Applied Social Psychology

Understanding and Addressing Social and Practical Problems

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Applying Social Psychology to Education

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In 1996, after 6 weeks of being taught by a group of health care professionals, 11 high school students of Native Canadian and black backgrounds reported on the results of their research projects. Their work was impressive, and so were their experiences; they had the opportunity to observe surgery, work alongside university researchers, and watch health care professionals going about their duties (Galt, 1996). Begun in 1994, the University of Toronto Summer Mentorship Program was established to address a concern over the lack of black and Native Canadians pursuing professions in the health field. The program is designed to expose high school students from minority groups to the university environment and, by having them job shadow professionals, to encourage them to consider careers in science and medicine. The program is aimed specifically at minority students who previously had not considered university as an educational option because they believed that either they were not smart enough or they did not have the skills and means to be successful at the university level. The mentorship program has been so successful that over the years it has been expanded to include other faculties at the University of Toronto such as law, engineering, and social work. The program now admits more than 100 students each year. As an indicator of effectiveness, participants' high school marks have improved by an average of 10%. According to

Miriam Rossi, associate dean of student affairs in the Faculty of Medicine, "Once they see that university is a possibility, they redouble their efforts in high school" (quoted in Sibbald, 1998). As one student put it, "Now I know I can do it" (quoted in Galt, 1996).

- What factors may have affected the students' motivational levels and aspirations?
- Why did these students, who previously viewed themselves as marginal students, come to view their academic abilities more positively?
- How do interactions with mentors, teachers, and role models affect students' academic achievement and aspirations?

We can all remember instances from our school pasts that we cherish—good friends made, inspirational teachers, moments of accomplishment, and the like. We also can recall instances that we would much rather forget—schoolyard bullies, a teacher who made us feel foolish, feelings of isolation, and the like. Social psychology has helped to uncover the intrapersonal and interpersonal processes that operate in the educational environment. For example, there are social psychological theories to explain how students' learning experiences may have led the minority students in the opening vignette to view their academic abilities in a more positive light. In the first section of the chapter, *intrapersonal processes,* such as attitudes, attributions about success and failure, and beliefs about academic achievement, are discussed.

Also, we must not forget that acquiring an education is very much a social process in that teachers interact with students and students interact with each other. In the vignette, it seems that the minority students' interactions with health care professionals led the students to alter their academic aspirations. The second section of the chapter, which discusses *interpersonal processes,* considers how teachers and students interacting together can affect students' beliefs about their abilities and their levels of academic achievement.

Of course, many educators and researchers also have applied social psychology in schools to address more general social issues such as violence, prejudice and discrimination, and health-related behaviors. Interventions based on social psychological concepts are aimed not only at improving the academic achievement of students but also at creating learning environments that foster the development of broad-based emotional, social, and cognitive skills in students. The final section of the chapter focuses on the problem of school violence. It shows how the school environment reflects broader societal norms regarding violence and how schools can be used as vehicles for addressing this pressing social issue.

INTRAPERSONAL PROCESSES: INCREASING SUCCESS, REDUCING FAILURE

Susan, a psychology major, is worried about her performance in a statistics course. She worries that she "can't do math." To deal with her feelings, she engages in activities that help to distract her from the requirements of the course; for example, she goes out with friends the night before two statistics exams. Susan fails the course. How does she feel about statistics now? How would you feel if you were Susan? Because she failed, Susan believes that her original conception of her ability is correct; that is, she is lousy at math. Can students' beliefs about academic ability be changed? Can these changes result in better academic achievement? Social psychology and decades of research have shown that these changes can occur.

What Factors Affect Student Performance?

What was it about Susan that may have led to her poor performance in statistics? Was it her negative attitude toward math or her previous negative experiences with math courses? Susan attributed her performance to an internal stable characteristic (i.e., low ability). Will this attribution lead her to engage in the same nonadaptive behavior in another similar course? This subsection reviews some of the factors (and related social psychological theories) that may positively or negatively affect academic performance.

Attitudes and academic behavior. In a review of research examining the link between attitudes and behavior, Wicker (1969) indicated that attitudes and behavior might not always be consistent. Susan may value statistics as part of

her training in psychology, but her behavior (i.e., going out with friends instead of studying) seems inconsistent with her positive attitude. In an effort to address such inconsistencies, Fishbein and Ajzen (1975) formulated the **theory of reasoned action.** The theory takes into account multiple determinants of behavior (i.e., attitudes and perceived norms) that predict a person's intention to behave in a particular fashion. It is such intentions to behave that predict eventual behavior. Behavioral beliefs (i.e., beliefs that an action will lead to a certain outcome) and the evaluation of the outcome both lead to formation of an *attitude toward the behavior.* For example, you may believe that working hard in college will lead to academic success and that academic success is important; these two beliefs would form your positive attitude toward doing course work. But many behaviors are performed in a social context; we are aware of what others expect of us, and we may (or may not) be motivated to comply with these expectations. Therefore, in addition to our attitudes, *subjective norms* may also affect behavioral intention and behavior. You may be aware that your parents expect you to work hard in college and to be a serious student. Because you do not want to disappoint them, you are motivated to meet their expectations.

But we do not always have control over whether we can, in fact, carry out our intended behavior that will lead to our desired outcome. For example, you would like to get good grades in college. You know that to accomplish this, you must work hard by engaging in behaviors such as keeping up with your readings, studying on a regular basis, and getting all assignments done. You may evaluate college and getting good grades positively (attitudes), and you know that good grades are looked on favorably by your family, friends, and professors (subjective norms). However, you may still end up with a C average simply because you do not have good study skills, lack the ability to comprehend the material, live in a noisy "party" dorm, or have "tough" professors. Any one of these factors may interfere with your intention and ability to work hard in college and, therefore, with the possibility of achieving good grades.

