social aggression are less documented than changes in physical aggression. It is thought that the increased use of verbal and social aggression after age four is partly responsible for the normative declines in physical aggression noted above for both girls and boys (Dodge et al., 2006). Exclusion and negative gossip can be observed as early as preschool in some children, and these behaviours increase as children gain in social skills and understanding over the primary and intermediate grades. But the largest increase in social aggression occurs in early adolescence, since the effective deployment of the weapons of social aggression (deception, betrayal, exclusion, and defamation) in a complex web of social relationships requires a high degree of cognitive ability, and this only comes with maturity and the onset of formal operations (Piaget & Inhelder, 1969).

B. DIFFICULTIES WITH SELF-REGULATION

Problems with self-regulation are not restricted to aggressive children or to social interactions. Problems with self-regulation are evident when students are distractible or impulsive when learning requires them to be focused and on-task. At the other extreme, chronic inhibition or over-control is also a self-regulation problem (Block & Block, 1980). Thus, good self-regulation is, above all, indicated by flexibility in responding to the needs of the current situation under changing conditions. Students with good self-management skills can be focused in the classroom and also spontaneous with their classmates in social situations.

In infancy and toddlerhood, self-regulation occurs in relationships. It is not yet an individual characteristic, because infants and toddlers need help from a caregiver in order to regulate their emotional distress and their impulses (e.g., Kopp, 1982, 1989). But by age three or four, with continued caregiver support and monitoring, self-regulation is becoming internalized; that is, children demonstrate an increasing ability to manage their emotions and impulses on their own (Sroufe, 1995). Self-regulation continues to improve with age,

³Some authors (e.g., Underwood, 2003) have argued that of the two forms, social aggression is in fact more hurtful and damaging than physical aggression, since it undermines friendships and relationships with peers, and the damage it causes can only be undone with difficulty, if at all.

so that by the end of the primary grades, most children are able to adhere to classroom routines, including long periods of sitting. In contrast to these positive outcomes, however, children who are under-controlled (that is, who have difficulties regulating their emotions and behaviours) are becoming behaviour and management problems in the classroom: disruptive, noncompliant, and sometimes aggressive.

There is evidence for moderate gender differences in self-regulation, with boys being somewhat more impulsive (and active) than girls, trends that appear to continue through adolescence and into adulthood. In her review of the literature, Block (1983) noted that in a large representative sample of emergency room admissions, boys outnumbered girls at every age between 4 and 18, suggesting that they were more likely to engage in risky (and perhaps forbidden) behaviours; and observational studies of adults have found that drivers who run yellow or red traffic lights are more likely to be men than women. Men outnumber women in another area of risky behaviour: excessive drug use.

Several authors (e.g., Shedler & Block, 1990; Sroufe et al., 2005) have noted that the moderate, experimental use of drugs (either alcohol or marijuana) constitute a normative behaviour for adolescents (that is, one engaged in by more than 50 percent of youth), and that, indeed, exploring various behaviours, including various forbidden behaviours, is developmentally appropriate during adolescence. In contrast, frequent drug use and the use of many types of drugs have been repeatedly linked to adverse outcomes. For example, Shedler and Block (1990) compared adolescents who were frequent users of drugs at age 18 (that is, those who used marijuana at least once a week and had tried, on average, nearly three other street drugs) with adolescents who were moderate, experimental users (that is, those who used marijuana no more often than once a month and who had tried no more than one other street drug). Independent observers rated the frequent users as less self-regulated (that is, more unpredictable, less able to delay gratification, less responsible and dependable, more self-indulgent, and more maladaptive under stress), more antisocial (that is, more hostile to others, more deceitful and manipulative, more likely to undermine or sabotage, and more self-defeating), less warm, less sympathetic, less liked, and, finally, less happy. They were also doing less well academically (grade point averages were 2.3 and 3.0, respectively, for frequent users and experimenters).

Importantly, Shedler and Block's longitudinal data enabled them to determine that the problems shown by frequent users at age 18 were apparent even in the early elementary grades. At age 7, compared to those who later became moderate experimental users, future frequent users had more difficulty forming good relationships with peers and teachers, were more insecure, and they showed numerous signs of emotional distress. Across the entire sample (which included adolescents who never used any drugs),⁴ the strongest predictor of drug use was self-regulation. The more impulsive and less self-controlled adolescents were, the more often they used marijuana. Thus, difficulties with self-regulation and social relationships appear to predate drug abuse, rather than to result from it. The roots of drug abuse run deep, and effective intervention may need to begin early.

To summarize briefly: From a classroom management point of view, problems in self-regulation are most likely to be manifested in three areas. First, they are evident in difficulties in attending to instruction and completing work independently, both in elementary and high school. In the primary grades, however, this includes difficulties in sitting still and adhering to classroom routines. In extreme cases, difficulty in focusing attention can be so severe as to warrant a formal diagnosis (see below). Problems with self-regulation are also evident in conjunction with aggressive, antisocial behaviours (chiefly in elementary school, as aggression becomes more planned during adolescence). Finally, problems with self-regulation are apparent in conjunction with excessive drug use (most evident in high school).

⁴Those who abstained completely from drugs were more constrained and inhibited than those who used drugs moderately. They also had fewer friends, consistent with the suggestion that, during adolescence, friends lead each other astray.

In contrast to these behaviours, shy, inhibited children are usually not problems for classroom management, nor are they usually at risk for failing to understand the formal classroom curriculum. Nevertheless, they are at risk in terms of the informal curriculum of social skills and peer relationships (Rubin, Bowker, & Kennedy, 2009). Fortunately, most children have at least one friend, and shyness declines over the course of elementary school. (For this reason, however, social isolation is more problematic in older children.) Because it is not considered a risk factor for academic problems, we will not consider shyness further.

C. LOW LEVELS OF SCHOOL-RELATED COGNITIVE SKILLS

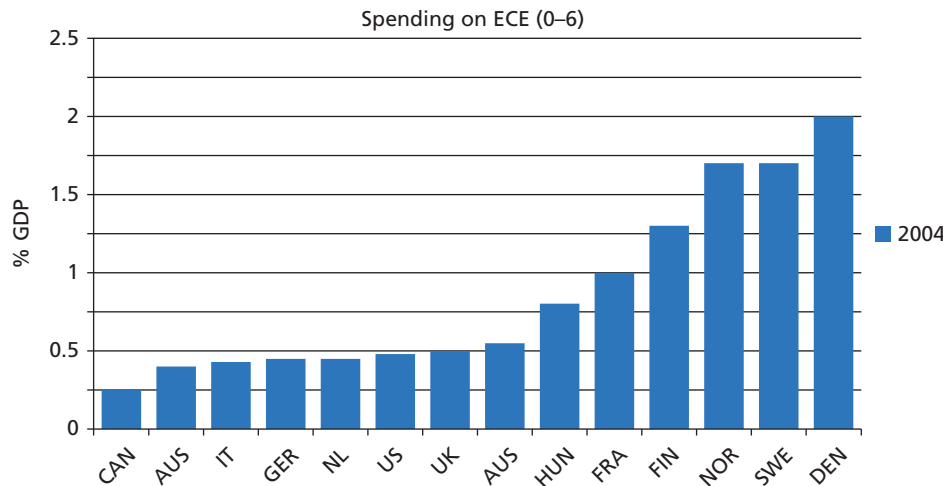
Knowledge, as Piaget (1927/2009) noted, is a social construction. Schools teach what is valued by the dominant society; what is taught reflects a consensus about what is worth teaching and worth knowing. Because our cognitive abilities grow out of our experiences (Piaget and Inhelder, 1969), children from peripheral or marginal social groups (e.g., low-income; Aboriginal) may enter the formal school system with relatively low levels of the diverse cognitive skills required for success in school (e.g., D'Angiulli, Siegel, & Hertzman, 2004), even when they show high levels of competence in their home environments. Moreover, these cultural differences may mean that these children do not see the value in learning what is presented, and their parents may be less able to help them in mastering these skills or supporting them in their early school experiences—for example, by effectively communicating with and collaborating with teachers (see Hill & Taylor, 2004, for a review).⁵

Initial deficits are a concern because of their cumulative effects. For example, difficulties in learning to read in Grade 1 place children at risk for learning difficulties in many areas in the later primary grades (Hertzman, 2009). Moreover, early difficulties are thought to undermine children's sense of academic competence. Expectations of failure lead to reduced effort and persistence, and make failure more likely. As children move into the later elementary grades and then into high school, remediation becomes more and more difficult (Weikart, 1998).

The developmental course followed by these children depends heavily on the learning opportunities provided by (or lacking in) the community and the school. There is abundant longitudinal research documenting that preschool intervention programs can substantially increase school-related cognitive skills (e.g., Anderson et al., 2003; Hertzman, 2009; Lazar, Darlington, Murray, Royce, & Stipper, 1982), a fact that is now widely recognized (OECD, 2013). Compared to control groups, children who attend preschool programs are less likely to later be placed in special education classes and more likely to graduate from high school, and they more often graduate on time. Other important benefits have also been documented. Assessed at age 27, adults who had attended the High Scope/Perry Preschool program 23 years earlier were less likely than controls to have been arrested or incarcerated, or to have ever been on welfare. More of them held jobs, and more of them owned their own homes (Weikart, 1998). In short, they were much more likely to become responsible, productive, tax-paying citizens. It is estimated that for every dollar spent on early intervention and education for low-income children, more than \$17 is saved over the long run (Karoly, Kilburn, & Cannon, 2005; Trefler, 2009).⁶

⁵Parental factors have also been implicated in grade retention in early elementary school (Jimerson, Carlson, Rotert, Eeland, & Sroufe, 1997) and in dropping out of high school (Jimerson et al., 2000). Jimerson et al. (1997) reported that grade retention was predicted only by parental involvement and children's behaviour problems, and not by academic achievement or IQ.

⁶The amount saved depends on the type and quality of the program and the length of follow-up time considered. However, even for high-income groups, ECE programs are cost effective—they save more over the long term than they cost.

Figure 1 Spending on ECE

In light of this evidence, it is disturbing that Canada ranks last among 16 OECD nations in spending for early childhood education, measured as a proportion of GDP (Semenuik, 10 February 2014) (see Figure 1). Only 48 percent of Canadian four-year-olds attend any preschool program, well below the OECD average of 84 percent (OECD, 2013). The failure of the Canadian government and of provincial governments outside Quebec to adequately fund early childhood education programs is a clear example of short-sighted government policies that damage children and families and increase long-term costs to society.

D. DIAGNOSED DISORDERS

Diagnosed disorders form a disparate group, ranging from mental illnesses (such as conduct disorder and ADHD) to severe learning disabilities to physical handicaps and impaired hearing or vision. What distinguishes them as a group is the fact that the difficulties are so extreme that the student has received a formal diagnosis (usually from a physician or psychologist), is eligible to receive government funding, and requires an *Individual Education Plan* (or *IEP*).⁷ It is worth noting that even though diagnoses are, in their nature, categories, the behaviours that lead to the diagnosis are continuous. Thus, the behaviours of children and adolescents with diagnosed disorders often do not differ in type but only in frequency and intensity from the behaviours of their peers (Sroufe, 1997). We will focus on those disorders most likely to be found in a normal classroom, often referred to as “high incidence” disabilities.

I. CONDUCT DISORDER *Conduct disorder* is defined as the persistent violation of the rights of others or of important social norms (American Psychiatric Association, 2013a). Examples would include physical cruelty to animals or people; threats to or intimidation of peers; deliberate destruction of property, perhaps by setting fires; deceitfulness; theft; and manipulation (American Psychiatric Association, 2013b). As these examples suggest, children and adolescents receiving this diagnosis may be callous and unemotional in their relationships with others. Behaviours must be present for least three months.

Estimates of prevalence vary widely, partly reflecting naturally occurring differences across age, region, and social conditions, but also differences in diagnostic criteria. For

⁷Different jurisdictions in Canada use different terms to denote these types of individual plans. For example, the Ministry of Education in Saskatchewan uses the term Personal Program Plan (PPP), while Nova Scotia uses the term Individualized Program Plan (IPP).

example, in Canada, it is thought that between 1.5 percent and 3.4 percent of all children and adolescents suffer from conduct disorder (Children's Mental Health Ontario, 2001). In contrast, rates in the United States are substantially higher.

There are marked gender differences in both the frequency and form of conduct disorder. During the elementary school years, when conduct disorder is chiefly manifested as physical aggression, it is three to five times more common in boys; but during adolescence, as conduct disorder begins to include covert offences (such as burglary) and prostitution, girls are diagnosed more often than boys (Children's Mental Health Ontario, 2001).

II. ATTENTION DEFICIT HYPERACTIVITY DISORDER (ADHD) *Attention deficit hyperactivity disorder* is defined by the presence of extreme levels of over-activity, impulsiveness, and an inability to focus attention or concentrate (American Psychiatric Association, 2013b). *ADHD* is thought to develop before the age of seven, but children rarely receive a formal diagnosis until they encounter demands for structure and self-control in the primary grades, and many are only diagnosed in later elementary school or early high school. Precise determination may be also be delayed if a child has the subtype of *ADHD* that is predominantly related to attention, with few symptoms of hyperactivity.

ADHD is more common than conduct disorder, and shows more stable gender differences. In a sample of over 930,000 children in British Columbia aged 6 to 12, 6.9 percent of boys were diagnosed with *ADHD*, compared to only 2.2 percent of girls. Over 70 percent of children who received a diagnosis were treated with medication (Morrow et al., 2012).

Hyperactivity is reasonably stable. In a longitudinal sample, Carlson, Jacobvitz, and Sroufe (1995) reported that a third of those children who were rated by their teachers as hyperactive in Grades 1, 2, and 3 (normed scores above the 95th percentile across all three grades) were still in the clinically hyperactive range in Grade 6. On the other hand, one could view these data as indicating a fair amount of change. Two-thirds of the original sample had improved by Grade 6; and the seven children who had remained hyperactive were joined by 12 others who were newly diagnosed with *ADHD*. Such patterns suggest that there are important environmental (as opposed to biological) causes for hyperactivity. The importance of environmental factors is also suggested by the fact that in the Minnesota study, caregiving variables assessed when children were between 6 and 30 months of age predicted hyperactivity in both the primary grades and at Grade 6, over nine years later (Carlson et al., 1995).

ADHD continues to be a problem through adolescence and into adulthood. For example, compared to other adolescents, young drivers with *ADHD* receive three times as many tickets for speeding and are involved in nearly four times as many traffic accidents (Mental Health Canada, 2014).

III. AUTISM SPECTRUM DISORDER (ASD) As the name implies, this category covers a range of disorders: autism, Asperger syndrome, pervasive developmental disorders, Rett syndrome, and childhood disintegrative disorder (American Psychiatric Association, 2014). Although the particular symptoms vary in nature and severity, they always include trouble communicating with others and carrying on social interactions. Students with *ASD* may be socially unresponsive (avoiding eye contact, for example) or have marked language delays. They also engage in repetitive behaviours and have severely limited interests. Symptoms often emerge by the age of three and can persist into adulthood.

ASD is a serious condition that until recently was fairly rare in Canada, affecting slightly more than 0.6 percent of all children (Health Canada, 2013). Prevalence rates throughout North America have increased. In the United States, rates appear to have jumped to 1.5 percent (MacDonald, March 28, 2014). Boys are four times more likely to be diagnosed than girls, suggesting that there may be a genetic component. However, on the whole, little is known about the causes of these disorders.



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IV. INTELLECTUAL DISABILITIES If intellectual disabilities were defined solely by low scores on standardized tests, then about 0.1 percent of all students would be diagnosed with a moderate or profound intellectual disability (they would have scores more than three standard deviations below the mean—that is, less than 55 on the Stanford Binet or Wechsler scales). About 2.1 percent would be diagnosed with a mild impairment (they would have scores between two and three standard deviations below the mean—that is, between 55 and 70). In fact, low levels of adaptive functioning must also be present (e.g., British Columbia Ministry of Education, 2013). Thus, children and adolescents with this diagnosis not only demonstrate a lack of competence in school (for example, they have difficulty telling time or counting money); they are deficient in basic skills across most domains of daily living (such as following rules, schedules, and routines). Based on these two criteria, about 0.4 percent of all students are considered to have a mild intellectual disability, and about 0.04 percent (that is, about 4 per 10 000), a moderate or profound disability. Individuals in the latter group require substantial support throughout adolescence and adulthood (Ouellette-Kuntz et al., 2010). There are no important gender differences.