What happens to you when you know that you cannot achieve your desired outcomes due to factors beyond your control? Ajzen (1991) expanded the theory of reasoned action to include an additional component—*perceived behavioral control.* This new theory (see Figure 9.3 in Chapter 9) is called the **theory of planned behavior.** It recognizes that behavioral intentions, and consequently behaviors, may be affected by the extent to which the person believes that he or she has control over the situation. For example, you may have positive attitudes about studying and know that important others encourage studying. However, if you lack the study skills needed to get good grades in college, you might not work very hard. That is, your intention to work hard and the degree to which you work hard will be diminished by your perceived lack of control.

Using the theory of planned behavior as a framework, Sideridis and Padeliadu (2001) compared the importance of achieving good grades in elementary school children who were high-performing readers with that in elementary school children who were low-performing readers. Specifically, the researchers wanted to examine how the children's motivation to achieve good grades was related to the key components of the theory of planned behavior: (a) attitudes toward high academic achievement (beliefs about the consequences of studying and evaluation of the importance of doing well in school), (b) subjective norms about high academic performance (beliefs about the importance that others place on the children's academic performance and how motivated the children are to comply with others' expectations), (c) perceived behavioral control (how easy or difficult the children view studying to be), (d) behavioral intention (how determined the children are to study hard to achieve high grades), and (e) actual academic performance in language and mathematics.

Sideridis and Padeliadu (2001) found that high- and low-performing readers had very different profiles based on the theory of planned behavior. Compared with high-performing readers, low-performing readers undervalued the importance of being a good student, expressed weaker intentions to work hard to achieve, perceived weaker subjective norms about the importance of academic achievement, and demonstrated poorer academic performance. It seemed that the perceived importance of doing well in school predicted attitudes about studying and beliefs about the consequences of working hard, was linked to perceived control over the

ability to achieve good grades, and could also be related to the perception of subjective norms. What does this mean for teachers, students, and their parents? It means that if one can increase the importance of learning in students and also increase students' beliefs about their abilities and the amount of control they have over their academic outcomes, students will want to work harder (behavioral intention) to achieve better grades.

Attributions about success and failure. The concept of attributions (i.e., the perceived causes of behavior) has been used extensively to explain students' performance in educational settings, from the types of attributions that students make about their successes and failures to how these attributions influence students' expectations about their subsequent academic achievement. Researchers also have looked at how attributions may be affected by others in students' environment such as peers, teachers, and parents. Of particular interest has been how students' attributions about their academic performance may influence important things such as their choices of areas of study, their decisions to stay in school or drop out, and their feelings of self-worth.

Bernard Weiner developed a three-dimensional framework of attributions that individuals may use when considering their academic outcomes (Weiner, 1986, 2001). Table 10.1 shows Weiner's framework and provides examples for a situation where a student has failed. The first dimension is that of *locus* (internal vs. external). Does the individual believe that the event was caused by something within him or her (internal) or by something outside him or her (external)? For example, if you do poorly on a test, is it due to your lack of study skills or to the fact that the test was difficult? The second dimension is that of *stability* or duration of the cause (stable vs. unstable). Is the perceived cause of an event something that is constant and not expected to change (stable) or is it temporary and likely to change (unstable)? If Susan attributes her performance in statistics to a lack of ability, this would be a stable cause because ability at math usually is not something that can be changed readily. On the other hand, if Susan explains her poor performance in terms of bad luck, this would be an unstable cause because a person's luck can change from moment to moment. The third dimension, *controllability*, refers to the degree of control that the individual believes he or she has over the cause of the outcome. Effort is something that a person can control (e.g., Susan could study harder and get a math tutor to help her), but some aspects of the task might not be under a person's control (e.g., Susan's professor might be tough on students).

What does it matter whether a student perceives that performance on an assignment is uncontrollable and due to external factors or is controllable and due to internal factors? According to Weiner (1986, 2001), it can matter a great deal to the student's expectations for future performance and can influence the student's emotional reactions to success or failure. Susan believes that she just "can't do math." Susan attributes her poor performance to a lack of mathematical aptitude, a cause that (according to Weiner's framework) is internal, stable, and uncontrollable. As a result, her performance expectations are affected: She fully expects to fail the upcoming test in statistics and will feel embarrassed by her performance (especially if other students do well). Will Susan be motivated to study harder? Probably not; she sees little point to it. She might even be tempted to drop the course or change her area of study altogether.

Table 10.1 Weiner's Three Dimensions of Achievement Attributions

Students' Perceived Causes of Academic Failure							
Internal				*External*			
Stable		*Unstable*		*Stable*		*Unstable*	
Controllable	Uncontrollable	Controllable	Uncontrollable	Controllable	Uncontrollable	Controllable	Uncontrollable
Does not work hard	Low aptitude	Did not complete all assignments	Illness	Teacher has negative impression of student	College has very high standards	Peers were a distraction	Bad luck

SOURCE: Adapted from Weiner (1986, p. 51).

CULTURE CAPSULE: THE ROLE OF CULTURE IN ATTRIBUTING ACADEMIC ACHIEVEMENT

As noted in this chapter, Weiner (2001) observed that students may attribute successful and poor academic performance to different causes depending on the students' perceptions of their own abilities and their expectations about their future performance. Attributions of academic achievement also seem to differ on the basis of culture (Yan & Gaier, 1994). In one study, Yan and Gaier (1994) examined attributions regarding academic performance in 358 students from the United States and Asia (i.e., Chinese, Japanese, Korean, and Southeast Asian) who were enrolled at a large American university. The students rated the extent to which they attributed their successes and failures in the achievement domain to each of the following: ability, effort, task difficulty, and luck. For example, a success item that focused on ability was "I feel my good grades reflect directly on my academic ability," whereas a failure item that focused on luck was "Some of my lower grades have seemed to be partially due to bad breaks."

Based on mean attribution scores, Yan and Gaier (1994) found that students from all groups attributed academic success and failure first to effort and then to ability, task difficulty, and luck. When culture was considered, American students rated ability as a more important factor in academic achievement than did Asian students. In addition, American students believed that effort played a more important role in success and a less important role in failure, whereas Asian students believed that effort was somewhat more important for failure than for success. Also, it is noteworthy that very few differences among the four groups of Asian students were found.

What might be the explanation for the differences in attributions found between American and Asian students? The attribution patterns may reflect cultural and societal beliefs about success and failure in school. One explanation may stem from the degree of individualism and collectivism present in Eastern and Western cultures, with the former being more collectivistic and the latter being more individualistic. The stronger emphasis that is placed on individualism in American culture may lead American students to attribute success more often to internal stable factors (e.g., ability), whereas in collectivistic cultures there is greater emphasis on contributing to one's group and not "losing face" in front of others. Therefore, for the Asian students, both success and failure are reflections of internal but unstable and controllable factors (i.e., effort) (Yan & Gaier, 1994).

Basically, what happens is that Susan's attributions about her past and current academic failures influence her expectations about future academic performance, which in turn affect her level of motivation, which in turn may then affect subsequent academic achievement (Weiner, 2001; Yan & Gaier, 1994). Recall that some (perhaps many) of the minority high school students in the opening vignette initially believed that they lacked the ability to successfully pursue a university education and professional training (i.e., an internal, stable, and uncontrollable attribution). Without any intervention (e.g., the mentoring program), these students very likely would not have bothered to apply to university. If the students had continued to believe that they lacked the ability to achieve successful academic performance, then putting more effort into their schoolwork would have seemed pointless and of little value to them. Their academic motivation would very likely have decreased. However, once their attributions changed so that it became clear to them that they *could* be successful in a university setting, their academic goals changed and their high school performance improved. In a sense, these students now viewed their academic outcomes as controllable, and past academic difficulties that they may have experienced were not necessarily seen as indicators of their academic abilities.

So, what can be done if students engage in attributions about their academic performance that have adverse effects on motivation? Yasutake, Bryan, and Dohrn (1996) wanted to see whether students who had these maladaptive attribution patterns could be introduced to an

intervention in the school environment that would change their beliefs about their academic performance from uncontrollable factors (e.g., ability) to controllable factors (e.g., effort). This kind of intervention procedure is often called *attribution training* and has been shown to have positive effects on academic outcomes. Yasutake and colleagues were especially interested in helping learning-disabled children because it is commonly found that such students develop maladaptive patterns of causal attributions; they attribute their academic successes to external causes, such as "easy tasks," and their academic failures to internal factors, such as a "lack of ability." Consistent with Weiner's (1986, 2001) view about how attributions can affect students' expectations about their academic performance, students with learning disabilities who engage in maladaptive causal attributions can often develop poor self-concepts and show less persistence on academic tasks.

The particular attribution training used by Yasutake and colleagues (1996) involved having grade school children, identified as either learning disabled or at risk for special education, serve as tutors for younger children. The use of this procedure was based on the evidence that peer tutoring involving learning-disabled students leads to academic improvement for both tutors and tutees. The pairs of children (tutors and tutees) were randomly assigned to one of two instructional methods, and the tutors were trained to give feedback on math and reading tasks using the method to which they were assigned. The instructional methods were (a) *problem-solving only,* in which tutors made general positive statements, such as "good job," when tutees made correct responses and suggested problem-solving strategies when incorrect responses were made, and (b) *attribution training plus problem solving,* in which tutors made internal attribution statements, such as "you are smart" and "you are really trying hard," to correct responses and suggested problem-solving strategies when incorrect responses were made. The results showed that the addition of attribution training had significant effects on students' self-concepts. At the end of the intervention, both tutors and tutees in the attribution training condition had more favorable self-perceptions of scholastic ability than did

their counterparts in the problem-solving only condition. It is notable that the positive effects also pertained to self-perceptions of behavior, athletic ability, and physical appearance.

Self-serving biases in the classroom. **Self-serving strategies** (see also Chapter 5) are cognitive and behavioral strategies that can help to protect our self-esteem or enhance our self-image. Often, self-serving strategies are biased in favor of the self and, thus, become **self-serving biases.** When people regard themselves as better than average (e.g., in tolerance and honesty), place particular value on positive qualities they possess and less value on positive qualities they lack, and believe they are less likely than most others to get divorced, we are likely seeing the operation of self-serving biases (Weinstein, 1980). These biases may seem to be harmless, positive, and even adaptive in some cases. For example, if we had more realistic views of our futures instead of expecting "rosy" futures, would we still be as motivated to achieve our goals? However, some social psychologists believe that, in the long run, these self-serving biases and their accompanying behavioral strategies may be self-defeating (Baumeister & Scher, 1988). One example of an ultimately self-defeating strategy, commonly used by students, is self-handicapping, a variable that was considered in Chapter 5 in the context of personal uses of social psychology.

According to Berglas and Jones (1978), **self-handicapping** refers to strategies that people use to handicap their own performance on a task so that they have a ready excuse for failure. Furthermore, self-handicapping not only reduces the cost of failure by shifting blame away from individuals but also enhances the value of success because success occurred despite the handicap. Let us revisit Susan and her statistics course. Suppose that Susan has a statistics test coming up and is afraid that no matter how hard she studies, she will do poorly on the test. She decides, therefore, to go out with friends the night before the test and to study for only a few hours. Handicapping her own performance has two advantages for Susan. If she fails the test, she can attribute her poor performance to not studying enough and being out with friends the night before. If she happens to do well on the test, she can feel especially

good about her good performance because she attained it under handicapped conditions. Either way, Susan protects her self-esteem from yet another confirmation of her inability to do math.