V. LEARNING DISABILITIES In comparison to intellectual disabilities (above), which are global and severe, learning disabilities are relatively moderate in nature and, critically, restricted to one or a few domains, with normal abilities in other areas. Because individuals with learning disabilities may function very well in some areas, and there appear to be no physical characteristics, this heterogeneous group of disorders are often referred to as “hidden handicaps.” On initial observation, one may be inclined to conclude that a child is simply lazy, unmotivated, or not trying hard enough; in fact, learning disabilities are believed to result from a neurological abnormality. Although the relevant domains are usually academic in nature (difficulties in oral language, reading, writing, or mathematics), they also include self-regulation (difficulties with attention, planning, and decision making). *Dyslexia*, *dyscalculia*, and *dysgraphia* are the most common types of learning disabilities.

About 4 percent of Canadian children aged 8 to 11 are diagnosed with learning disabilities (2002 data; Milan, Hou, & Wong, 2006), a rate that may decline with age (only 2 percent of those aged 15 to 24 report a learning disability; Statistics Canada, December 3, 2013). There are consistent cross-national data that about three boys are diagnosed with learning disabilities for every two girls (OECD, 2007). It is not uncommon for children and youth with untreated disabilities to also suffer from behavioural problems (comorbidity).

VI. SPEECH AND LANGUAGE DIFFICULTIES; HEARING IMPAIRMENTS; VISUAL IMPAIRMENTS This very disparate category ranges from problems with pronunciation and comprehension to enduring deficits in hearing and vision. Difficulties with speech and hearing are particularly challenging because they interfere with social relationships as well as with academic mastery. The most common type of speech problem is *poor articulation*, which is relatively easy to remediate if addressed in early childhood. Hearing impairment appears to be fairly rare in older children (only 0.5 percent of adolescents and young adults from 15 to 24 years of age report a hearing impairment; Statistics Canada, 2009). According to some sources (e.g., Canadian Association of the Deaf, 2014) no really accurate information on prevalence is available.

In contrast to very low rates among older children, transient hearing losses are thought to be very common in young children due to *otitis media*. For example, it is thought that 60 to 85 percent of Canadian children have an *acute* case of otitis media by the time they are a year old, with rates only declining after the age of five (Worrall, 2007). Boys may be somewhat more vulnerable than girls, but gender differences are small and are not consistently reported (Bennett & Haggard, 1998). Acute cases usually receive medical attention because they are painful. However, otitis media can be asymptomatic. Even though the child experiences no discomfort, such cases can still result in mild to moderate hearing impairment because of fluid buildup in the middle ear. These impairments may persist for some time (until the child spontaneously recovers) as the condition often goes unnoticed. Even mild hearing impairments disrupt language acquisition, which depends on the ability to hear and to interact with others using language (Marschark, 1993). Peer relationships and social skills, which depend critically on the ability to speak and to listen, are negatively affected as well (e.g., Vernon-Feagans, Manlove, & Volling, 1996). Finally, children with early hearing impairments learn to be inattentive, so that early otitis media is often associated with impaired learning throughout elementary school and even into early adolescence (e.g., Lindsay, Tomazic, Whitman, & Accardo, 1999; Roberts, et al., 1987).

In contrast to the nearly universal experience of otitis media, only about 6 percent of Canadian six-year-olds suffer from *myopia* (nearsightedness), although the rate is substantially higher in some groups (for example, 22 percent of six-year-old Chinese Canadians are myopic; Access Economics, 2009). The incidence of myopia increases over the course of childhood, reaching about 20 percent in North America by the end of elementary school. Adolescent onset is uncommon, but rates increase again in adulthood (Yu, Li, Gao, Liu, & Xu, 2011). It is thought that 60 percent of children experiencing reading difficulties have undetected or uncorrected vision problems (National Coalition for Vision Health, 2011). As with hearing loss, early detection is important.

2. CAUSES OF AT-RISK BEHAVIOURS

There is convincing evidence from longitudinal studies—notably the Minnesota study (e.g., Sroufe et al., 2005) and the Berkeley study (e.g., Block & Block, 2006)—that early experiences in the family have important consequences for children’s social relationships (including their prosocial and antisocial behaviours) and their self-regulatory abilities (including their flexibility and resourcefulness). When things go well (that is, when parents are affectionate, responsive to children’s needs and emotional distress, when they encourage exploration and play, and when they support young children’s emerging autonomy and independence while providing clear guidelines and structure), children become friendly, cooperative and empathic, independent, curious, and self-regulated. As toddlers move from the family into the wider world of preschool, these qualities stand them in good stead, allowing them to meet other children and adults in ways that are friendly and cooperative. Such children can take advantage of opportunities to learn and to make friends. They are easy to teach and to parent. As long as environmental supports remain favourable, they go

from strength to strength, adapting well to the school environment of the early primary grades and to the challenges of later childhood and adolescence. Although adverse environments, when they are encountered, will take a toll on them, as on all students, they will show resilience in the face of stress—they will have the ability to recover and do well over the long run (Sroufe et al., 2005).

There is no doubt that constitutional or physiological differences in children's vulnerability to stress exist; but it is important to realize that genetic factors do not operate independently of the environment, as has long been supposed. According to Keller (2000), the concept of *genes* and *genetic action* were first introduced at the beginning of the twentieth century in order to account for two striking biological facts: the existence of inherited family characteristics, and the fact that embryological development always runs "true to type" (that is, even though the fertilized single egg-cells of frogs, birds, and people all appear to be remarkably similar under the microscope, they invariably develop, and only develop, into frogs, birds, and people, respectively). At the end of the nineteenth century, it seemed that we could only account for these facts by supposing that there were hereditary particles that were transferred unchanged from generation to generation, sequestered from and immune to environmental influences—how else could recognizable characteristics be transferred from parents to children? And since development ran "true to type," these unchanging particles must not be acting on the environment, directing physical development.

By 1960, it seemed that this conceptual model had been given a physical basis. DNA had been identified as the repository of hereditary information; its structure seemed to indicate that it could replicate itself; and the doctrine of "one gene-one protein" appeared to explain how genetic action could construct organisms. Unfortunately for the model, life turned out to be much more complicated. In recent decades, it has become clear that genes do not replicate themselves—that is the task of very complicated cellular machinery. DNA is not sequestered from the environment, but embedded in it. For example, in times of environmental stress, the processes that replicate DNA, change DNA; that is, they produce more mutations in their copies. By increasing genetic variability, these processes increase the odds that some offspring, at least, will make it into the next generation. Moreover, it is now apparent that the types of proteins produced by cells are influenced by many factors in the cell and its local surroundings, in addition to the information that is stored in the cell's DNA. That is, *epigenetic* factors, factors in the environment, influence how information in the DNA is utilized (Keller, 2000).

We now appreciate that prenatal factors and early rearing conditions can influence learning and health throughout childhood and even into adulthood, because they influence the early physical development of the body (e.g., Barker, Eriksson, Forsén, & Osmond, 2002; Hertzman, 2009). Early intervention is important when environmental circumstances are unfavourable.

Unfortunately, many children do encounter unfavourable early circumstances. Parents who themselves had difficult childhoods, who are parenting alone or have difficult marital relationships, who experience serious illness, financial difficulties, the stress of finding adequate housing, or any other of a long list of challenging life circumstances, will have difficulty providing an optimal environment for their children. There are only a few ways for things to go well, but many ways for things to go wrong, and support can be needed simultaneously on very different levels (Bronfenbrenner, 2005). There is an important role for social policy, as noted by Werner and Smith (2001) among others. We will now consider some of the factors that are associated with the difficulties that we identified earlier.

A. ANTISOCIAL BEHAVIOUR

Many studies have found an association between family interactions and later noncompliance and aggression. Based on their review of the literature, Sroufe et al. (2005) conclude that children who experience early care that is unresponsive, inconsistent, or intrusive, as

well as harsh and rejecting, become angry and alienated. They show low levels of empathy, expect others to be hostile, and have trouble regulating their behaviour, with the result that they engage in disruptive, oppositional, and aggressive behaviours. These behaviours, in turn, elicit dislike, anger, and harsh treatment from parents, and, as the children grow older, from peers and teachers. Thus, these children are both the victims and architects of the relationships that create and then perpetuate their difficulties.

While these patterns of interaction can become fairly entrenched by the time children are in elementary school, the work of Patterson and his colleagues (e.g., Patterson & Dishion, 1988) demonstrate that interventions can be successful. When parents of highly aggressive children are trained to notice and consistently reward positive behaviours in the family and to firmly and consistently discourage aggressive behaviours at home, their children become markedly less aggressive and more compliant in school. Positive peer relationships, supportive relationships with a teacher, or experiences that foster self-regulation (such as a highly structured classroom environment in the early grades), can also help children become less aggressive and more compliant. As noted above, many children who are aggressive in preschool become less so over the course of elementary school, while self-regulation and compliance increase.

While some children who are aggressive early in childhood continue to be aggressive into adolescence and adulthood, there are other children who first begin to be aggressive only during adolescence. The reasons are not well understood, but appear to be related to greater levels of stress or to higher levels of emotional distress (Loeber & Hay, 1997). It is thought that these late-onset children are likely to desist from aggression by the end of adolescence. Although some have argued that the distinction between early- and late-onset is important, others have argued that the same processes are operating for both groups and, indeed, along all the relevant dimensions of behaviour from nonaggressive to aggressive (Loeber & Hay, 1997; Sroufe, 1997).

We have already discussed factors related to the increasing use of social aggression (exclusion, character assassination) across elementary and high school. As we noted earlier, social aggression, like physical aggression and bullying, can be traced back to early rearing conditions that foster a lack of empathy, increased maliciousness, and a desire to dominate and control others. In contrast to physical aggression, however, social aggression requires high levels of social and cognitive skills, and so it shares causal factors identified earlier for normal social development.

B. DIFFICULTIES WITH SELF-REGULATION

As noted earlier, infants and toddlers need adult help to regulate their emotions and behaviour (e.g., Kopp, 1982, 1989). Sensitive, responsive parenting during this period lays the foundation for later internalized self-regulation and successful independent behaviour. By preschool, children who earlier participated in responsive, affectionate relationships, and who continue to enjoy such relationships with their parents and other family members, are creating positive social relationships with others in their classrooms. They encounter or create fewer social problems, and show more flexibility in solving them, according to observational data reported by Sroufe et al. (2005). Compared to other children, they need less guidance from their teachers and have less contact with them, preferring to play with peers.

These positive outcomes depend critically on self-regulation. In some situations it is necessary to moderate one's emotional distress or behavioural impulses (when sharing, for example, or waiting in line, or resolving a conflict), whereas in other situations it is necessary to maintain or even increase levels of pleasurable excitement in oneself or in others (as when playing games). Children who have grown up in a caring environment in which emotions are expressed and accepted, in families in which differences are resolved in an

equitable manner by parents who are themselves self-regulated, enter school with the self-management skills needed to negotiate the challenges that they will encounter there (Sroufe et al., 2005).

In contrast, children who are impulsive and under-controlled have usually experienced early care that is inconsistent, intrusive, and sometimes harsh. As they grow older, entering preschool and then elementary school, their family environments continue to be somewhat chaotic, as well as unaffectionate. Their parents often do not take their family responsibilities seriously. For example, Block (1971), in a classic longitudinal study, found that men and women who were under-controlled as adults had, during their elementary and high school years, lived in homes that were unpredictable and ever-changing, with mothers who were self-indulgent and fathers who were detached and indifferent. Moreover, discipline was erratic and sometimes marked by parental harshness and anger. Similar patterns have been found in more recent longitudinal studies (e.g., Kremen & Block, 1998; Sroufe et al., 2005).

Maltreatment and neglect, as one might expect, produce extremes along these dimensions, depending on the nature of the maltreatment (Sroufe, 2002). Physical abuse, for example, is strongly related to higher levels of negative affect and greater under-control, with their attendant learning and behaviour problems. In contrast, children who are neglected are dependent, anxious, and struggle academically, with many of them recommended for grade retention or special education services (Sroufe et al., 2005).

In contrast to these adverse outcomes, if parenting becomes more sensitive and responsive during the preschool period (or later), children, even abused children, will show improvement in self-management and independence. We will examine factors that contribute to such positive changes in parenting and children's behaviour in the section on protective factors. Early experience lays a foundation, but it is not destiny.

For normally developing children in North America, there appear to be slight but important gender differences in the development of self-regulation during childhood and adolescence, linked to gender roles and gender-role stereotypes. Compliant, inhibited behaviour is more acceptable for (and expected of) girls, whereas independent, active, impulsive behaviour is more acceptable for boys. Based on their longitudinal data, Kremen and Block (1998) concluded that, as a result of these different socialization pressures, slightly different parental strategies were associated with optimal self-regulation in girls and boys. Parents who were observed to be expressive, affectionate, and child-focused with their daughters during a teaching task when their daughters were four years old had daughters who were appropriately self-regulated as adults. In contrast, parents who were observed to engage in constraint and who focused on performance in the teaching task had daughters who were later inhibited and constrained as adults. Parents of boys who were observed to be affectionate and who (in contrast to parents of girls) placed greater emphasis on working harmoniously and productively during the preschool teaching task had sons who were appropriately self-regulated as adults. In contrast, parents' observed hostility and ineffectiveness during the preschool teaching task predicted boys' later impulsiveness and under-control as adults.

Thus, supportive parenting (rather than autocratic, controlling parenting) appears to be most helpful for girls, preventing them from becoming inhibited and constrained, as they are encouraged to do by the socialization pressures associated with their gender role. For boys, supportive parenting that emphasizes harmonious, well-regulated relationships (in contrast to parenting that is unaffectionate and ineffective) appears to be especially important, preventing them from becoming under-controlled and somewhat unempathic, outcomes encouraged by the socialization pressures associated with their gender role.

It is possible that these patterns have implications for classroom management. Regardless of gender, it may be important to encourage children who seem constrained and inhibited, while emphasizing friendly, harmonious behaviour for those who are impulsive.

C. LOW LEVELS OF SCHOOL-RELATED COGNITIVE SKILLS

Many children, especially those from low-income families or marginalized social groups (such as Aboriginals or other visible minorities) enter the formal school system with low levels of the school-related cognitive skills that they need to successfully meet the challenges of the primary grades. Because cognitive development is driven by experience (a point made long ago by Piaget), these school-related deficits are linked directly to aspects of early environment (Hertzman, 2009). Thus, as we noted earlier, demographic variables, although *markers* of increased risk, are not themselves *causes* of increased risk.

Perhaps because of the vigour of neurological development over the first five or six years of life, early educational intervention is easier and more cost-effective than later intervention (OECD, n.d.). However, in the absence of any intervention, deficits acquired by preschool tend to persist and even to have later impact on health, as well as schooling (Hertzman, 2009; OECD, 2013). Many middle-class and upper-income families tacitly recognize the importance of the preschool years for cognitive and social development when they purchase preschool experiences (such as Montessori, dance, Brownies, or Beavers) for their young children; but given the relation between family income and academic achievement, benefits are greatest for low-income and marginal groups (OECD, 2013). Thus, activities in preschool, full-day kindergarten, and Grade 1 can make a substantial difference for low-income and Aboriginal children. We will review some of these activities in the section on interventions.

D. DIAGNOSED DISORDERS

We take the view of Sroufe (1997) that psychopathology results from a developmental process—that is, that it results from a series of adaptations made to a number of adverse (or risk) factors and a dearth of resources (or protective factors). In this section on causes, we are considering factors that first place students on maladaptive pathways and then maintain them there. Other protective factors (which we will consider in the next section) operate to deflect them back towards more adaptive modes of behaviour.

From this developmental point of view, we can understand how the processes that we reviewed above for the origins of aggressive behaviour can lead to the extreme forms of aggression and noncompliance that result in a diagnosis of conduct disorder. Similarly, we can understand how the processes that we reviewed for difficulties of self-regulation can result in the extreme problems characterizing ADHD. Similarly, it is plausible to think that factors associated with low levels of school-related cognitive skills are at least partially responsible moderate levels of intellectual disabilities.

In contrast, as noted earlier, little is known about the causes of the more intractable difficulties grouped under the labels of autism spectrum disorders and severe intellectual disabilities. A variety of medical or physiological factors appear to be implicated in these disorders, as they clearly are for problems with hearing and vision and related difficulties of speech and language. Without the proper prospective longitudinal studies, we can know little about the origin and development of these difficulties—and such studies are almost impossible to conduct if the disorder is rare, because children need to be identified before the disorder emerges. Fortunately, advances in brain scan technology and use is helping to identify the exact physiological or neurological impairments for disorders such as learning disabilities.