This might sound like a good strategy. A number of researchers (e.g., Thompson, 1994), however, have noted that self-handicapping can be habit forming, resulting in negative effects on academic performance and measures of achievement over the long term. For example, Murray and Warden (1992) warned that reliance on self-handicapping as a self-protective strategy in academic settings may lead to the inability to make internal stable attributions about one's performance even when one does well (e.g., "I did well because I am smart"). To examine the performance attributions used by self-handicapping students, Murray and Warden administered measures of self-handicapping, attributions, affect, study habits, and expectations for success on a midterm examination to approximately 200 undergraduate students. The self-handicapping measure was a self-report questionnaire that assessed individuals' tendencies to engage in self-handicapping behaviors in a variety of situations. The students completed all of the measures both before and after receiving their grades on the midterm examination. The researchers found that students who had higher self-handicapping scores were also less likely to make internal and stable performance attributions (e.g., to low or high ability) and also were more likely to believe that their performance was controlled by others (e.g., the professor) and the situation (e.g., the difficulty of the test) and to feel worse about their performance. These results occurred regardless of whether the students had performed well or poorly.

Murray and Warden (1992) suggested that the nonadaptive pattern of attributions that self-handicappers use might lead to lower effort on academic tasks and to performance decrements over time. If students believe that their performance is controlled by external factors, this may protect their self-esteem when failure occurs, but they also might not be able to take full responsibility when success occurs. It is students' perceptions of what affects academic performance, rather than their actual performance, that will determine their efforts in future academic endeavors.

Given that self-handicapping may have detrimental long-term effects, what can educators do to encourage students to put effort into their academic work even if the students may fail at some tasks? How can teachers help students to avoid attributing poor performance to a lack of ability and, instead, to view it as normal part of the learning process? Surprisingly, some classroom environments actually may promote the use of self-handicapping (Turner et al., 2002; Urdan, Midgley, & Anderman, 1998). Urdan and colleagues (1998) found that students in classrooms where ability and competition were emphasized were more likely to report using self-handicapping strategies than were students in classrooms where individual mastery, effort, and learning were emphasized. When the classroom structure is designed to emphasize the idea that performance is linked to ability, students who believe that they are not very good will be more likely to engage in strategies (e.g., self-handicapping) that protect their self-concepts.

To create a classroom environment that emphasizes individual mastery and effort rather than ability and performance, teachers use instructional strategies such as providing students with choices among learning tasks, creating multiple ways in which students can demonstrate their knowledge about a topic, and helping students to set short-term achievable (but still challenging) learning goals. For example, Turner and colleagues (2002) found that sixth-grade students in mathematics classes were less likely to engage in self-handicapping and other avoidant behaviors when they were in classrooms where teachers emphasized learning, motivated students to demonstrate new skills, and emphasized enjoyment of the material. Teachers in these classrooms told students not to feel ashamed when they could not understand some of the math and that it was okay to make mistakes (Figure 10.1).

How Can Student Performance Be Improved?

The research on self-handicapping and achievement attributions suggests that improving students' performance may be accomplished by changing the reward contingencies and teaching strategies in the classroom. In other
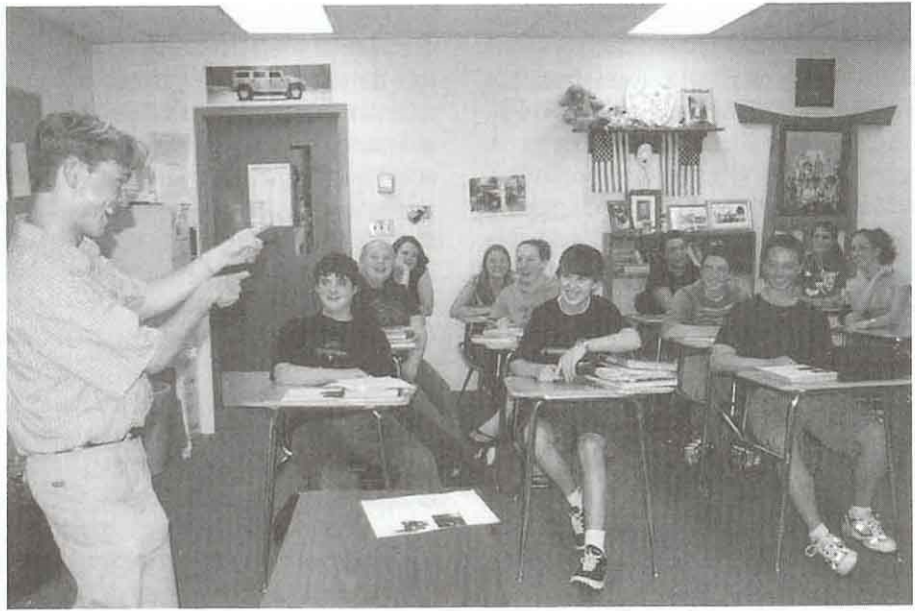
Figure 10.1   A Teacher Helping to Make Learning Fun

SOURCE: Photo courtesy of Cassandra Lee Davis

words, if a teacher wants to change a student's behavior, it might be constructive to focus on the situation, or on the interaction of the individual and the situation, rather than solely on the individual. This, of course, reflects the social psychological perspective. The following subsections continue this idea by describing how the emphasis on grades and competition in a classroom can adversely affect students' motivation to learn and by considering what educators can do to prevent this from happening.

Intrinsic motivation and external rewards. It is generally believed that in an *intrinsically oriented* system, people will be motivated to engage in an activity, whether it is a hobby, an exercise, or something new that is being learned. That is, individuals will engage in this behavior not for external rewards (e.g., grades, recognition, fame) but rather because they simply enjoy engaging in the activity. It is also known that providing large rewards for an activity may backfire and undermine people's intrinsic motivation for the activity (Deci, 1978).

Why does such undermining occur? Why would people draw less intrinsic enjoyment from an activity when they receive external rewards for engaging in it? The answer may be found in Daryl Bem's **self-perception theory.** According to Bem's (1972) theory, we infer our own attitudes and beliefs by observing our actions in a detached and logical way. Just as we draw conclusions about other people's attitudes from the ways in which they behave, we also infer our attitudes from observing our own behavior. For instance, you are currently reading this chapter and, thus, might infer that you like what you are doing. According to self-perception theory, when we begin to receive a reward (especially a large reward) for doing something we enjoy even without any recompense, we start to attribute our behavior—engaging in the activity—to the reward (extrinsic factor) rather than to enjoyment (intrinsic factor). Bem proposed that a reward (especially a large reward) is a salient cue to us and that our focus for explaining our behavior shifts from an internal factor to an external factor. As a result, internal factors, such as enjoyment and interest, no longer appear to provide sufficient justification for engaging in the activity. This is called the **overjustification effect** (also discussed in Chapter 5), which refers to the loss of motivation and interest as a result of receiving an excessive external reward (Bem, 1972; Lepper, Greene, & Nisbett, 1973).

What does the overjustification effect have to do with school and with the way in which we educate children? Deci (1978) and others

(e.g., Lepper et al., 1973; Tang & Hall, 1995) have argued that schools are very extrinsically oriented. You may remember a teacher giving you a "gold star" when you did well on a school project, or you may recall being embarrassed in front of others when you did poorly. Gold stars, grades, ranks in class, and competition all serve to focus children on the extrinsic aspects of learning. The unintended message conveyed to students is that working on academic tasks is not interesting and of value and that rewards are needed to get people to learn (Deci, 1978). The consequence of the overjustification effect is that intrinsic motivation to learn is undermined.

FOCUS ON RESEARCH

In an experiment to examine the overjustification effect in an educational setting, Lepper and colleagues (1973) relied on the observation that nursery school children enjoyed playing with "magic markers." The children were randomly assigned to one of three experimental conditions: (a) expected award, (b) no award, and (c) unexpected award. Each participant was brought into a playroom by one of the researchers, presented with magic markers and paper, and told that there was a person who was visiting the school to see what kinds of pictures boys and girls like to draw with magic markers. In the unexpected award and no award conditions, the researcher asked the child if he or she would like to draw some pictures for the visitor. In the expected award condition, however, the researcher showed the child a "Good Player Award" (a certificate with a gold seal and ribbon) and informed the child that the visitor would be giving these awards to children who were willing to draw pictures with the magic markers. In all three conditions, the researcher left the room, and the "visitor" (actually a second researcher) was brought into the room to sit with the child. The second researcher asked the child what kind of picture he or she would like to draw. The child was then allowed to draw for approximately 6 minutes with minimal input from the second researcher. At the completion of this session, children in the unexpected award and expected award conditions were given the awards.

For approximately 2 weeks following the experimental session, the participants in all three conditions were observed unobtrusively in their classrooms by the researchers from behind one-way mirrors. The researchers noted the amount of time that the children engaged (without prompting) in the target activity (i.e., playing with the magic markers) from among a choice of other activities and materials (e.g., building blocks, easels). Consistent with the overjustification hypothesis, Lepper and colleagues (1973) found that for children in the expected award condition, interest in the target activity decreased significantly after being rewarded for drawing with magic markers, whereas for children in the unexpected and no award conditions, interest in the magic markers did not decline. The researchers also noted that the *quality* of the drawings produced by the children in the expected award condition was poorer than that produced by the other children in both the experimental session and postsession observations. These findings clearly suggest that the expectation of a reward may affect intrinsic motivation and performance on school tasks. The overjustification effect has been found to occur not only with elementary school children but also with high school and college students (Deci, Koestner, & Ryan, 1999; Tang & Hall, 1995).

Does this mean that teachers should not give students extrinsic rewards for engaging in learning activities? No. Extrinsic rewards can still be used in educational settings in such a way that maintains interest and motivation in students, but there are some conditions that educators need to consider before employing them. Tang and Hall (1995), in their review of the literature on the overjustification effect, noted that other variables, such as the level of initial interest in a task, the expectation of receiving a reward on task completion, and even the characteristics of a reward, are also important in predicting whether the overjustification effect occurs in an educational setting. For example, if students find the learning task to be interesting even without a reward (e.g., building a model of the solar system), then being rewarded will decrease

motivation and will decrease subsequent performance on the particular task for the reasons stated earlier. However, if the task is uninteresting to students, then intrinsic motivation will remain unaffected or might even increase when a reward is incorporated (McGraw, 1978).

Remember that in Lepper and colleagues' (1973) study, the children who received an *unexpected* award did not show a decrease in their interest in playing with the magic markers, nor did they show a decrease in the quality of their drawings, as was seen with the children who expected an award. Expecting to receive an award for completing a task connects the task with the reward; in other words, students assume that they are engaging in the activity because they will receive a reward, not because the activity is intrinsically interesting. But teachers should be careful. Unexpected rewards, if given frequently for completing or doing well

on a task, may come to be *expected* by students, and then there may be an accompanying drop in intrinsic motivation due to the overjustification effect.

Finally, the characteristics of a reward may also play a role in the emergence of the overjustification effect. Deci and colleagues (1999) noted that tangible rewards (e.g., money, prizes, good grades), in particular, are likely to have undermining effects on intrinsic motivation, especially if these rewards are large. Furthermore, children tend to be more susceptible than college students to the negative effects of large tangible rewards. In contrast, verbal rewards (e.g., praise) are apparently perceived differently by students than are tangible rewards and can have an enhancing effect on motivation. Deci and colleagues (1999) suggested that this occurs because verbal rewards are often unexpected and provide clear affirmation of competence.