Typically, however, our efforts at remediation aren't readily assisted by our understanding of underlying causes, and we must carefully observe the impact of our interventions.

At all times, it is necessary to note and evaluate the consequences of our actions, but never more so than when we are unaware or unsure of the causes that first precipitated and then maintained a disorder or maladaptive pattern of behaviour.

3. PROTECTIVE FACTORS

There are a number of factors that seem to protect children from the adverse outcomes discussed above. Speaking generally, a given protective factor may be associated with reduced levels of several adverse outcomes; and, as with demographic risk factors, the causal processes underlying them are sometimes unclear. Some protective factors appear to be markers or proxies for processes that we do not fully understand. Other factors (such as gregariousness or social support, for example) appear to reflect important causal processes contributing to resilience or recovery. In the following discussion, based largely on longitudinal data collected in Hawaii (Werner & Smith, 2001) and Minnesota (Sroufe et al., 2005), it will be useful to consider protective factors using a multi-level approach (Bronfenbrenner, 2005).

A. FACTORS IN THE CHILD

As infants and toddlers, children who are later resilient in the face of stress are active, but not excitable or easily distressed. They can be readily comforted by their mother or other caregiver—that is, they are well-regulated in the context of their early dyadic relationships. As toddlers, they are sociable and likable, qualities that bear them in good stead as they move into preschool and then elementary school. They are alert, responsive, and willing to ask for help when it is needed—qualities which are aided by having caregiving that is responsive and helpful, rather than indifferent, uncaring, or intrusive.

In preschool, children who are resilient are cooperative and sociable, as they were earlier. Importantly, they are able to take advantage of the learning opportunities to which they are exposed, as their world expands beyond the home and their immediate family (Sroufe et al. 2005).

In the primary grades, resilient children are doing well in school—not, as Werner notes, because they are bright, but because they are able to pay attention and be persistent. Their self-management skills allow them to deploy whatever abilities they have to the task at hand. They are noted for their reading skills and for their flexibility. They are good at problem-solving and not constrained by their gender role.

It is worth noting that in Werner's longitudinal study, doing well in school during the primary grades was itself a protective factor for adverse outcomes during adolescence (such as failure to graduate from high school, delinquency, or early pregnancy) and even into middle age (for employment status, family status, and life satisfaction at age 40).

B. FACTORS IN THE FAMILY

As we have already seen, factors in the child and factors in the family are closely related. Early attachments and support for exploration, play, and cooperation lay the foundation for competence in preschool, and continuing parental support, warmth, responsiveness, and guidance continue to be important throughout the school years. For young children exposed to problematic parenting, a positive, close relationship with at least one caretaker during the first years of life is critical—an aunt or uncle, a grandparent, or even a neighbour. During preschool or the early primary grades, a supportive relationship with a caring teacher can be extremely important, also.

Beyond these relationship qualities, and perhaps connected with them, are several structural qualities. Resilient children are most likely to come from families with no more than four children, spaced at least two years apart. Werner also found that it was helpful for older children to have some valued, useful responsibility within their family. For girls whose mothers were working for wages (a protective factor in itself), this often involved caring for younger siblings. For boys, family responsibilities usually involved chores of various sorts. It may be that these activities enhanced children's sense of mastery, competence, and self-esteem, attributes that would stand them in good stead as they coped with the challenges of adolescence and later life.

C. FACTORS IN THE COMMUNITY

Werner and Smith (2001) identified both formal and informal factors in the community that were associated with resilience in the face of early and severe stress. Some of these are clearly connected to the individual and family characteristics just mentioned. For example, Werner and Smith found that as they moved from the primary grades into adolescence, resilient children formed wide, supportive, informal social networks for themselves. These networks were comprised of neighbours, peers, and elders, and provided many forms of support, from practical help, to advice, to emotional support. Having one or several close friends, especially beginning in middle childhood, was also important. Thus resilient children were able to create resources for themselves, which they were then able to utilize.

Resilient children also joined and utilized formal, organized, cooperative enterprises such as church groups, YMCA, 4-H, and Scouts. Resilient children felt "at home" in their schools. They had positive experiences there, feeling liked, respected, and reasonably successful. Thus, as with informal community factors, resilient children were able to seize the opportunities made available to them by formal organizations in their community.

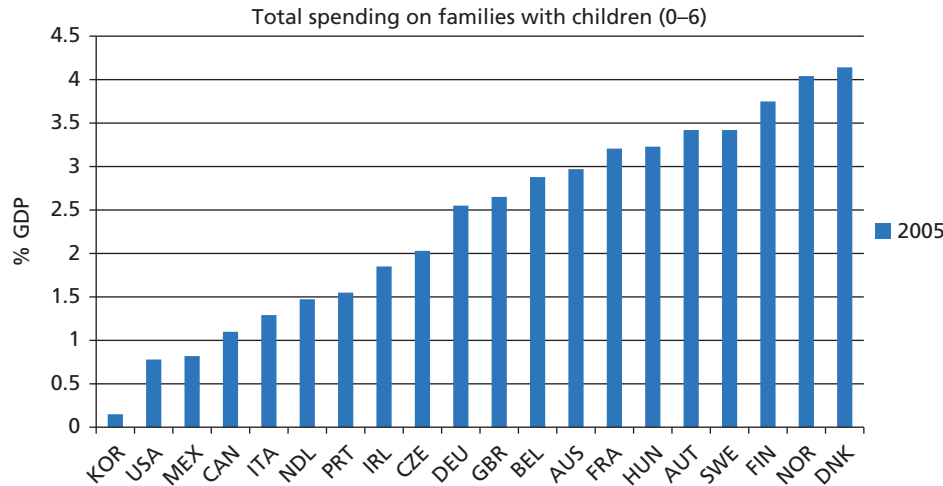
D. GOVERNMENTAL FACTORS

Resilient children are able to seize the opportunities available in their environment. Some of the most important of these opportunities and resources are provided by provincial, territorial, and federal governments. Thus, social policy has an important impact. Government actions and programs can minimize risk and make possible the recovery of those subjected to risk; or governments can fail to provide these resources.

High on the list of such federal, provincial, and territorial responsibilities is the provision of medical care. Health care is particularly important for children with medical or physical problems; but good health is a prerequisite for learning for all children.

The provision of adequate funds for education at all levels is also a basic responsibility of government. While this is acknowledged for elementary, secondary, and (to a lesser extent) post-secondary education, governments seldom make such funding a priority. This is most evident at the post-secondary level, with the result that families with a student in university spend, on average, nearly \$5000 a year in tuition fees, thus in effect restricting university education to higher-income families. In 2009, families paying tuition had an average gross income of over \$100 000, whereas non-university-attending families had an average gross income of \$71,000 (Statistics Canada, 2011). Support for secondary education varies widely across provinces, with families with a student paying an average of \$6300 a year in tuition in British Columbia, in contrast to \$2000 in Quebec.

The World Bank (2014) reports that, across all levels of education, Canada spends a total of 5.5 percent of its GDP (2010 data). This is slightly less than the United States, Australia, or the OECD average (5.6 percent each), less than Argentina or Brazil (5.8 percent each), and substantially less than the UK, Norway, Finland, the

Figure 2 Spending on families with young children

Netherlands, and Ireland (from 6.0 percent to 6.9 percent each). Clearly, Canada is capable of doing better.

Countries, such as Finland, that offer free post-secondary education are able to do so because university graduates, regardless of their field of study, earn substantially more, on average, than individuals with only a high school diploma. The higher taxes from their higher incomes, accruing over their lifetimes, more than pay for the cost of their university education. The decision by governments to charge tuition for university is therefore motivated by political, rather than practical, considerations.

A similar but even stronger case exists for early childhood education (ECE). Although it has enormous potential benefits, ECE remains one of the most neglected areas in Canadian public policy (Figure 2). Although, as noted above, early intervention programs return 1.5 to 17 times their cost in eventual savings, Canada ranks last among comparable OECD countries, spending only 0.25 percent of its GDP on early childhood education (Semeniuk, 2014; TD Bank Group, 2014). Quebec, of course, is the notable exception, providing comprehensive, inexpensive care for young children. Quebec spends 4.7 percent of its provincial budget on ECE, two to three times as much as any of the other provinces (Alexander & Ignjatovic, 2012; “Better Daycare,” 2013).

The provision of housing and support for low-income families also leaves room for improvement. More than one child in seven—15 percent of all Canadian children—live in poverty, a rate that has increased over the past 20 years. Child poverty rates in Canada are among the highest in the 17 member countries of the OECD (Conference Board of Canada, 2013).

In their longitudinal study, Werner and Smith (2001) noted the importance of educational opportunities in allowing children to overcome early adversity as they moved through adolescence and into adulthood. Resilient children are able to take advantage of the resources and opportunities that are present in their environment, they found; but it is the responsibility of government to make educational opportunities available.

Beyond these federal, provincial, and territorial responsibilities, important resources for children and families are also supplied at the municipal and regional level. It makes a considerable difference to families with young children if there are adequate public libraries, public parks, and “parks and recreation” activities (such as arts and sports)—and an adequate public transit system that can be used to access them. Such resources benefit all families, but especially low-income families whose children are at risk for low levels of school-related cognitive skills.

CONCLUSIONS

There are a few very general points to make about the conditions and factors that we have reviewed above.

A. CONTINUOUS DIMENSIONS VS. CATEGORIES

First, as we noted for the diagnostic categories, individual differences form a continuum: behaviours do not fall into naturally occurring categories. For example, almost all children, even peaceable ones, can be aggressive under the proper circumstances (for example, on school playgrounds; Pepler, Craig, and Roberts, 1998). But at higher levels of frequency or intensity, or in certain contexts (like the classroom), aggression becomes a problem; and at very high levels, children may be diagnosed with conduct disorder. There are not only differences across children, but within children; that is, children have strengths as well as difficulties. Thus, a child who is aggressive may have strengths or skills in some other area.

Nevertheless, although behaviour is continuous and varies across contexts, we must often make categorical decisions about children—should this particular child be diagnosed with conduct disorder? Does this particular child need an Individual Education Plan? Does this particular aggressive interaction need adult intervention? These questions require sound, practical, professional judgment; and we hope that the information and exercises in this learning module will help you develop your own sound judgment.

B. OVERLAPPING DIFFICULTIES

A second point made earlier is also worth emphasizing: problem behaviours are often related or co-occurring. For example, aggression often entails poor self-regulation. Most children who are aggressive on the playground are not aggressive in the classroom; but for some children, aggression becomes a default mode of acting regardless of context; and for a few, it becomes compulsive. Self-regulation is also implicated when children have difficulty attending to directions and staying on task, and it is also implicated in social difficulties. Successful social interactions depend on the ability to manage one's own distress on some occasions and, at other times, to be emotionally expressive—to be fun to play with. Problems in the classroom often present themselves as clusters of difficulties, such as behaviour, learning, and attention challenges.

C. FAMILY RELATIONSHIPS

A third point is that although causes are diverse (as they must be, when considering such diverse behaviours and difficulties as those outlined above), many of them involve disturbed or problematic family relationships. Such conditions may have existed for a number of years, even for young children; and their presence makes classroom remediation more challenging, although not impossible.

5. FROM THEORY TO PRACTICE

Fortunately, the causes that give rise to behaviour problems are often quite distinct from the processes that prevent children from recovering. Thus, interventions in the classroom can be effective because they can address the factors that maintain dysfunctional behaviours

Table 1 Risk Factors in the Classroom: A Summary

Risk factor	Comorbidity?	Family factors implicated?	Peer factors implicated?	Relevant Module Activities
Antisocial Behaviours				
noncompliance, behaviour problems	aggression; self-regulation	yes	yes	– Literary Activity #6 – Action-Based Research Activity #6 – Case Study #6
physical aggression	self-regulation; noncompliance	yes	yes	– Action-Based Research Activity #6
social aggression		yes	yes	– Literary Activity #6 – Action-Based Research Activity #6 – Case Study #3
Self-Regulation				
difficulties with attention, focus	aggression; noncompliance	yes	yes	– Action-Based Research Activity #6
drug use	behaviour problems	yes	yes	– Activating Activity #6
Low Cognitive Skills		yes		– Action-Based Research Activities #4 and 5 are particularly useful for children and youth with low cognitive skills
Diagnosed Disorders				
conduct disorder	self-regulation; noncompliance; behaviour problems; aggression	yes		– Action-Based Research Activity #6
ADHD	self-regulation			– Literary Activity #3 – Case Study #4
Autism Spectrum				– Literary Activity #2 – Case Study #5
intellectual disabilities				– Action-Based Research Activities #4 and 5 are particularly useful for children and youth with intellectual disabilities
learning disabilities				– Literary Activity #5 – Case Study #1
speech/language difficulties				– Literary Activity #4
hearing impairment	difficulties with attention, focus		yes	– Action-Based Research Activity #1

Note. By definition, all risk factors are comorbid with academic difficulties.

there. Nevertheless, in the nature of things, some of the conditions we have discussed are more responsive to classroom interventions and others are less so. Therefore, in some cases it will be necessary for teachers to try to enlist outside help, either for more intensive school-based interventions or to help families address underlying causes.

A. THE NEED FOR RESEARCH-BASED INTERVENTIONS

Interventions need to be tailored to the child, to the teacher and the resources available at the school, and, in the most challenging cases, to the resources available in the community. In this endeavour, it is extremely helpful to know what has worked, and what has not—and this can only be established by *systematic observation*, by *research*. In some areas, such as aggressive behaviour and bullying, research is relatively abundant and useful. In other areas, such as late-onset aggression, ASD, and learning disabilities, much remains to be done. In all cases, however, there is no substitute for your own careful, professional judgment in applying the lessons of research to the particular students in your class. It is essential for teachers to carefully *evaluate the effectiveness* of the interventions that they implement, and to be prepared to try different approaches in order to achieve better outcomes.

There are several approaches that have proven useful across a wide range of problems, and which will be the focus of our practical suggestions. They fall under the general heading of *inclusiveness*.

B. INCLUSIVENESS

The basic idea of inclusiveness is that everyone, regardless of physical or mental disability, should be included in the classroom and school community (Press, 2010). At the physical or architectural level, this involves schools that are wheelchair accessible, for example. On a social level, it involves creating groups in which everyone feels accepted and welcomed. Inclusive education is rooted in principles of *social justice* and the right of all individuals to access a quality education (Crawford, 2008).

Canada is a leader in inclusive education, being the first country to enshrine the rights of the disabled at a constitutional level. The Charter of Rights and Freedoms (Department of Justice Canada, 1982) ensures that all individuals, regardless of disability, have a right to access public education without discrimination or exclusion. Inclusiveness in education is also supported at an international level with such initiatives as the United Nations Convention on the Rights of Persons with Disabilities (Inclusion International, 2009; UNESCO, 2001).

The point made by advocates of inclusiveness is that such arrangements benefit everyone, not only those with physical handicaps or behavioural difficulties. Indeed, a Canadian study of the Participation and Activity Limitations survey (PALs) found that overall well-being was higher for children in inclusive versus segregated settings. The benefits were found for students both with and without disabilities (Timmons & Wagner, 2010).

In education, the goal of inclusiveness is supported by two related approaches, *Universal Design for Learning (UDL)* and *Response to Intervention (RTI)*.

I. UNIVERSAL DESIGN FOR LEARNING UDL attempts to do for the curriculum what a good architect attempts to do for a school building: create a structure designed from the ground up to accommodate everyone regardless of their needs. The architect has by far the easier job. Teachers need to not only consider issues of physical mobility, but also factors affecting social interactions (from aggression to hearing impairments) and academic competence.

UDL attempts to reduce barriers to mastering the curriculum by emphasizing the inherent value of all learners, regardless of ability, disability, ethnicity, language, or sexual orientation (Rose & Meyer, 2002). On a practical level, UDL (also referred to as UDI or universal design for instruction) requires that teachers create educational experiences that are tailored to the needs of each student, so that learning for all students can be maximized. That is, instructional materials, facilities, and strategies are designed to be appropriate for, and usable by, all students, to the greatest extent possible. In this way, every lesson appeals to a wide range of abilities, disabilities, ethnic backgrounds, language skills, and learning styles.

Rose and Meyer (2005) point to three specific ways to maximize the learning experience for all learners. The first relates to the “what” of learning and means presenting information and content in different ways. For example, a classroom teacher might realize that, for some students, reading the explanations and instructions at the beginning of each chapter of a math textbook is not an effective method of learning the concepts presented there. In response, the teacher incorporates hands-on activities to present those concepts in a different way.