● FOCUS ON INTERVENTION

Amabile, Hennessey, and Grossman (1987) examined whether training students to be more intrinsically motivated would help them to maintain their interest in schoolwork, even when given a reward. In other words, they wanted to develop an intervention that would "immunize" students against the overjustification effect. Using 68 elementary school children (third through fifth grades), the researchers randomly assigned each student to either an intrinsic motivation training group or a control group for the first part of the study. Then, in the second part of the study, half of the students in the intrinsic motivation training group and in the control group were promised a reward for engaging in a creativity task. Therefore, there were four groups of children: (a) intrinsic motivation training/reward, (b) intrinsic motivation training/no reward, (c) control/reward, and (d) control/no reward.

The intrinsic motivation training involved showing children videotapes of two 11-year-olds talking with an adult about various aspects of their schoolwork. The dialogue in the videotapes was designed to get the participants to focus on (a) the intrinsic reasons for doing schoolwork (e.g., "I like social studies the best. I like learning about how other people live in different parts of the world.") and (b) the enjoyment of doing schoolwork and not on the extrinsic, socially imposed rewards for doing schoolwork (e.g., "Sometimes when I know my teacher is going to give me a grade on something I am doing, I think about that. But then I remember that it's more important that I like what I'm doing, that I really enjoy it. . . . "). Children in the intrinsic motivation training met in small groups with the experimenter for two 20-minute training sessions in which they saw and discussed the videotapes. A number of activities were also included in the training sessions to help the children focus on their feelings about doing schoolwork. For example, the participants were asked to indicate their preferences for a variety of school activities. Children in the control condition also met with the experimenter in small groups; however, the focus was on the children's favorite nonschool activities.

After the sessions were over, half of the students in the intrinsic motivation training group and control group were introduced to the reward manipulation. The researcher told them that if they promised to tell a story for the experimenter, they could take two pictures with an instant camera (the reward). The reward was made especially salient to these children by having them sign an agreement that if they told a story,

the experimenter would let them use the camera. This agreement was kept in sight of the children for the remainder of the session. For the other half of the participants who were not promised a reward, the picture taking and storytelling were simply presented among a list of things to do during the session, so that one activity was not viewed as a reward for engaging in another activity. For all groups, the storytelling involved making up a brief story to accompany a set of pictures in a book.

In examining the creativity of the children's stories, Amabile and colleagues (1987) obtained some interesting results. First, consistent with the overjustification effect, the control group participants who were rewarded produced stories that were less creative than those produced by their nonrewarded counterparts. Second, and the key part of the research, the children receiving the intrinsic motivation training plus reward produced stories that were more complex and higher in creativity than those produced by children in the control plus reward condition. This finding indicated that the intrinsic motivation manipulation had been effective in preventing the overjustification effect from occurring. Opposite to expectations, however, the children who received the intrinsic motivation training and were rewarded scored *higher* in their creativity than did the children who received the training but were not rewarded. Amabile and colleagues believed that, for the intrinsically motivated children, the reward might have led them to alter their perceptions of the situation such that they actively counteracted the detrimental effects of the reward. Whatever the reason, the results of this study imply that it is indeed possible to develop interventions to alter students' motivation and perceptions of a reward situation so that the usual overjustification effect may be minimized or even reversed.

Students comparing each other. In assessing our performance and abilities, according to Festinger's (1954) **social comparison theory,** we may use two types of standards: objective and social. According to this theory, in the absence of an objective standard (e.g., the proportion of correct responses on a test), we are likely to judge our performance and abilities (as well as our personality characteristics) in comparison with those of other people in our environment (e.g., "Am I smart?" "Do I have many friends?"). Usually, comparisons are made with others who are similar or close to us in terms of the characteristics in question. Furthermore, these comparisons may be made with people who are slightly better than we are on particular abilities and traits (called *upward social comparisons*) or with people who are worse off than we are (called *downward social comparisons*). Both types of comparison serve a useful purpose in that they make us feel better about our current abilities, achievements, and personalities (as in the case of downward social comparisons) or enhance our self-images by giving us attainable goals to strive for (as in the case of upward social comparisons).

The classroom is an environment that readily lends itself to the process of social comparison.

Children and young adults are often grouped in terms of their abilities and academic performance and are regularly evaluated not only on the basis of absolute criteria but also on the basis of how they do relative to their peers (Renick & Harter, 1989). Let us say that you received a B+ on a math test, whereas a classmate of yours received an A on the test. Comparing your performance with that of your classmate, you may end up feeling bad even though the grade you received was a good one. On the other hand, you may react in a more constructive way. You may discuss the test results with your classmate and get useful information on how to improve your grade on the next test. The difference in your grades also may motivate you to try harder the next time, or it may give you a sense of what you are capable of achieving. Because you are making an upward social comparison, comparing your performance with that of your classmate can even raise your self-confidence and feelings of self-efficacy (Blanton, Buunk, Gibbons, & Kuyper, 1999).

Therefore, it seems as though it might be a good idea to encourage children to make upward comparisons with classmates so that their academic performance, motivation, and self-efficacy can improve. But not all

classrooms are homogeneous entities with all children close in abilities and with similar chances to achieve. Classrooms are often made up of children of very different backgrounds, abilities to learn, and opportunities to succeed. What happens, for example, when a classroom is made up of children from different ethnic and socioeconomic backgrounds? Consistent with the upward social comparison effect, there is evidence that in classrooms where the majority of children are high-achieving Caucasians, minority children tend to have higher levels of academic achievement than do minority children in classrooms composed predominantly of their own racial groups (Pepitone, 1990). Despite the gains in achievement, however, minority children's academic self-concepts are poorer in integrated classrooms than in racially/ethnically homogeneous classrooms.