The second way that a teacher can maximize the learning experience is by differentiating the ways that students can express what they know. This is the “how” of learning. For example, instead of requiring that all students write an essay to assess what they have learned about the Canadian Constitution, students may choose different forms of representing their “knowing,” such as skits, visual art, or musical renditions.

A third way that educators can reduce barriers to the curriculum is by addressing the affective part of learning—student interests and background experience. This relates to the “why” of learning. We have already alluded to this need to see relevance and value in the curriculum when we noted Piaget’s observation that a good student wants to learn whatever is presented. But this is not just an individual characteristic. Teachers can work at a structural level by incorporating students’ varied cultural backgrounds into classroom activities. In this way, students from a variety of backgrounds, especially those from marginal social groups, feel acknowledged and valued, and so have an increasing chance of themselves valuing the curriculum. Students value the activity when they see the “authentic” real-world purpose or application.

Another aspect of UDL/UDI relates to the theory of multiple intelligences (Gardner, 1983). Howard Gardner’s work has demonstrated that individuals have preferred ways of engaging with curriculum and representing their learning. He identifies eight common modes or intelligences: verbal/linguistic, bodily/kinesthetic, visual/spatial, naturalistic, intrapersonal, interpersonal, logical/mathematical, and musical/rhythmic. Most people have one or two preferred ways of learning new information, but the preferences strongly depend on the context for the learning, the content, and the individual’s emotional state. Therefore, when planning lessons, teachers should aim to match at least one of the preferred intelligences for each learner in the class. It is important to remember, however, that the goal of education is also to expand and challenge learners. Therefore, it is recommended that learners be aware of the need, and provided the opportunity, to develop other intelligences.

Given the very diverse types of behaviours and conditions that we have reviewed above, and the very diverse levels of intensity that can occur within each of those conditions, it is, for practical purposes, impossible to anticipate all needs and all challenges in a classroom. Still, when designing a curriculum, it is helpful to keep in mind the types of students that you may be encountering in a given school population or in a particular classroom, and to structure your plans and techniques so that the diverse abilities of your class can be accommodated with a minimum of ad hoc adjustments. (The particular ways in which this might be done are sometimes discussed under the heading of *differentiated instruction*.)

II. RESPONSE TO INTERVENTION (RTI) The basic idea behind RTI is one that we have mentioned earlier—the need to monitor children’s progress in learning, and to change teaching strategies or interventions as necessary. It is a systematic approach for “establishing and redesigning teaching and learning environments so they are effective, efficient, relevant, and durable for all students, families, and educators” (Sugai, 2007). Methods and intensity are adjusted, as needed, based on data collected from ongoing monitoring of the student’s response to instruction (or intervention). The RTI framework consists of three levels (see Figure 3):

1. *Primary Tier.* At this level, all students are exposed to the core curriculum and those who experience academic or social/behavioural difficulties are identified. The general education teacher is responsible. Key features of this level are (a) clear goals and expected outcomes, (b) appropriate instruction, (c) monitoring, (d) feedback and encouragement, and (e) error correction. Approximately 80 to 90 percent of students typically have success at this tier. If the universal supports are not sufficient to meet student needs, a more intensified approach is employed at the next level.
2. *Secondary Tier.* This level provides supplemental academic and social/behaviour support. Typically a team of educators oversee instruction and intervention at this level. Key features of this level include (a) a focus on additional instruction and practice, and (b) increased structure or explicitness. Prevention at this level focuses on changes to curriculum, instruction, or the physical environment, so that students are placed in situations that increase the likelihood of increased learning and/or appropriate behaviour. Five to ten percent of students require this level of support.
3. *Tertiary Tier.* The third level of support is individualized and intensive, incorporating specialized methods, strategies, technologies, and materials. Only 1 to 5 percent of the student population requires this level of intensity. Family involvement at this level is essential.

Change will always be necessary. If a teaching strategy is successful, then the student is ready to be presented with new goals and tasks. If a strategy is unsuccessful, then the situation needs to be re-evaluated and new strategies put in place. Children grow and change; they always present a moving target. UDL and RTI provide you frameworks for effectively and efficiently addressing the needs of your students. Various activities in Parts 2 and 3 of this module will help you to apply the principles of UDL and RTI to your own teaching context.

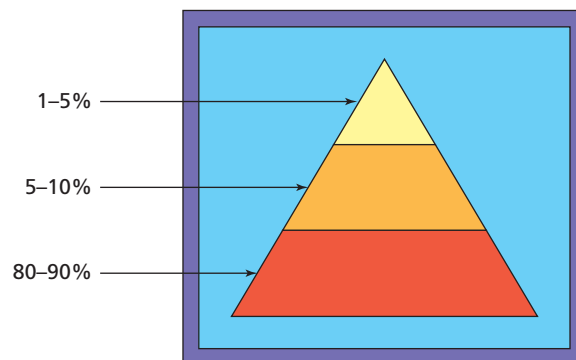


Figure 3 *RTI Tiers of Prevention*

PART TWO PRACTICAL APPLICATIONS

As a classroom teacher, you will encounter students with diverse backgrounds and learning needs. Although most school systems group children homogeneously by age level, the reality is that each and every student will present as a unique individual. Your challenge will be to determine the strengths and needs of each student in terms of the mandated curriculum that you are required to teach. Among each classroom of students will be children and youth who require additional or alternative instruction and supports. Part 1 of this module introduced you to the most common types of at-risk behaviours that you may encounter. You read about the myriad causes of these at-risk behaviours, as well as potential protective factors and ways to intervene and provide effective instruction. Part 2 of this module will extend and consolidate the concepts presented in Part 1, as you consider practical ways that you can address the needs of children and youth who are at risk for academic, social, and behavioural difficulties.

The activities in Part 2 will help you to situate your educational practice within municipal, provincial/territorial, and national contexts. It is important for you to understand the systems within which you are/will be working. The activities are also designed to hone your critical-thinking skills, which are an essential component of reflective practice. You will review the components of empirical research and critique research studies that focus on at-risk children and youth. Other activities will engage you in action-oriented research, which is becoming an increasingly common activity for classroom teachers. Some of the activities may also be undertaken with students—for example, media literacy. The last group of activities in Part 2 encourage you and your students to take action and promote change for the benefit of all children and youth in your classroom, school, and community.

1. ACTIVATING ACTIVITIES

The purpose of the activities in this section is to enable you to consider the needs of, and services for, at-risk children and youth within the educational context of your own province or territory. Throughout these activities, you are encouraged to engage in conversations with your peers and colleagues about the types of at-risk children and youth who you may encounter within your classroom, as well as the issues, interventions, and practices related to their education and care. You will discuss how theoretical frameworks and concepts impact the classroom. As a teacher, you will use these understandings to design meaningful learning events for your students, and theorize about your practice when you critically examine the impact of these learning experiences on your students.

Note that the activities in this section are not specific to any particular grade level or at-risk category, per se. Rather, the intent is for you to become familiar with the over-arching nature of wellness and care for ALL children and youth within your respective communities.

ACTIVITY 1: AT-RISK CHILDREN AND YOUTH—A NATIONAL AND REGIONAL PERSPECTIVE

As you have learned, children become at-risk for social, emotional, physical, and academic challenges for myriad reasons. There is significant concern for the prevention and care of at-risk children and youth at all levels of government—municipal, provincial, national, and even international. In this first activity, you will explore the needs of and services for at-risk children and youth within your own province/territory.

The Government of Canada collects data on the education and well-being of children and youth in Canada on an ongoing basis. Two key surveys used to collect this data are the National Longitudinal Survey on Children and Youth (NLSCY) and the Survey of Young Canadians (SYC). These surveys generate an enormous amount of data from which multiple publications are generated. Statistics Canada groups these publications or reports by topic. For the first part of this activity you need to access the most recent publications of these surveys, at <http://www5.statcan.gc.ca/subject-sujet/theme-theme.action?pid=20000&lang=eng&more=0>. You will notice the following subtopics listed:

- Children and Youth (general)
- Child Care
- Child Development and Behaviour
- Crime and Justice (youth)
- Education
- Health and Well-being (youth)
- Immigrant Children and Youth
- Labour Market Activities
- Low Income Families
- Risk Behaviours
- Violence Among Children and Youth
- All subtopics for Children and Youth

On each of these subtopic webpages are a list of resources, including the most recent publications. Click on the Publications link to see the title, release date, and actual document.

After you have perused the publications, generate a list of the areas of concern that were surveyed/addressed. For example, you might note if teenage mothers, youth violence, dropout rates, and/or family income are included. Are there topics or issues that you did not expect to find? Are there any topics or issues that you think should be included in the survey?

The second part of this activity is to investigate the type of programs offered by your provincial or territorial governments. You will need to go to the main government website for your province or territory and then search in the family, child, youth, or education ministry sections. Take particular note if there are any programs, services, or resources to address issues such as childhood obesity, single mothers, young offenders, or any of the other categories of at-risk children and youth that we discussed in Part 1. Share your results with a small group of peers and then create a comprehensive list of services, programs, and resources that are offered in your region.

ACTIVITY 2: KEEP THEM IN SCHOOL!

Keeping students in school can serve as a protective factor for at-risk children and youth. Indeed, there are multiple negative consequences for students who drop out, such as chronic health issues, reduced possibilities for employment, and increased incidence of incarceration (Jimerson & Ferguson, 2007; Rumberger, 2011). Investigate the incidence of dropouts in your province or territory. Also check on the dropout rate within your local school district and compare to the provincial/territorial averages.

Next, consider the following questions about student retention and dropout:

1. What are the causes of student dropouts?
2. What programs, services, or resources are available in your local school district to prevent students from dropping out?

3. What is the retention or promotion policy for your local school district?
4. What alternatives exist, other than retention or social promotion, for students who are at risk for dropping out?

ACTIVITY 3: CATEGORIES OF SPECIAL NEEDS

Children and youth who experience significant social, emotional, and/or academic challenges may be assessed and diagnosed for the purposes of receiving funding and services. Many ministries of education across Canada use special needs categorical frameworks. There are many pros and cons to “labelling” students, the most notable benefit being that it can ensure that the student receives the necessary services and supports. With a group of your peers, investigate whether your province or territory has funding categories for children with special learning needs. Discuss with the group the pros of diagnosing and labelling children. Next discuss the cons related to this practice. What is the impact of labelling for at-risk students? How is this practice complicated when children have multiple diagnoses or comorbidity issues? Are all of the types of at-risk learners covered or addressed through the ministry funding for your region?

ACTIVITY 4: ASSESSING WELL-BEING WITH THE EARLY DEVELOPMENT INSTRUMENT (EDI)

As the Canadian National Longitudinal Survey of Children and Youth has found, a child’s chances of being vulnerable by the time they reach school age is directly related to family income, parental education, and parental job status (Hertzman, 2009). Children from the least-privileged families are the most at risk for physical, social/emotional, or language/cognitive developmental difficulties.

Because the early childhood years are so critical for development in these areas, Canadian researchers have developed an assessment tool (Early Development Instrument—EDI) to measure the level of vulnerability of families and children in local neighbourhoods within different regions in Canada. For example, British Columbia, Manitoba, Ontario, and Prince Edward Island have collected sufficient data with the EDI to map out the level of vulnerability for neighbourhoods within the school districts in their respective provinces. The EDI is a questionnaire that is filled out by kindergarten teachers for each of their students covering five key domains—physical, social, emotional, language/cognitive, and communication skills. Learn more about the EDI by viewing the Human Early Learning Partnership website (<http://earlylearning.ubc.ca/edi>). Check to see if there has been a survey done in your local school district.

An important feature of this type of data collection is to monitor changes and trends in the level of wellness of young children in Canada. For example, the results of the EDI may indicate that a particular neighbourhood in your school district has a high percentage of young children who are vulnerable and at risk for social, emotional, physical, and academic difficulties. Quite likely, this school district, as well as social agencies in the community, may then focus efforts to provide additional services and support to families in that neighbourhood. After several years of additional health, social, and educational interventions, policy-makers and practitioners would hope to see an improvement in well-being when the EDI was next administered.

With a group of your peers, consider how local governments and non-profit agencies might better support vulnerable children and youth within your community. It is clear that family income, parent education, and parent job status significantly impact early childhood development. What initiatives or policies could impact these important variables? If you had the power and financial means to enact change for these at-risk families, what would you do? Generate a list of all of the programs, resources, and supports that you would

initiate. Next, review your list and suggest which groups, organizations, or governments should ultimately be responsible for these services. Lastly, determine two initiatives that you believe should get top priority and be enacted immediately.

ACTIVITY 5: SOCIAL AND EMOTIONAL LEARNING

Social and emotional learning and well-being are fundamental to success in school. Teachers cannot assume that students will come to school with the skills necessary to adapt to school culture and demands. Many school curricula now reflect the belief that children and youth need to be taught skills and awareness of social and emotional well-being. Some provinces and territories have created a separate, stand-alone curriculum with specific learning outcomes and methods of evaluation. Investigate the curricula of your own province or territory. Is there a separate curriculum that addresses these areas? For example, at the elementary level there may be a curriculum document specific to social responsibility, as there is in British Columbia. Or the specific learning objectives may be embedded within a curriculum guide for health education, as in Saskatchewan and Nova Scotia, or within health and physical education curricula, as in Ontario. If so, take a closer look at the learning outcomes and how they are distributed across the grade levels. How are the skills and concepts sequenced? Also examine the rationale section of the curriculum. Check to see on what theories or constructs the curriculum is based. If there is not a separate curriculum for social and emotional development, under which curriculum area do you find these aspects of child development?

ACTIVITY 6: JUST SAY “NO”?

There are multiple negative effects of illegal drug use among children and teens, as noted in Part 1 of this module. Both Canada and the United States have “waged war on drugs” by reinforcing the slogan “just say no to drugs.” Yet, we know that youth and teens experiment with risky behaviours, as part of a developmental progression. Given this, and the fact that illegal drug use has not dramatically declined despite the millions of dollars spent on education and drug enforcement, one must question if there is a better way to address the problem of experimental and frequent drug use.

Before one can even begin to answer this question, however, it is necessary to become familiar with the current incidence of illegal drug use within your own community. In this activity, you will contact the social agencies within your community who deal with treatment for drug addiction among children and youth. Determine current prevalence rates, typical drugs of choice, and the common names of these drugs. Also seek information about treatment protocols (who delivers the program, duration, location of treatment), and incidence of relapse or recovery.

Share your findings with other teachers or teacher candidates. As a small group, generate arguments both for and against the “just say no” approach to prevention of drug use among children and youth. Discuss alternative approaches for both the experimental and frequent drug users.

2. LITERARY ACTIVITIES

The purpose of this section is to encourage you to read and critique research related to dealing with at-risk children and youth in the school system. These literary or reading activities will challenge you to recognize and apply theory or concepts described in Part 1, and also to identify and apply criteria of quality educational research. It is incumbent upon all educators to be informed consumers of educational research, and the following activities will help to hone these skills. The first activity lays the groundwork by introducing a framework with

which to evaluate research articles. The next five activities require you to look at current research articles in each of the broad types of at-risk groups described in Part 1. Note that the last five activities are not specific to grade levels, but rather focus on the most common types of at-risk categories that you will encounter in the general education classroom.

ACTIVITY 1: A FRAMEWORK FOR EVALUATING RESEARCH

This activity requires you to understand the various components of a research study and use a framework to judge its quality, in order to then critique research which is presented in the subsequent activities.

It may be helpful to review how someone engages in empirical research (empirical research is typically defined as a systematic method of investigation that gathers and analyzes evidence of a specific phenomenon). Whether it is a university professor or classroom teacher, the researcher begins with a question. Perhaps it is a scientist who wants to know the impact of the new drug for Alzheimer's. Or, it could be a classroom teacher who would like to determine the effectiveness of a new teaching strategy or program to address the needs of students who struggle with decoding text. (Classroom investigations of this kind, which are used to guide planning and instruction, are sometimes referred to as "action research." You will engage in some action research activities in section 3.)

The next step of developing a research project is to do some background reading or knowledge acquisition, if the investigator had not already done so. For the medical scientist, that might mean reviewing all of the recent studies on drug X that was used for the purposes of stopping memory decline in Alzheimer's patients. In the case of the classroom teacher who wants to incorporate a new decoding strategy, he or she might also do a review of all literature related to that particular strategy/program, in addition to searching for feedback and comments from teachers, administrators, parents, and students who have experience with the particular approach. The teacher may also compare this information to alternative instructional methods that would address decoding skills.

Once the researcher has a clear picture about the question and purpose for this study, she then begins to design a systematic approach to collect data that will help her to answer the research question(s). There are many different types of research designs, and for the most part the researcher selects an approach best suited to answer his or her research question(s) and purpose(s). The researcher will then choose the site and participants for the study. For a medical scientist, that might mean soliciting the participation of a large sample of patients with a particular illness, such as Alzheimer's, in order to form treatment and control groups. For the classroom teacher, her site and participants are already predetermined.

A researcher's next step is to decide the type of evidence that she wishes to collect and how she will go about collecting and analyzing it. Some investigators will collect both quantitative and qualitative data in order to answer their research questions. No matter which type of data she chooses to collect, it is important that she attend to issues of reliability and validity. That is, both the researcher and the consumers of the findings want to know that, should they repeat the study, they would find similar results with the same types of participants and in the same setting (reliability). Second, the investigator and the consumer of the findings want to be sure that the data represents the concept or phenomenon that was intended (validity). For example, a classroom teacher would likely not collect valid information about decoding skills from a silent reading comprehension test.

Based on the type of data that the researcher collects, different analysis procedures may be incorporated. Quantitative data can be analyzed statistically, and the selection of a statistical test is based on the type of data which were collected. For example, if the data were collected from a large randomized sample of patients in control and treatment groups, the investigator may select a *t*-test or analysis of variance (ANOVA) to determine if there are

significant differences between the two groups. If the researcher had qualitative data such as transcripts from a focus group session, he or she may analyze the data for particular themes. (There are many different ways to collect and analyze data, but that subject is beyond the scope of this particular textbook.) Your job as a reviewer of empirical research is to become more familiar with these methods, and more importantly, to judge whether the author's findings are valid and reliable, given what they reported to the reader.

Typically, researchers make a point of identifying the implications of their findings, limitations of their study, and potential areas for further investigation. As well, they should indicate any sources of potential bias or conflict of interest that may affect the study and the findings.

To synthesize what you have learned in this activity, join with a partner or small group and define the following terms, providing an example for each:

- a. research questions, purpose
- b. site, participants (sample)
- c. quantitative data, qualitative data
- d. reliability, validity
- e. bias, conflict of interest

Next, read "Checklist to use in evaluating whether an intervention is backed by rigorous evidence," pp. 16–17 in *Identifying and Implementing Educational Practices Supported by Rigorous Evidence*, written by the US Department of Education (2003) (<http://www2.ed.gov/rschstat/research/pubs/rigorous/vid/rigorous/vid.pdf>). As you read, highlight each of the above terms, collectively clarifying any points, as needed. In the next activity, you will use the checklist to evaluate a variety of unconventional treatments for children with autism spectrum disorder.

ACTIVITY 2: UNCONVENTIONAL APPROACHES

As an educator, you will continually be exposed to new and innovative approaches to help meet the social, emotional, and cognitive needs of your students. Some of these approaches may seem questionable, and you may wonder how or why they seem to work, or why they are so pervasive (Matson, Tureck, Turygin, Beighley, & Rieske, 2012). You are wise to be skeptical and question the rationale for a given approach or strategy, as well as the evidence of its effectiveness. One such approach that may, at first, seem questionable is called deep compression (using a compression vest), which has recommended uses for children with autism or Asperger's Syndrome. First, do an internet search for videos or images about this method. After that, select two articles from the following list, all of which relate to deep compression or other interventions or strategies for children on the autism spectrum, and evaluate the quality of the research. Use the checklist from Activity 1 to guide your examination. Make a brief note beside each item on the checklist to justify your decision.

- Cox, A.L., Gast, D.L., & Luscre, D. (2009). The effects of weighted vests on appropriate in-seat behaviours of elementary-age students with autism and severe to profound intellectual disabilities. *Focus on Autism and Other Developmental Disabilities*, 24(1), 17–26.
- Devlin, S., Healy, O., Leader, G., & Hughes, B.M. (2011). Comparison of behavioural intervention and sensory-integration therapy in the treatment of challenging behaviour. *Journal of Autism & Developmental Disorders*, 41(10), 1303–1320.
- Hillier, A., Greher, G., Poto, N., & Dougherty, M. (2012). Positive outcomes following participation in music intervention for adolescents and young adults on the autism spectrum. *Psychology of Music*, 40(2), 201–215.
- Hodgetts, S., Magill-Evans, J., & Misiaszek, J.E. (2011). Weighted vests, stereotyped behaviours and arousal in children with autism. *Journal of Autism and Developmental Disorders*, 41(6), 805–814.

- Kouijzer, M.E.J., de Moor, J.M.H., Gerrits, B.J.L., Buitelaar, J.K., van Schie, H.T. (2009). Long-term effects of neurofeedback treatment in autism. *Research in Autism Spectrum Disorders*, 3(2), 496–501.
- Laugeson, E.A., Frankel, F., Gantman, A., Dillon, A.R., & Mogil, C. (2012). Evidence-based social skills training for adolescents with autism spectrum disorders: The UCLA PEERS Program. *Journal of Autism and Developmental Disorders*, 42(6), 1025–1036.
- Quigley, S.P., Peterson, L., & Frieder, J.E. (2011). Effects of a weighted vest on problem behaviours during functional analyses in children with pervasive developmental disorders. *Research in Autism Spectrum Disorders* 5(1), 529–538.
- Reichow, B., Barton, E.E., & Sewell, J.N. (2010). Effects of weighted vests on the engagement of children with developmental delays and autism. *Focus on Autism and Other Developmental Disabilities*, 25(1), 3–11.
- Stickles Goods, K., Ishijima, E., Chang, Y-C, Kasari, C., (2013). Preschool-based JASPER intervention in minimally verbal children with autism: Pilot RCT. *Journal of Autism and Developmental Disorders*, 43(5), 1050–1056.
- Stephenson, J., & Carter, M. (2009). The use of weighted vests with children with autism spectrum disorders and other disabilities. *Journal of Autism and Developmental Disorders*, 39(1), 105–114.

ACTIVITY 3: IT'S ALL IN YOUR HEAD

In Activity 2 you were introduced to treatments to address sensori-motor/physical needs of children with autism or Asperger syndrome. Neurofeedback is a relatively new area of intervention research that aims to make functional and structural changes in the brain at the neurological level. This approach has applications for a number of medical diagnoses, and there is extensive research on its use for children with attention deficit hyperactivity disorder (ADHD). Some of the popularity of neurofeedback for ADHD may be because it is a nonpharmaceutical intervention with reportedly long-term outcomes. As a consumer of educational research, it is often helpful to review a large number of studies in order to get a more comprehensive view of effectiveness. *Meta-analyses* are enormously helpful because they do the leg work for you.

Meta-analyses are systematic evaluations of an extensive selection of studies pertaining to a specific intervention. They allow the reader to make a relatively quick determination about the benefits or disadvantages of a particular program or intervention, thus saving time and energy by avoiding trial and error approaches. Your task in this activity is to review meta-analyses about neurofeedback for children and youth with ADHD. One thing that you should know before beginning, however, is the use of a particular statistical term for quantitative meta-analyses: *effect size*. An effect size can be calculated in different ways, but essentially it allows one to quantify the overall impact that a treatment may have on a group of individuals. Many researchers use Cohen's *d* effect size formula and rating scale. Typically, effect sizes in the range of 0 to 0.2 are considered low/weak, 0.2 to 0.6 are considered moderate, and greater than 0.6 are strong (Wuensch, 2010).

Review the following article to determine the overall impact of neurofeedback for individuals with ADHD.

- Sonuga-Barke, E.J., Brandeis, D., Cortese, S., Daley, D., Ferrin, M., Holtmann, M., . . . Sergeant, J. (2013). Nonpharmacological interventions for ADHD: systematic review and meta-analyses of randomized controlled trials of dietary and psychological treatments. *The American Journal of Psychiatry*, 170(3), 275–289.

Note the individual effect sizes that are calculated for each of the studies included in the meta-analysis. Also note how the authors have generated an overall effect size for this type of intervention. Based on your review of this meta-analysis, what do you conclude about

the use of neurofeedback for children and youth with ADHD? Write a newspaper headline to summarize the potential impact of the neurofeedback approach. Compare your breaking news headline to that of a peer.

ACTIVITY 4: TECHNOLOGY FOR SPEECH/ LANGUAGE IMPAIRMENTS

Children with speech and language impairments make up a large number of those requiring support services in the primary grades. In many cases, the school district speech/language consultant or a speech/language pathologist (SLP) from the community may provide programming on an itinerant basis. However, teachers and parents are also integrally involved because they must cue the child to use the new strategies that they have learned in everyday communication. For example, if a child has articulation difficulties (says /f/ for the /th/ sound), the classroom teacher might point to her own tongue position when mirroring back when the child says “I fink she took my pencil.”

In this activity, you are going to summarize a research article to provide other readers with a “snapshot” of the key features of the study. For guidance, review some of the summaries presented at www.cckm.ca/CPSLPR/SLDD%20Intervention.htm. Notice the text-box sections as well as the headings that some of the writers have used. You will use similar textboxes and headings (see examples below).

Usefulness to Clinical Practice	
<input checked="" type="checkbox"/>	Examples of print referencing for clinicians & parents
<input checked="" type="checkbox"/>	Theory underlining print referencing
<input checked="" type="checkbox"/>	Recommendations for clinical practice
Characteristics of Review	
Population	At-risk children
Review Type	Narrative
Country	USA
Number of studies	57 included

Now read one of the articles about a specific speech/language intervention from the list below. With a partner who has also read the same article, draft a summary of the key findings, filling in the following categories:

Objectives:

Sample:

Selection criteria:

Data collection and analysis:

Main results:

Authors' conclusions:

You may wish to refer back to the checklist from Activity 1 as a guide for which information to include.

Articulation

Camarata, S., Yoder, P., & Camarata, M. (2006). Simultaneous treatment of grammatical and speech-comprehensibility deficits in children with Down Syndrome. *Down Syndrome Research and Practice*, 11(1), 9–17.

Grammar Facilitation

Motsch, H.-J., & Riehemann, S. (2008). Effects of “Context-Optimization” on the acquisition of grammatical case in children with specific language impairment: An experimental evaluation in the classroom. *International Journal of Language & Communication Disorders*, 43(6), 683–698.

Fast ForWord

Fey, M.E., Finestack, L.H., & Gajewski, B.J. (2010). A preliminary evaluation of Fast ForWord-Language as an adjuvant treatment in language intervention. *Journal of Speech, Language, and Hearing Research*, 53(2), 430–449.

Printer Referencing

McGinty, A.S., Breit-Smith, A., Fan, X., Justice, L. M., & Kaderavek, J.N. (2011). Does intensity matter? Preschoolers’ print knowledge development within a classroom-based intervention. *Early Childhood Research Quarterly*, 26(3), 255–267.

Vocabulary Development

Tzivinikou, S. (2004). Intervention for a bilingual child with developmental speech problems. *Early Child Development and Care*, 174(7–8), 607–619.

Dialogic Reading

Desmarais, C., Nadeau, L., Trudeau, N., Filiatrault-Veilleux, P., & Maxes-Fournier, C. (2013). Intervention for improving comprehension in 4–6-year-old children with specific language impairment: Practicing inferencing is a good thing. *Clinical Linguistics & Phonetics*, 27(6–7), 540–552.

ACTIVITY 5: A POTPOURRI OF PROGRAMS FOR CHILDREN WITH LEARNING DISABILITIES

Learning disabilities, by definition, are heterogeneous in nature, and therefore no one program will necessarily address a particular child’s learning needs. There are many commercial programs available for use in the general education classroom that claim to be effective for children with learning disabilities. There are also websites that can be useful in locating evidence-based educational methods or programs. Choose one of the following websites and search for approaches or programs that have been proven effective for teaching children with reading, writing, and math disabilities. Be aware, however, that YOU must ultimately make a judgment about the veracity of the evidence that is presented.

What Works Clearinghouse (<http://ies.ed.gov/ncee/wwc/findwhatworks.aspx>) by the US Department of Education provides independent and trusted evaluation of scientific evidence of what works in education.

Promising Practices Network (www.promisingpractices.net) website highlights programs and practices that credible research indicates are effective in improving outcomes for children, youth, and families.

International Campbell Collaboration (www.campbellcollaboration.org/lib/?go=monograph) offers a registry of systematic reviews of evidence on the effects of interventions in the social, behavioural, and educational arenas.

ACTIVITY 6: ROOTS OF EMPATHY

As you learned in Part 1, children with conduct disorders (aggressive or antisocial) often lack prosocial skills, including the ability to empathize with others. As you will explore later in this module, there are numerous commercial programs available which assist children and youth in developing these skills. The Roots of Empathy program was developed by Canadian Mary Gordon with the purpose of creating caring, peaceful, and civil societies by developing empathy skills. The program has curriculum for children and youth, is in use in many countries worldwide, and has been researched extensively.

Go to the Roots of Empathy website and select a research article from their list of recent publications (www.rootsofempathy.org/en/research/publications.html). (Alternatively, search your own library website for empirical research articles that have investigated the effectiveness of the program.)

Once you have thoroughly read one of the research articles, try your hand at writing an article critique. An article critique is a specialized form of writing that summarizes the main ideas, claims, and findings of an empirical research project. In addition, the critique evaluates the quality of the research presented, typically from academic sources such as journal articles, which in turn, adds to the body of knowledge and understanding of the topic within the particular discipline. You may have read a book or movie review and these pieces are primarily based on the opinions of the reviewer. A scholarly critique or review is different because it usually offers an “actively engaged response to a scholarly writer’s ideas” (University of the Fraser Valley, n.d., p. 1), which is more than simply an opinion. Further, the informed response that the reviewer offers is always supported by thoughtful reasoning and proof. “Hence, writing an article review is a way for university students to display their knowledge of a scholarly topic; to engage with ideas, theories, research and information in their disciplines or programmes; to rethink and extend ideas in their field of study; and to show how their analytical response to an article is worthy of consideration” (University of the Fraser Valley, n.d.).

A scholarly review usually follows a similar structure to that of the empirical research article. If you are unfamiliar with this writing style, refer to the suggestions as outlined by Dr. Kevin Lawson in “How to Read and Evaluate an Empirical Research Article” (http://journals.biola.edu/cej/assets/30/Reading_and_Eval_a_Research_Article.pdf).

3. ACTION-BASED RESEARCH ACTIVITIES

The activities in this section are designed for you to engage in action-orientated research. Action-based research has had a long history in education and involves the processes of reflecting, planning, acting, and observing in a circular, iterative fashion (Carr & Kemmis, 2005). Within the educational context of schools and classrooms, this process usually begins with a wondering, question, or problem generated by the teacher. It may also involve students and teachers investigating issues together as they work to explore possibilities for teaching and learning within the context of their own classroom.

For example, you may have a student within your classroom—let’s call him Johnny—who has phonemic awareness difficulties. That means that Johnny has difficulty both segmenting and blending sounds when reading and writing. You may ask the learning assistance teacher for some suggestions on how to intervene with Johnny within your classroom. Once you implement the approach, it will be important for you to carefully monitor Johnny’s response to your intervention (RTI). You will need to allow enough time to adequately test this particular approach, being sure that you are carefully adhering to the particular methodology. This becomes a form of action research.

The activities in this section specifically reflect the theoretical constructs discussed in Part 1 of this module. You will be able to make specific connections to inclusive education, universal design for learning (UDL), and response to intervention (RTI). The activities are applicable to any grade level or general education classroom

ACTIVITY 1: CLASSROOM CLIMATE

Inclusive educational environments are those that welcome all students, regardless of diversity in culture, language, socioeconomic status, religion, or learning ability. To be truly successful, all classroom members (including educators, administrators, parents, and the students themselves) must share a similar belief about the intrinsic value of all individuals. Teachers and administrators are particularly important in setting the stage for a positive class climate that honours the uniqueness of all people. In this activity, you will carefully examine the climate of one classroom within a school setting. The goal will be to identify aspects of the structure and operation that demonstrate respect for student independence and diversity.

Use the table below to guide your observations, as you identify ways that classroom teachers, staff, and administration facilitate an inclusive educational environment. For example, you may notice that the teacher has a number of areas within the classroom that support the learning of children who are working individually or in groups. The teacher may have created a table area for students who have chosen to complete assignments in groups, and may also have created another area that is conducive to individual work. In this way, the physical environment is arranged to facilitate the different ways that learning can take place within the classroom. Other physical arrangements may be incorporated to assist visually or hearing impaired students, such as specialized seating. Another example of a welcoming class climate could relate to the choices that the classroom teacher offers the students. The teacher may allow students to select topics of interest for a particular reading or writing assignment, or perhaps have a democratic process where students vote on the type of field trip that they would like to experience.