So why does upward social comparison not work in all cases? If one observes the interpersonal dynamics in a classroom or even in a schoolyard, those children with similar backgrounds and interests tend to interact with each other. One of the postulates of Festinger's (1954) social comparison theory is that we tend to compare ourselves with others who we perceive as *similar to ourselves.* Making social comparisons to people from outside our group depends on the availability contact with dissimilar others in our environment and the degree to which we come to perceive these others as similar to us in some relevant domain. For comparisons to occur, children from minority ethnic backgrounds must see majority children as relevant comparison figures (Pepitone, 1990). Their mere presence in the same classroom, using the same resources and learning materials, does not guarantee that the higher achieving children will be seen by lower achieving children as similar and, therefore, as appropriate comparisons. That is, minority children must view the areas of competency displayed by the majority children as relevant and important parts of their own self-concepts.

Another factor to consider when examining the effects of social comparison on academic achievement is the notion of perceived control over one's performance and ability. It is critical that students perceive that it is not only important to improve but also that it is *possible* to

improve (Huguet, Dumas, Monteil, & Genestoux, 2001). Keil, McClintock, Kramer, and Platow (1990) argued that the emphasis on social comparison standards and procedures in educational settings may be detrimental to children who consistently perform more poorly than their peers. After repeated lack of improvement in their academic performance, these students may experience less confidence in their abilities, may lose their motivation on academic tasks, and may experience lowered feelings of self-worth, consequently leading to lower academic achievement. In this case, making upward social comparisons can have a negative effect on students if the gap between the students and the targets of comparison never closes.

One group of students who are faced with constant challenges in school is learning-disabled children. Renick and Harter (1989) found that social comparison processes played an important role in how learning-disabled elementary school students perceived their academic competence when they compared themselves with their normal-achieving peers in a regular classroom and when they compared themselves with their learning-disabled peers in their special needs classroom. The researchers also were interested in which group (the normal-achieving peers or the learning-disabled peers) the learning-disabled students spontaneously used as a comparison group. Learning-disabled students reported that they perceived themselves to be more academically competent in the special needs classroom than in the regular classroom and that they spontaneously compared themselves with their regular classroom peers. A disturbing finding was that the learning-disabled students' perceptions of their academic competence decreased across the grades tested in the study (third through eighth grades), suggesting that as these students progress through school they become increasingly aware that there is a discrepancy between their own academic performance and that of their normal-achieving peers, a discrepancy that they may never be able to reduce. According to Renick and Harter, it is this knowledge that may have a detrimental effect on the self-perceptions and feelings of self-worth of learning-disabled children.

In view of the fact that social comparison processes can have both positive and negative

effects in the classroom, what can educators do to capitalize on the ego-boosting aspects of making comparisons and, thereby, increase student achievement? The next section may offer some answers by exploring the interpersonal dynamics of the classroom.

INTERPERSONAL PROCESSES: TEACHERS AND STUDENTS INTERACTING

People spend many of their formative years in a school environment. Prior to college or university, they are in school approximately 6 hours a day, 5 days a week, 10 months a year, for approximately 12 consecutive years. Although many school administrators, educators, and researchers focus their attention on how the school environment influences the development of basic academic skills, the capacity to acquire knowledge, and overall scholastic achievement, school also provides a medium for social and emotional development. Asp and Garbarino (1988) called school "the most pervasive socializing institution (outside of the family) in the lives of children" (p. 170). It should come as no surprise that social psychologists have long been interested in how teachers and students interact in the school environment and how these interactions affect the development of individuals.

Teacher Expectations and Student Achievement

One study in social psychology that generated a lot of research, excitement, and criticism is Robert Rosenthal and Lenore Jacobson's Pygmalion in the Classroom. Rosenthal and Jacobson (1968) noticed that teachers had higher expectations for the achievement of good students in their classrooms and wondered whether these expectations could influence students' academic performance. In their classic experiment, Rosenthal and Jacobson told teachers early in the school year that, based on the results of an intelligence quotient (IQ) test, some of their students had above average academic potential (a group labeled "bloomers"). In actuality, the students who they named as bloomers had been randomly selected, meaning

that these students were, on average, no smarter than the other students in their classes. The teachers were unaware that the feedback to them had been falsified, and the students were not told about the label given to them. The results indicated that students who had been labeled as bloomers showed significant increases in their IQ scores by the end of the school year compared with students in the control condition. Remarkably, the teachers' expectations had come true. How did the improvement come about? Rosenthal and Jacobson suggested that because the teachers believed the bloomers to be above average students, they began to treat these students differently. In-class observations revealed that teachers provided the bloomers with the following:

- A warmer climate by giving them more attention, support, and encouragement
- More challenging material to learn
- More feedback on their schoolwork
- More opportunity to respond in class and a longer time to respond

It is important to note, however, that the teachers did not deliberately treat these students differently from others in their classrooms. Indeed, when the results of the study were released, they evoked a great deal of alarm and criticism. According to Babad (1993), the Pygmalion study drew concerns from teachers and other educators that the results could be used to blame teachers for the poor academic performance of some students—expect poor performance, get poor performance. Recall that when the study was published, the United States was in the midst of school desegregation and related busing issues, and many aspects of social institutions were being questioned.

Criticisms aside, it seemed clear from Rosenthal and Jacobson's (1968) research that the expectations of teachers can affect students' IQ scores and possibly academic performance as well. But what mechanism was operating behind the relationship between teachers' expectations and students' subsequent performance? Rosenthal and Jacobson's study was actually an illustration of Robert Merton's concept of self-fulfilling prophecy. A **self-fulfilling prophecy** refers to having expectations about

another person that influence how the holder of the expectations behaves toward that other person and that in turn cause the other person to behave in a way that confirms the expectations. In addition, because the target person behaves in accordance with the expectations, he or she may believe that the expectations are justified. Merton (1948) proposed that the self-fulfilling prophecy notion could explain a variety of problems, from bank failures to discrimination against ethnic minorities.