If time permits, interview the classroom teacher, administrator, or student support worker to see if, in fact, their intentions match your observation. There is a column of the table that provides space for teacher/administrator/support worker comments.

When your table is complete, review each particular aspect of the classroom climate through the lens of each of the typical groups of at-risk students which was presented in Part 1 of this module. For example, you may notice that there is a space for students to work individually, free of external visual and auditory distractions. This physical arrangement would be helpful for children with ADHD. Similarly, allowing students opportunity for choice may be appropriate and useful for a child with conduct disorders. Indicate which type of student would benefit from the action, behaviour, or setting.

ACTIVITY 2: PROACTIVE CLASSROOM MANAGEMENT

As you may have noticed from Activity 1, classroom teachers can be proactive in managing potential behaviour problems simply by creating a positive, welcoming, and flexible classroom environment. In addition, the way that a teacher prepares and delivers a lesson affords multiple opportunities to effectively manage behavioural issues. For example, if a teacher has a child in

Time	Action, Behaviour, Setting	Who Is Involved?	Intentions	Who Benefits?
9:15am	Daily agenda reviewed on the board and selected students read orally	Teacher, student		Children with ADHD, ASD, visually impaired, those with reading challenges

the class with significant antisocial behaviours, he could develop and deliver a lesson in a way that would discourage isolation and encourage appropriate social interaction. This may take the form of assigning the child to a particular group that would be welcoming and supportive of the child, and assigning specific roles to each member of the cooperative learning team. The antisocial child may be given the task of reporting the group's findings, rather than being the group leader (which could be too stressful and lead to frustration and withdrawal).

In this activity, you will work with a partner and review one of your recent lesson plans. With a highlighter pen, identify any aspect of the plan that could be considered proactive management. If you find that there are very few examples within the lesson plan, use a different-coloured highlighter to identify areas where you could modify the plan in order to proactively manage student behaviours. Share your highlighted plan with another pair of teachers or teacher candidates.

ACTIVITY 3: LEARNING STYLES/MULTIPLE INTELLIGENCES

As we discussed in Part 1, universal design for learning (UDL) is a powerful strategy to enhance teaching and learning. One key component of UDL is acknowledging and addressing different learning intelligences (multiple intelligences—MI). In order to do this, the classroom teacher must first be aware of the dominant learning styles of each student. In this activity, you will administer a questionnaire to one or more students in order to determine each student's dominant learning style preference. There are various open-access questionnaires for you to choose from, some which are more suitable for different grade and reading levels. Below are a few examples of such questionnaires, but you may find one that is more appropriate for the group of students with whom you are working. Once complete, review the findings. Do they confirm what you had already suspected? Were you surprised by any of the findings?

The Connell Multiple Intelligence Questionnaire for Children: http://printables.scholastic.com/content/collateral_resources/pdf/05/0439590205_e001.pdf

Shawano School District Multiple Intelligences Survey for Students: www.sgsd.k12.wi.us/homework/ferchc/MULTIPLE%20INTELLIGENCES%20SURVEY%20FOR%20STUDENTS.htm

Bing.com, Examples of Multiple Intelligences Surveys: www.bing.com/images/search?q=Multiple+intelligences+survey&qvpt=Multiple+intelligences+surv

Walter A. MacKenzie's Surfaquarium, Multiple Intelligences Inventory: <http://surfaquarium.com/MI/inventory.htm>

The second step in this activity is to create a lesson or unit plan that would address the dominant intelligences of the students in your class. It is useful, however, to also include some activities that require students to develop their skills in nondominant intelligences. For example, if the majority of your students are bodily/kinesthetic and visual/spatial learners, you may decide to include a musical learning activity, as well. Remember, not every aspect of your lesson needs to perfectly match the students' dominant intelligences. Your goal should be to have at least two to three components throughout the hook, body, and conclusion parts of your lesson that are a good fit for the given MI.

ACTIVITY 4: PROJECT-BASED LEARNING

Project-based learning can be a very powerful approach for children and youth who are at risk for learning challenges. Essentially, project-based learning allows the teacher and student to create an in-depth investigation in the topic of interest to the student, using methods and strategies that are most compatible with the student's learning strengths. In

this activity, you will work with a school-aged student to create a project that both is of interest to the student and fits the classroom curriculum. The first step in this activity will be to get to know the learner and current curriculum. If you already know a particular student, including his or her dominant intelligence(s), interests, and social/emotional needs, you can move on to the second step. Otherwise, take some time to become acquainted with the child or youth. You may find it useful to interview the student, review his or her cumulative file (usually kept in the school office), and examine work portfolios. If necessary, also administer one of the multiple intelligences inventories.

The second step in the process will be to design a project that incorporates goals, sub-activities and means for achieving the goals, and assessment/evaluation. Keep in mind what you know about UDL and multiple ways of engaging with the topic and representing the learning. It is sometimes helpful to “begin at the end,” by narrowing down the specific attitudes, skills, and behaviours that you would like the student to acquire and demonstrate by the end of the project. The student may even have some ideas of the types of skills or knowledge that he or she would like to acquire through the project. Associated with the end goals is the bigger question that the student would like to investigate. This is where your background work in step one of this activity will be useful. Narrowing down the research question can take time and be recursive in nature. It is essential that the topic of investigation and research question be motivating for the student.

Once you have narrowed down the driving question for the project, as well as the specific skills, attitudes, and behaviours that you wish to develop, you will need to focus on the assessment and evaluation for the final product. Again, keep in mind the principles of UDL and be willing to negotiate the final outcome with the student.

You are now at a point where you can begin to map out the sub-activities that will lead to achievement of the final goal. Depending on the ability level of your student, you may need to include specific scaffolds that will ensure success with each of the sub-activities. For example, if the ultimate goal is for your student to design her own rocket ship, she may need some direct instruction in aerodynamics, coaching on how to interview a physicist, and perhaps the aid of a draftsman to assist with the schematic drawings.

There will be multiple goals for your student to achieve with the project-based learning activity. A key outcome should be self-esteem, pride, and a sense of accomplishment when the project is complete. You will therefore need to ensure careful monitoring and small successes along the way. Build in frequent opportunities to check in with the student, track progress, and respond to any questions or concerns.

The Buck Institute for Education (http://bie.org/object/offsite/pbl_online_org) has developed a number of excellent resources to assist teachers in creating project-based learning activities. There are instructional videos and templates to guide you through the creation of a project that would be suitable for your student. Once you have signed in to the site, a planning template can be found at <http://174.123.25.183/ProjectPlanning/PlanningForm.htm>.

ACTIVITY 5: TIERED LESSONS

Students arrive in our classes with varied cultural and linguistic backgrounds, different learning opportunities and experiences, and a range of personal interests. As you are already well aware, when it comes to lessons and materials, one size does not fit all. In this activity, we will focus on a tiered lesson, which allows you to differentiate tasks, processes, and products, and thus affords your students different pathways to meet the same learning outcomes. For this activity, begin by thinking about a particular lesson that you will teach. Think about the concepts or skills from the curriculum that you wish to address, and how the skills or concepts could be divided into different levels of challenge, like the tiers of a wedding cake. You may find it useful to look at the learning outcomes from the previous and next grade levels to help establish the focus for each tier.

For example, if you are teaching mathematical regrouping, and you know that the children in your class have a wide range of abilities in this regard—from one- to four-digit regrouping skills, and some able to do multiple regroupings within a given computation—you may decide to have three different tiers to represent a range of approximately three grade levels. The bottom tier of the cake would represent the specific skill or level that all of the students in the class could achieve. It would represent the minimum level of functioning that you would want for every student. The next tier is smaller, representing a more difficult skill or understanding that fewer children in the class would be expected to achieve. The top layer of the cake is smaller still, representing more complex skills and a fewer number of students within the group. Typically, tiered lessons are created based on varying ability levels, but you can also layer activities based on interest or multiple intelligences.

The first step of this activity is for you to write your lesson plan, beginning with the rationale, learning outcomes, and specific objectives. Though your rationale may be the same for all tiers, the learning outcomes and specific objectives may be different for each tier. Below is an example of the first part of a lesson plan for a Grade 4 class focusing on poetry. In this case, the prescribed learning outcome is taken from the British Columbia Ministry of Education curriculum for language arts (2006).

Lesson Title: “Remembering Using Acrostic Poetry”

Rationale: Remembrance Day has a significant cultural practice in Canada and is therefore, important for children to understand. Poetry allows individuals to creatively express thoughts and feelings about topics of deep importance.

Prescribed Learning Outcome C3: Write a variety of imaginative writing modelled from literature, featuring effective word choice by experimenting with new, more powerful and varied words, especially descriptive words

Instructional Objective(s): Students will

1. complete an acrostic poem about Remembrance Day, and
2. use a variety of descriptive words, relating to Remembrance Day.

The second step of this activity is to develop assessment and evaluation. We will focus on rubrics for this particular lesson so that you will see the connection between the tiers and the corresponding ranges of performance as outlined on the rubric. For example, the lowest tier would represent a beginning level of understanding, and may be the first column in your rubric. Then, based on the number of tiers that you create, there will be more columns on the rubric. Each row of the rubric describes a different skill, attitude, or behaviour that you would expect to see demonstrated by a student within each tier.

Based on the acrostic poetry lesson noted above, a sample rubric is outlined for you. Note that there are two rows in the rubric. The first focuses on the base word of the acrostic and the second focuses on the types of descriptive words that are used (corresponding to the

	Tier 1	Tier 2	Tier 3
Base Acrostic Word	The base acrostic word is a simple noun or verb related to war, peace, or Remembrance Day.	The base acrostic word is a noun, verb, adjective, or adverb related to concepts of war, peace, Remembrance Day, social justice, or equity.	The base acrostic word is a noun, verb, adjective, or adverb related to concepts of world peace, social justice, unity, harmony, or equity.
Describing Words	The describing words are basic nouns, verbs, adjectives, or adverbs.	The describing words are multi-syllabic adjectives or adverbs.	The describing words are multi-syllabic adjectives or adverbs associated with concepts of world peace, social justice, unity, harmony, or equity.

two learning objectives). You can see that the rubric allows for a range of performance/product, each corresponding to a different tier and therefore a different level of ability and expectation for the students.

Now it is your turn to design a tiered lesson of instruction for the students who you are or will be teaching. You may choose to tier by ability level, interests, or dominant intelligence.

ACTIVITY 6: FUNCTIONAL BEHAVIOURAL ASSESSMENT (FBA)

Functional Behavioural Assessment (FBA) provides a perfect example of the circular nature of action-based research. Using this approach, the classroom teacher can objectively observe and analyze behaviours, hypothesize on the cause of the particular behaviour, and plan alternate pathways for responding to particular context or situations. FBA involves in-depth observation and insight, and is recursive in nature because it often requires subsequent observations and data collection in order to correctly identify the “triggers.”

In this activity, you will observe a student who has a behavioural response that is not appropriate or suitable for the classroom context. Your job will be to identify the antecedents that precipitate the particular behaviour, and also identify the consequences following the target behaviour. There are a variety of different templates available to guide your FBA, and some examples are provided by Google Images, at this link: www.google.ca/search?q=functional+behaviour+assessment+forms+free&sa=X&rlz=1C1TSCD_enCA512CA512&espv=210&es_sm=122&tbm=isch&tbo=u&source=univ&ei=KLbuUti4N8W8oQTO6IHA Aw&ved=0CC8QsAQ&biw=1092&bih=480

Alternatively, do your own internet search to find a template that you would like to use for this activity. For the most part, these templates typically focus on the ABCs. **A** means to identify antecedent conditions, **B** stands for the specific problem behaviour, and **C** means the consequences of the behaviour.

The first step will be for you to describe the problem behaviour(s). Be as specific as possible, detailing what it looks like, sounds like, and how it may change in intensity. Also note the frequency with which the behaviour(s) occurs.

The next step is to specify what demands or situations occurred just before the behaviour. Make a note if it is linked with a particular location, time of day, or person. For example, the problem behaviour may occur during transition times or just after the teacher has given directions for an activity. It is also advisable to make a note of any particular medical or family issues that could have an impact on the child’s behaviour.

You then focus on the consequences for the particular behaviour. During this step, you want to explore possible reasons for the student’s behaviour. For example, did the child obtain attention as a result of his or her behaviour? Or perhaps, the child was attempting to avoid something. The chart below will help to guide your observations and reflections.

As the observer, you will now want to check out your hypotheses with the classroom teacher. If your understanding of the cause of the behaviour matches that of the teacher, consider whether there are more appropriate ways for the child to meet the particular need.

Date: _____ Date: _____ Date: _____
 Time: _____ Time: _____ Time: _____

Context or Circumstance

Antecedents

Behaviour

Consequence

Comments or other observations

If not, brainstorm for alternate ways that the child could respond, given similar circumstances. Either way, the classroom teacher would now likely want to discuss with the student the hypothesized reason for the behaviours and plan for alternate ways of responding in the future. As an action researcher, you would want to document the discussion with the student and plan for the future behaviour. Then you would observe to see if the plan works. That is the recursive nature of action research.

ACTIVITY 7: CREATE PARTNERSHIPS WITH PARENTS AND GUARDIANS

Without a doubt, the parents and guardians of your students are vital members of the educational team. Sadly, some parents and guardians do not feel comfortable or welcomed into the public school system, for a variety of reasons. Creating effective parenting partnerships can ameliorate those barriers, however. That is precisely where you come in!

In this activity you are going to explore ways to enhance how parents can become involved in their children's education. In order to do this, you will need to gather some information. The first step will be to determine the best way to collect the data that you seek. For example, some parents are readily accessible via email, while others may prefer face-to-face contact. Ask each of the parents or guardians of your students how they would like you to communicate with them. (It may be necessary to involve a translator, if you are unable to communicate in languages other than English.)

Once you know the various methods of contact that parents and families prefer, you can begin the process of collecting data. The goal is to better understand what barriers currently exist to parental involvement, and how you may create innovative ways for these important partners to become engaged in their children's education. Incorporate what you know about UDL to find out

- what parents expect from you, the teacher,
- the best time of the day that they can be reached,
- whether they are interested in sharing some of their culture or personal interests with the students,
- how comfortable they are coming to the school, and
- whether they have access to digital media.

With this new knowledge and understanding of the needs of your parents and barriers to engagement, you can begin the process of strategically developing your parenting partnerships. Some possible methods of engagement include

- after-school social events,
- digital recordings of major activities or presentations,
- structured volunteer times (to do anything from photocopying to one-to-one reading), and
- field trips to parents' places of employment.

With a small group of peers or colleagues, generate a list of innovative methods for involving parent partners.

4. CRITICAL MEDIA LITERACY ACTIVITIES

Children who are at risk physically, emotionally, socially, and academically often suffer twice: once when they must cope with their circumstances, and a second time when they are marginalized because of social stereotypes and misconceptions. Sometimes those stereotypes and misconceptions are perpetuated in the culture through various media. The activities in

this section focus on media critique, which is a critical literacy activity that can involve taking social action. We engage in critical literacy when we examine common assumptions, power relations, and perspectives, and offer alternative world views. Students of all ages can engage in critical literacy activities about media, and there are existing curricula and websites for these purposes.

The first activity in this section requires you to consider a variety of television programs or movies for the depiction of individuals with cognitive, physical, or emotional challenges.

ACTIVITY 1: INDIVIDUALS WITH DISABILITIES IN TELEVISION AND FILM

Choose a minimum of 10 different shows or movies, preferably from different genres. Note whether there is any depiction of individuals with exceptionalities, and then identify in what light they are portrayed. Three common stereotypes of individuals with disabilities are the hero, victim, or villain. Read the description of each at the MediaSmarts website: <http://mediasmarts.ca/diversity-media/persons-disabilities/common-portrayals-persons-disabilities>. As you view the various television shows or movies you have selected, make a note of the title of the show, the disabled characters, and how they are portrayed (hero, victim, or villain).

Here is an example from the new *Michael J. Fox Show* (view a short clip of the show at https://www.youtube.com/watch?v=CPi_7fNLbz4):

Title: *Michael J. Fox Show*. Disabled Character: Mike Henry has Parkinson's disease.
Portrayed: Victim.

Enter Michael J Fox. He plays Mike Henry, a husband, father, TV personality and a person with a disability—Parkinson's—on the new Michael J Fox Show. Mike Henry's daughter asks why does everyone have to talk about her father's Parkinson's? In the show, Mike Henry works hard to portray his disability as just one aspect of his life. But his assistant works overtime molly coddling him. In one scene he comes into the office dripping wet from a rain storm and the worried assistant says, "Michael you're all wet!" He responds, ". . . I have Parkinson's. I'm not a witch!" He's just a man trying to do his job, yet he's surrounded by people trying to remind him that he has a disability. I think he's fully aware of it without their help.

ACTIVITY 2: CYBERSPACE CAN BE A VIOLENT PLACE

Part of media literacy and a goal of twenty-first-century learning is to understand the impact of digital communication. Bullying can have a devastating impact on the victim, and the prevalence and impact is escalated when it occurs through digital media/sources. Indeed, there have been a number of tragic events across Canada involving children and youth being cyber-bullied to the point of precipitating self-harm or even suicide.

There are two steps to this activity; the first is to identify a case of cyber-bullying that has been reported in the media. You may locate this through an internet search. Take notes on the type of bullying that was involved. For example, did it involve name-calling and social isolation, and was the focus on sexual orientation, race, or socioeconomic status?

The second step of this activity involves creating some form of digital representation aimed at countering cyber-bullying. You may wish to create a short video clip of a skit, or maybe a musical and movement presentation using mime. Use your own dominant intelligence to determine the type of digital representation that you will use.

ACTIVITY 3: PHOTOSHOP THIS!

Another way to become media literate is to critically analyze images that are represented in print media. Youth are all too aware of the images of perfection that are displayed in these publications. One possible response is to strive to emulate the images of perfection, and another is to berate oneself for not attaining these unrealistic expectations, both of which put the individual at risk socially, emotionally, physically, and academically. Watch this short clip about the photo shoot of a female model and the photo editing that followed: <https://www.youtube.com/watch?v=17j5QzF3kqE>. At the very end of the video clip you will see an initiative calling for the use of disclaimers in media to identify images that have been modified.

Next, examine a number of popular magazines, particularly those aimed at youth, and identify instances where the editors have disclosed the use of photo editing. If there is no disclaimer anywhere in the magazine, consider how to approach the editors about this issue.

Now reflect back on the images that you observed in these print publications. How were the females presented? Was there a difference between the way females and males were presented? Were there any images of individuals with notable physical disability? Did the portrayal patronize or victimize the disabled person? If there were no images of individuals with notable physical disabilities, what does that say about the values or beliefs about an inclusive, pluralistic society? Share your thoughts about these questions with a small group.

ACTIVITY 4: STEREOTYPES

Stereotypes often develop within a culture when an individual or group appears to be significantly different from the dominant and majority population. This is certainly true for children and youth who are at risk for social, emotional, and academic learning challenges. By virtue of the circumstances that put them at risk, they may be perceived as “different.” In this activity, you will examine stereotypes related to different minority groups.

Stereotypes are widely held beliefs about a person or thing based on oversimplified information and understandings, and unfortunately, are often not based on facts. For example, prior to the civil rights movement in the United States, blacks were sometimes considered to have intellectual abilities inferior to those of whites. This stereotype led to widespread oppression and significant limitation of the educational opportunities provided to black children and youth. Fortunately, prominent individuals have helped to shatter this stereotype—people such as Canadian politician Rosemary Brown, entertainer Bill Cosby, former governor general of Canada Michaëlle Jean, athlete Michael Jordan, U.S. president Barack Obama, and musician Stevie Wonder.

Consider the following groups and write down a stereotype often associated with individuals from that particular group. Organize your response using a table with three separate columns; the first column will be the group or category and the second will be for the stereotype. Once you have filled in the table, join with another teacher or teacher candidate to identify individuals who have helped to break down the particular stereotype. Write these names in the last column of your table.

Children and youth who are

- gifted
- live in poverty
- of Aboriginal ancestry
- wheelchair-bound
- visually impaired

5. TAKING-ACTION ACTIVITIES

The activities in this section are designed for you to explore ways in which you might develop social conscience and self-regulation among the students with whom you are currently working. The activities vary by grade/developmental level; however, if a particular activity interests you and it is not specifically designed for the cognitive level of the children you are teaching, feel free to adapt as needed.

ACTIVITY 1: A MODEL UN FOR STUDENTS

This activity is based on the work of the United Nations (UN), a worldwide organization that advocates for the rights and welfare of children, youth, and adults. The UN maintains a number of useful resources for educators to teach the concepts of peace, social justice, and conflict resolution to school-aged children. One such document is the guide “Teaching Human Rights: Practical Activities for Primary and Secondary Schools” (www.un.org/wcm/webdav/site/visitors/shared/documents/pdfs/Pub_United%20Nations_ABC_human%20rights.pdf).

The purpose of this activity is for you to use this UN guide to expose your intermediate or secondary school students to alternate ways of managing conflict, keeping in mind a sense of social justice. To begin, you will need to set the stage with your students, establishing some background understandings related to personal human rights. Choose from one of the five activities outlined in the section titled “Protecting Life—The Individual in Society.”

The next step will be to create a summit role-play (see page 29 of the guide), during which students will debate a policy that would reduce the use of land mines during war.

ACTIVITY 2: CHILDREN PROMOTING CHANGE

The Me to We conferences developed by Craig and Marc Kielburger (www.metowe.com) are held worldwide every year for children and youth, and provide an excellent example of how students can promote social change within their families, neighbourhoods, and communities. The We Days are hugely successful and inspirational events where students become motivated to develop their own programs and initiatives to address local issues. Review the teacher resources associated with We Day (www.weday.com/we-act) to select materials and videos that would be appropriate for the children you are currently teaching and the communities in which they live.

Plan and deliver a two-part lesson. The first part of your lesson should spark interest about a marginalized group. The second part will involve a plan for action to address the issue or problem.

ACTIVITY 3: SCHOOLING IN THE TWENTY-FIRST CENTURY

One key aspect of twenty-first-century learning is student collaboration and problem solving. Although we expect our students to be able to collaborate effectively in pairs, and in small and larger groups, we cannot assume the children come to school having these skills intact. You may need to incorporate structured lessons in such skills as turn taking, goal setting, listening, encouraging, problem solving, and providing feedback. The activity “Teaching Collaborative Skills to a Digital Generation,” at the Association for Supervision and Curriculum Development (ASCD) website (www.ascd.org/ascd-express/vol6/611-bechtel.aspx), is designed for students in the intermediate grades and focuses on effective collaboration.

Try the activity with your students. Notice those individuals who have strengths in turn taking, goal setting, listening, encouraging, problem solving, and providing feedback. Also take note of those students who could use more work in one or more of the skill areas so that in future group activities you can create heterogeneous groupings.

The next activity is a potential extension of this one, encouraging students to self-assess their skills in a particular area and create achievable goals to help meet these needs.

ACTIVITY 4: GOAL SETTING AND SELF-REGULATION

Both academic and social success require self-regulation. In order to self-regulate in either of these domains, an individual must have self-awareness, a clear understanding of the task or problem to be solved, knowledge of potential strategies, self-monitoring skills, and motivation to persist. Goal setting can be an important component of self-regulation, and children of all ages are capable of setting and monitoring goal achievement. Create a lesson plan in which you teach goal setting to a group of students. Be sure to include some reason or justification for your students, and be prepared when they ask why they need to learn such a task or skill. For example, if you are focusing on academic skills, you might think that teaching a particular reading comprehension strategy would help to improve reading retention and enjoyment of texts. You may want to role play with students to illustrate the need for the strategy, before you actually do a think-aloud instruction about the particular skill.

Some teachers practise goal setting with their students on a regular basis. For example, each student may choose one academic and one social goal that he or she will work on over a two-week period. It is important that the students have a choice in the goals toward which they will be working. Your job as the classroom teacher will be to encourage and scaffold students to select appropriate and achievable goals. A second important aspect of your role in the goal-setting process is to identify strategies or methods that the student can use to help achieve a particular goal. For example, if you have a student whose goal is to develop appropriate outlets to deal with frustration, you may need to teach or coach the student in alternative means of releasing his or her anger. Perhaps he will use a stress-release handball to squeeze when he gets frustrated, or maybe he may go to a quiet spot in the room to decompress.

Once students have established a goal and some means of achieving the goal, you will assist them by cueing the use of the particular strategies, as appropriate. Gradually, you will reduce the amount or frequency of your cueing, in order to transfer control to the students.

The final aspect of goal-setting is to evaluate progress. To begin with, you may want to evaluate progress on a weekly basis to ensure that students are using the strategies or methods you agreed upon in order to reach the ultimate goal. If the student is not using the strategies or methods correctly, or is using alternative approaches, you will need to address that quickly before he or she establishes inappropriate habits. A word of caution: it is often easier for teachers to jump in and determine the effectiveness of the approach or method before the student has had an opportunity to reflect on his or her progress. Resist the temptation to do the assessment and evaluation for your students. Rather, pose questions that will allow students to honestly and accurately reflect on their progress.

Numerous websites offer free templates for goal setting that are appropriate for various grade and developmental levels. One example is the Pinterest site: www.pinterest.com/lesliejj/school-goal-setting.

ACTIVITY 5: RESPECTING DIVERSITY

Jennifer Katz is a Canadian educational psychologist who has extensive experience teaching in inclusive educational settings. She developed the Respecting Diversity Program (Katz, 2012) to teach children in general education classrooms to acknowledge individual differences and demonstrate understanding and tolerance for the range of abilities and learning styles within public school classrooms. The program includes a series of nine lessons, adaptable for students at any age or developmental level. The first five lessons focus on multiple intelligences and draw on current research about brain functioning. One particular lesson requires students to determine their dominant learning styles, using the multiple intelligences (MI) framework originally developed by Howard Gardner (1983). Try the following lesson with the group of students with whom you are currently working. You will need to download an MI survey appropriate for your students' grade level. Some examples can be found at the following websites:

The Connell Multiple Intelligence Questionnaire for Children: http://printables.scholastic.com/content/collateral_resources/pdf/05/0439590205_e001.pdf

Shawano School District Multiple Intelligences Survey for Students: www.sgsd.k12.wi.us/homework/ferchc/MULTIPLE%20INTELLIGENCES%20SURVEY%20FOR%20STUDENTS.htm

Bing.com, Examples of Multiple Intelligences Surveys: www.bing.com/images/search?q=Multiple+intelligences+survey&qv=Multiple+intelligences+surv

Walter A. MacKenzie's Surfaquarium, Multiple Intelligences Inventory: <http://surfaquarium.com/MI/inventory.htm>

Lesson 1: Introducing Multiple Intelligences

Rationale

This lesson introduces the language to describe “intelligence,” to discuss different levels of intelligence, different interests, different abilities, different feelings, different strengths, needs, and values. As students begin to expand their ideas of what “smart” means, they may begin to understand that there are many ways to acquire and demonstrate one’s knowledge and abilities, and that each way is equally valuable in contributing to one’s overall intelligence. The ways (or modalities) may overlap, but it is helpful to distinguish among them.

Depending on the age/level of your students, introduce the terms “learning profile” and “learning style” as synonyms for “intelligence” in some situations and descriptions.

Materials

Ensure students have their journals for these lessons. Have chart paper stands and pads of chart paper, as well as coloured markers, at hand.

Process

- Brainstorm: Ask: “*What does ‘smart’ mean to you?*” As students give their answers, record them on chart paper as a web. Use coloured markers on chart paper instead of chalk on the board, because you will come back to this summary later. As you write, begin to group the responses into the MI categories (e.g., *Can read well*, *Knows lots of words*, *Can spell accurately* would be grouped together because they are all part of “verbal-linguistic” intelligence). When possible, use different coloured markers for each intelligence to make them stand out visually.

- Ask questions when the students run out of ideas: “*What other ways can people be smart?*” “*What things are you good at?* (If a student says ‘hockey,’ group it with other sports, eventually to identify “bodily-kinesthetic” intelligence.) “*How do you learn best?*”
- Continue to prompt until you have listed examples of all 8 or 9 intelligences, filling in as necessary (e.g., “*Does anyone here play piano?*” “*I have a friend who . . .*”).
- Introduce the areas of cognitive abilities that Howard Gardner called “multiple intelligences.” Discuss each category separately. Circle the phrases from the students’ brainstorming session related to that intelligence, and discuss what activities or skills help define this group of people. Name the intelligence. (e.g., “*You’re right, some people are word smart, they are good at _____, which we call “verbal-linguistic intelligence.”*”)
- Journal response: Have students discuss, draw, or write their thoughts in their journal in response to your question “*What strengths do you think you have?*”

Adaptions

Students with significant disabilities can participate in this lesson by listening to the discussion, and can communicate their own likes and interests by using visual aids or matching their classmates’ pictures to pictures of activities they like.

ACTIVITY 6: THE POWER OF ASSETS

The research on attachment and well-being overwhelmingly points to the need for all human beings (children, youth, and adults) to have a sense of belonging and connectedness to others. At-risk students may come from complicated and dysfunctional family systems that classroom teachers have a limited ability to influence. However, classroom teachers do have a huge potential to serve as a significant asset, or a protective factor. (An asset is defined as any support that provides a foundation for healthy development.)

The Search Institute has correlated data on the attitudes and behaviours of children and youth with the number and type of assets that they possess. Their research mirrors what we know about assets and protective factors: the more assets that you have, the more likely you are to engage in healthy behaviours (succeeding in school, developing leadership skills) and the less likely you are to engage in unhealthy activities (drug use, violence). (For more information, view the slideshare “The Power of Developmental Assets” at www.search-institute.org/research/assets/assetpower).

While there are other frameworks and programs, the Search Institute simplifies the developmental needs into two major groups of assets: external and internal. Each of these broad categories includes 20 assets related to the following:

External subcategories—Support, Empowerment, Boundaries and Expectations, Constructive Use of Time

Internal subcategories—Commitment to Learning, Positive Values, Social Competencies, Positive Identity

Teachers and schools have the potential to develop assets in many of these areas. View the list of developmental assets for the 12- to 18-year age range of students and write down the assets that you could influence (www.search-institute.org/content/40-developmental-assets-adolescents-ages-12-18). Then read the suggested actions that can help to achieve positive growth in the different subcategories. Create your own list of ways that YOU can create assets for your students. Make a personal commitment to at least one of these actions.

ACTIVITY 7:

Teacher Self-Care

Teachers must maintain a healthy balance between their work and private lives. It is critical that every teacher have constructive ways to deal with the stresses associated with helping at-risk children and youth.

You don't need to re-invent the wheel (and create even more work and stress for yourself!). Review some of the ways that other educators have ensured their physical, mental, and spiritual selves.

www.pinterest.com/TGBTS/self-care-for-teachers/

Make a commitment to yourself by listing at least five ways that you will take care of yourself each week:

1. _____
2. _____
3. _____
4. _____
5. _____

PART THREE CASE STUDIES

The intent of this part of the module is to bring together the ideas that you have been exploring throughout the first two parts by providing some case studies of at-risk children and youth within classroom contexts. A variety of grade levels are represented in these case studies, but the behaviours and challenges associated with the different at-risk categories may be seen across primary, intermediate, and high school levels. As you read each case study, take note of the way that the teachers approach inclusive education through the use of principles of universal design for learning (UDL) or response to intervention (RTI). Questions are included at the end of each case study to prompt your reflection and discussion.

CASE STUDY 1: JOHNNY IS LEARNING DISABLED

Johnny has always attended Parkcrest School, and since kindergarten his teachers have noted the challenges that he has with phonemic awareness, reading fluency, spelling, and printing. Now in Grade 3, Johnny has recently been diagnosed with a language-learning disability. Kathy Banks is his classroom teacher and has worked with the learning assistance teacher to provide remediation/intervention for his phonemic awareness difficulties, as well as provide alternate supports within the classroom.

Three times a week, Johnny attends the learning assistance centre for intense one-on-one intervention using the Lindamood Phonemic Sequencing (LiPS) program. Kathy has also needed to become aware of the methodology of the program so that she can scaffold and support the newly learned strategies when Johnny is in the general education classroom. For example, to support encoding/spelling when Johnny is editing to create a good copy of a written assignment, Kathy prompts Johnny to use the multi-sensory feedback strategy taught in the learning assistance room. To begin with, she needed to cue him verbally, and now has come up with some nonverbal hand signals that she and Johnny agreed

upon. That way, Kathy can unobtrusively encourage Johnny to use the strategies. When correct spelling and neatness are required, Kathy makes sure to provide adequate, or even extra, time for Johnny to complete the tasks.

Kathy has also made a number of adjustments to her lessons to ease the burden of written output. When Johnny is drafting a story or report, he uses speech to text software on the classroom computer. He uses a headset with a microphone so that he doesn't distract other students in the class. In group work, Johnny is rarely assigned the role of recorder. Rather, he uses his strengths as a team leader to be the group facilitator. Whenever possible, Kathy encourages Johnny to read and write about topics of interest to him, which inevitably relate to sports and hockey.

Reflection Questions

1. What is the focus for student learning in this case study?
2. In what ways have UDL or RTI been utilized?
3. How have the use of UDL, RTI, or some other teaching/learning strategy facilitated learning and development for the at-risk student?
4. What are some potential implications for the other students and educational team?

Discussing the Case Study

1. Discuss the difference between intervention and accommodation/differentiation. How does it apply in this case?
2. What might Kathy have done at the beginning of the school year to create a class climate that acknowledges and supports differences in learning?

CASE STUDY 2: ABORIGINAL ISSUES

As a newly graduated teacher, Kevin White applied to various rural school districts in the hope of landing his first teaching contract. He was fortunate to get a permanent position in a small town in southern Saskatchewan, which provided him numerous recreational opportunities and new cultural experiences with the two local Native bands.

Although Kevin had some experience with individuals of Aboriginal ancestry, he grew up in a very urban, white community. When he was offered the contract in Rapid Springs, he realized that he would need to do some homework in order to better understand his new community. This became even more apparent when he realized that his Grade 5 class was made up of 12 students who had transferred from the local band schools. Although it was a steep learning curve, he sought to better understand the cultural background of all of the students in this class. He had an idea to do home visits in the two weeks leading up to the beginning of school in September.

To begin with, most of the parents or guardians of the students in his class were wary of his requests to visit their homes. He got the distinct impression that some felt that he might be there to spy on their living conditions, and be looking for some sort of fault or deficit. He tried to reassure the parents and guardians that he was really just trying to get to know his new students and learn more about the new community of which he had become a part. While both the families and he were awkward during these initial meetings, he felt it was time well spent.

On the first day of class, Kevin felt as though he already knew most of his students quite well. It was as though they had already established a comfortable bond. It wasn't far into the school year, however, when Kevin realized that attendance was becoming an issue and students did not always seem engaged in his lessons. He decided to develop a unit on outdoor education that would draw heavily upon the knowledge and interests of many of the students in the class. While the unit would require students to meet curricular goals, Kevin steeped the activities in multiple hands-on, out-of-class experiences. For example, the class made several field trips throughout the community to the local sawmill, fish

habitat, hunting grounds, and a newly developed zip-line business on the outskirts of the town. In some cases, the parents and guardians of the students in his class actually worked, hunted, or fished in the areas that the class visited. He called on the help of these adults for the various field trips, and most were more than happy to oblige.

Kevin was cognizant of the school's academic plan, which had a goal to increase the reading and writing skills of students in the intermediate grades. So he made sure to incorporate reading and writing activities in the lessons either preceding or following each of the field trips. He carefully analyzed the current level of performance in reading and writing for each of the students in this class, and then he planned mini-lessons for specific groups of students to address particular needs.

Reflection Questions

1. What is the focus for student learning in this case study?
2. In what ways have UDL or RTI been utilized?
3. How have the use of UDL, RTI, or some other teaching/learning strategy facilitated learning and development for the at-risk student?
4. What are some potential implications for the other students and educational team?

Discussing the Case Study

1. What personal biases or stereotypes might Kevin need to address about the Aboriginal students in his class?
2. In what ways did Kevin demonstrate to his students and the community that he values cultural diversity?

CASE STUDY 3: BULLYING THROUGH SOCIAL MEDIA

Like most high schools, Distinct Secondary School's student population came to school well-equipped with smartphones and tablets. For the most part, the teachers managed to keep the use of these digital devices at a minimum during class time. Both staff and parents were shocked, however, when the RCMP visited the school with news that sexually explicit materials were being electronically circulated throughout the student body. Apparently, some students had taken "selfies" of themselves in various stages of dress and sent them to boyfriends or girlfriends. What was intended for private viewing soon became circulated publicly among the wider student body.

The school district and staff responded quickly. They brought in a provincial expert on social media to do workshops for groups of students, as well as an evening workshop for parents and guardians. The teaching staff felt strongly that the student council should take an active role in the social media etiquette/awareness campaign. In addition, they sought representation on a task force from each club and group within the school. Everyone from actors, to sports players, to chess players, to cheerleaders was involved. These representatives helped to generate ideas and plan for the social media etiquette/awareness campaign. The idea was to then create communities within communities with all students, and they did this by mixing up each of the representatives into different groups which were then headed or supervised by one staff and one community member.

Each mini-community then became responsible for a project that would address some issues related to the misuse of social media. Some projects revolved around etiquette, while others focused on anti-bullying. Each group had the choice of how to represent their message—via a poster, play, video, piece of music, or debate. An entire school day was spent on the projects, which were then presented weekly over the following month.

Reflection Questions

1. What is the focus for student learning in this case study?
2. In what ways have UDL or RTI been utilized?
3. How have the use of UDL, RTI, or some other teaching/learning strategy facilitated learning and development for the at-risk student?
4. What are some potential implications for the other students and educational team?

Discussing the Case Study

1. Bullying can have devastating consequences for children and youth. How might the staff at the school deal with a student who is experiencing significant emotional and social trauma as a result of the exposed “selfies”?
2. From your experience, which type of students are most at risk for bullying? Why do you think this is the case?

CASE STUDY 4: I’M GOING TO BE A ROCK STAR!

Dennis was a charming Grade 4 student who had aspirations of becoming a rock star. Dennis was precocious, very bright, creative, and absolutely couldn’t sit still, plan, or focus . . . Or so it seemed. He had been driving his parents and teachers crazy! Everyone around Dennis seemed to be responding to his behaviours in “crisis mode.” Finally, Joyce Mitchell, Dennis’s Grade 4 teacher, decided to be proactive. She wanted to create a classroom community where Dennis would not be ostracized or excluded because of his grandiose ideas and sometimes impulsive behaviours, but be stimulated to use and extend his gifts and talents. She also wanted him to begin to learn to self-regulate his behaviours and actions instead of relying on external control.

Joyce decided to employ a Respect for Diversity mini-unit that focused on awareness of unique learning styles and preferences, as well as on tolerance and an obligation to help community members. In addition, she wanted Dennis to begin to learn to plan and evaluate his own behaviours and performance. She worked with Dennis to create a series of mini-goals and objectives for him to focus on daily and review weekly. She made sure that the goals and objectives were measurable and achievable. In order to provide further incentive for Dennis, he and Joyce agreed on a series of mini-rewards when he reached particular milestones. To get a better sense of what actually motivated Dennis, Joyce administered an interest inventory, reviewed all of Dennis’s previous school records, spoke extensively with his family, and made a home visit. She wanted to develop a type of unit of inquiry that would engage Dennis in deep exploration of the topic and challenge him intellectually.

In conjunction with Joyce’s work on self-regulation, Dennis’s parents pursued neuro-therapy so that he could begin to become aware of and control his thoughts and actions. Together, Joyce, Dennis, and Dennis’s parents also looked at making environmental changes. Within the classroom, Joyce made sure that there was a space that Dennis could go to if he needed to decompress. She also allowed Dennis to use earplugs and a desk screen to decrease distractions when he was working on assignments. Some days, Joyce turned down the lights in the classroom or played soothing background music. These strategies sometimes seemed to help Dennis and other students to focus. Joyce made a point of listing the jobs or steps of a particular task both in writing and orally. That way, Dennis could refer back to the steps of the task if he forgot or became distracted. She also allowed for a great deal of choice in activities. For example, if some review of math concepts was required, she allowed the students to select either even or odd questions at the end of a chapter. Another example was Joyce’s allowing the students to select from five different novels to do a book

report. To provide further choice in representing their understanding and critique of the book, she allowed students to choose to do a book report either in writing, poster format, skit, or musical performance. These environmental adjustments were helpful to other students in the class, not just to Dennis.

Reflection Questions

1. What is the focus of student learning in this case study?
2. In what ways have UDL or RTI been utilized?
3. How have the use of UDL, RTI, or some other teaching/learning strategy facilitated learning and development for the at-risk student?
4. What are some potential implications for the other students and educational team?

Discussing the Case Study

1. Are there any “dangers” or drawbacks to allowing students to use their dominant intelligence to complete tasks? How do you balance these drawbacks with the advantages of this approach to teaching and learning?
2. Students can sometimes overestimate their own abilities. How would you facilitate in such students a more realistic view their abilities without harming their self-esteem or motivation?

CASE STUDY 5: EARTH DAY ADVENTURES

As Earth Day approached, Sally thought about the type of unit that she could do with her class this year, given the new composition of students in her class, with particular learning needs. She reflected on the wonderful experiences that she had last year, which included visiting the local water treatment plant, recycling depots, and even the landfill (which was undoubtedly the highlight for her Grade 3 students). If she wanted to keep the visit to the landfill in the unit plan, she would need to incorporate some pre-emptive strategies, as well as make plans for the actual visit.

Sally had quite an interesting group of children this year, some of whom tended to need a great deal of structure and routine. She could think of a few particular students who, on a bad day, might go running around the landfill site and get into all sorts of trouble. Then there was Bill, a student with Asperger syndrome, who she knew could become easily overwhelmed with the sights, smells, and noises at the landfill site. On top of that, there was a large group of boys who had energy to spare, and needed many physical outlets throughout the school day. And so her planning began.

The week prior to the landfill trip, Sally confirmed a number of parent volunteers who would accompany the class on the bus, at the site, and back to the class again. Her plan was to assign a small number of students to each parent volunteer. She gave the children of the parent volunteers the option of being in groups with their own parent, or not. On previous trips, she had found it interesting to notice how children sometimes behaved quite poorly when their parents were in attendance. For that reason, she thought it might be desirable to have the children in different groups from their parents. She also made special arrangements with Bill’s student support worker. In the days leading up to the field trip, both the support worker and Sally talked about the site and even showed Bill pictures, as a way to reduce any anxiety. The other students in the class enjoyed looking at the pictures, as well. For this particular child, and any others who may have difficulty with the potential overstimulation, she had a class discussion about finding a place on the site to decompress, if it was needed. The group agreed that they would individually go to the designated spot if asked to do so by an adult, or if peers made the suggestion that it might be necessary to get some control of their behaviours. Sally had incorporated a similar routine on other field

trips, and so the children, for the most part, did not view the decompression site as punitive. Sally herself had wanted to spend a few moments in that spot on the last field trip!

Sally planned for a rigorous physical activity break to take place prior to loading the bus and departing on the day of the trip. While on the bus and at the site, the students had specific things that they were supposed to be doing, such as sketching what they were seeing, recording observations, and completing a visual treasure hunt. Sally did this so that there would not be wasted time, or excessive spare time that might lead to some acting out behaviours. She also assigned specific roles for each child in the parents' groups. The expectations were clearly explained in class, and were similar to what the children had experienced on previous field trips. With her preplanning in place, Sally felt confident that this year's group of Grade 3 students would have an educational and enjoyable trip to the landfill site.

Reflection Questions

1. What is the focus of student learning in this case study?
2. In what ways have UDL or RTI been utilized?
3. How have the use of UDL, RTI, or some other teaching/learning strategy facilitated learning and development for the at-risk student?
4. What are some potential implications for the other students and educational team?

Discussing the Case Study

1. When planning a field trip for the first time, it is difficult to know what might go wrong, and therefore to know how to pre-empt any potential problems. During a trip to the landfill site, what other circumstances (academic, social, physical) could pose a problem? What could Sally do before the trip in order to avoid these problems?
2. Student support workers can be an invaluable member of the educational team. How could Sally ensure that Bill is not "over-supported" during this field trip? Or in the classroom, in general?

CASE STUDY 6: THE "F BOMB"

Sandy was ecstatic! While being a "teacher teaching on call" (TTOC) in the three surrounding school districts where she lived, she finally scored a longer teaching contract. She would be filling in for the last six months of the school year for a high school band teacher who would become seriously ill. She loved band class, loved music, and felt this was a perfect opportunity to show her skills as a music teacher, rather than filling in as a TTOC for myriad subject areas. She knew that it would be difficult, however, to walk into a high school setting in the middle of a school year. But "How can this be any worse," she thought "than trying to establish instant rapport on a day-to-day basis?"

Most of the students in Sandy's band classes regarded her as the typical TTOC until after the first week, when they became accustomed to her routines and expectations. She was beginning to really enjoy her music classes until William came into her life. She had never encountered a student like him, and his behaviours rocked her to the core. William had just transferred to this high school, after being expelled from two other high schools in the city. He sauntered into class wearing a red and black checkered lumberjack shirt, pants hanging halfway down his backside, and a look of confidence and swagger on his face. That part she could handle. What she couldn't handle was his explosive temper and foul mouth. When he dropped the "F bomb" because she asked him to change seating arrangements in the band, she knew she was out of her depth.

"What do I do?" Sandy asked the school principal at the end of the day. And so began her education about students with severe conduct disorders. As she spoke with the school principal and learned more about William's background and personal history, she realized

how complicated his life was. Social services had been involved with William and his family for many years because of an unstable home environment that was plagued with poverty, drug abuse, and violence. To complicate matters, William had been placed in numerous different foster homes when things were simply too chaotic at home. He was currently living with another new family and hadn't yet totally settled in. The school district's behaviour consultant had been following William's care for many years, and there was a very thick cumulative file that had just been transferred to the school.

Sandy quickly realized that the focus of the next six months of her contract was not going to be strictly music. She made a personal and professional commitment to learn and do as much as she could to help William. The next day, she learned about a case conference about William scheduled for the following week, which would involve the principal, the school learning assistance teacher, the district behaviour specialist, the social worker, William's foster parents, and potentially William. Prior to that meeting, however, the learning assistance teacher had requested that Sandy (and William's other classroom teachers) document William's behaviours. In particular, William's teachers were asked to make notes of the contexts and situations when William was both compliant and noncompliant. Sandy also made a point of reading William's school file, and was surprised to learn that despite his very turbulent family life, William had expressed an interest in hard rock music and had an aptitude for car mechanics. Sandy immediately wondered how she could use these interests to her advantage.

The next day, Sandy asked all of the students in William's class what kind of music they would like to learn and perform for the spring concert. She did this as a way of learning more about the students as well as motivating them for the numerous rehearsals that lay ahead. Sandy also made a point of asking specific students, including William, to help with the moving and tuning of some large tympani drums. She wondered if William's adeptness at car mechanics would translate into the sometimes tedious task of tuning the large drums. Nothing noteworthy occurred during that task, and William seemed calm and relatively focused throughout class.

The day of the case conference arrived, and Sandy was surprised to see that William was actually in attendance. She wasn't sure how he would respond to a room full of adults talking about him and trying to direct his behaviours. It became abundantly clear, once again, that William's life was very complicated, and Sandy realized that she was only one member of a very large team working to help him. She couldn't perform miracles, and she couldn't do it all herself, but she would certainly do her part. When the topic of how William handled frustration came up, Sandy thought back to the day when he dropped the "F bomb." She was surprised when William acknowledged, at the conference, that that type of language was not appropriate at school. She was even more surprised when William agreed that he would leave the room for a short time to relieve his frustrations, rather than lashing out or swearing. After a very long meeting, the group agreed to reconvene in three weeks time to review William's progress.

Reflection Questions

1. What is the focus of student learning in this case study?
2. In what ways have UDL or RTI been utilized?
3. How have the use of UDL, RTI, or some other teaching/learning strategy facilitated learning and development for the at-risk student?
4. What are some potential implications for the other students and educational team?

Discussing the Case Study

1. Adolescence is a time of great change, and sometimes turmoil. In what ways has Sandy acknowledged and respected the students in her class, including William, during this phase of personal development? What else might Sandy do?

2. As a teacher, you may be faced with many sad and troubling family situations that seem almost insurmountable. Self-care is absolutely essential for anyone in a helping profession. How will you sustain yourself personally and professionally during these times? What strategies do you currently use to deal with extreme stress?

Assessment Questions

1. Explain why incorporating universal design for learning (UDL) and response to intervention (RTI) in the general education classroom are important for the learning and development of all students (whether at-risk or not at-risk). Provide specific examples to illustrate how UDL and RTI facilitate student learning and development, as well as the impact for members of the educational team.
2. Using the principles of UDL, design a mini-unit of study about the topic of human rights and equality. (If you are working with very young children, the mini-unit could focus on fairness and respect.) Design the lesson so that all students in the classroom can be fully participating members and also so that your students both comprehend and demonstrate the importance of social justice for all members of our society.

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