A student may respond to a teacher's high expectations by becoming more interested in schoolwork and working harder, all of which lead to better academic performance. Be aware that the teacher also observes the student's behavior and is likely to conclude that his or her expectations regarding the student are correct and accurate. Thus, the cycle is complete and reinforced. Essentially, what the teacher is doing is changing the student's academic self-concept to conform to the teacher's own expectations and beliefs about the student. This, of course, has serious implications not only for the student's academic self-concept and achievement but also for choices and decisions the student might make later in life (e.g., choice of occupation). It also may help to explain the changes in self-perceptions, performance, and future goals observed in the minority students described in the opening vignette. The mentors held positive expectations for the students and provided them with a variety of learning opportunities and feedback that reflected these expectations. The result was the successful completion of research projects, a change in the way in which the students viewed their academic abilities, improved performance in high school courses, and higher academic aspirations.

Since Rosenthal and Jacobson's (1968) initial study, there have been hundreds of investigations of teacher expectancy effects in educational settings. Rosenthal and Jacobson's study had raised more questions than it had answered. For instance, do teachers' expectations have long-term effects on students' self-concepts? Do positive and negative expectations affect students through similar processes? Also, studies reviewing expectancy effects have consistently found only a small effect of teachers' expectations on the academic achievement of students, accounting for roughly 5% to 10% of students' performance (Brophy, 1983). Kuklinski and Weinstein (2001) suggested that there may be other factors, such as the classroom environment, that interact with the influence of teacher expectancies on students' performance and self-concepts.

Madon, Jussim, and Eccles (1997) also argued that certain conditions may augment the effect of teacher expectancies on students. In their study of 98 teachers and about 1,500 students enrolled in sixth-grade math classes in Michigan, Madon and colleagues examined the relationship between teachers' expectations (whether positive or negative) and the development of self-fulfilling prophecies in certain types of students. For instance, are students who have negative self-concepts or who perform poorly in school (low achievers) more susceptible to the expectations of teachers than are students who have positive self-concepts or who perform well in school (high achievers)? To address this question, teachers' perceptions of their students' self-concepts and their ability, effort, and performance concerning math were surveyed and examined in relation to their students' math achievement.

The results indicated that teachers' perceptions and expectations (whether positive or negative) predicted achievement more strongly for low achievers than for high achievers. That is, low achievers were more susceptible to the development of both positive *and* negative self-fulfilling prophecies than were high achievers. Why might this happen? Madon and colleagues (1997) suggested that the history of past school experiences (mostly negative) may make low-achieving students more sensitive to the expectations of teachers, thereby affecting their motivation and self-concepts more keenly. Therefore, low-achieving students who for years have been deprived of rewarding school experiences in particular may be inspired by teachers' positive expectations. The researchers suggested, on the other hand, that students who are academically more successful may have many more psychological resources to draw on even when faced with teachers' negative expectations and, therefore, are not as greatly affected by teachers' perceptions.

So, does this mean that all that needs to be done is to make sure that teachers hold positive

expectations and beliefs about students who are not doing well and then those students' academic performance will improve? The answer is not exactly that simple. Low-achieving students must perceive that teachers' positive expectations are genuine and that any positive feedback they receive from the teachers is based on merit. If a student perceives that positive teacher expectations are based on a feeling of sympathy, for example, the student is likely to discount and mistrust the teacher's positive feedback and support (Crocker & Major, 1989). The result may very well be that the student will disengage from the situation and experience a decrease in self-esteem.

We have seen that teachers' expectations can affect students' academic performance, but what happens when these expectancies fall along racial or gender lines? Many studies (e.g., Steele, 1997) have noted that teachers frequently hold negative expectations related to the academic achievement of African American students. Also, female students are not expected to perform as well as male students in areas of study requiring advanced mathematical and spatial skills (Steele, 1997). Therefore, negative expectations held by teachers and the self-fulfilling prophecy may partially explain why students who belong to marginalized groups (e.g., African Americans, those with low socioeconomic status) tend to perform more poorly in school than do students who belong to nonmarginalized groups (e.g., whites, middle-class students).

Applying these findings to children from three elementary school grades, McKown and Weinstein (2002) wanted to determine how different types of teacher expectancies (under- or overestimates of students' academic abilities) were related to achievement in mathematics and reading for students in academically stigmatized groups (e.g., girls in math, African Americans in all subjects) and nonstigmatized groups. Specifically, they examined how teachers' expectations for children at the beginning of the school year were related to children's academic performance at the end of the school year. They found that the academic performance of children in the stigmatized groups was affected negatively by teachers' underestimates of their abilities but was not affected positively by teachers' overestimates of their abilities. For children in the nonstigmatized groups, the students benefited from teachers' overestimates of their abilities but were not affected by teachers' underestimates of their abilities. An even more interesting (and disturbing) finding was that the expectancy effects on students' achievement either were constant over time or increased with age.

● FOCUS ON INTERVENTION

Given what we know about the effects of teachers' expectations on students' academic achievement, what do we do about it? Is there a way in which we can counteract the negative effects that teacher expectations can have on academic performance, especially for students in marginalized groups? There has been some attempt to make use of the concepts and empirical evidence on teachers' expectations to design interventions that can be used in educational settings (Babad, 1993).

One approach is to provide teachers with training to help them recognize the differential expectations that they may hold for high- and low-achieving students and to instruct them on how to engage in behaviors that reduce the disparity in students' achievement. The goal of the training is to improve the academic achievement of *all* students (Gottfredson, Marciniak, Birdseye, & Gottfredson, 1991). The Teacher Expectations and Student Achievement (TESA) Program provides teachers with such training (Kerman, Kimball, & Martin, 1980). Recall that Rosenthal and Jacobson (1968) identified a number of teacher behaviors that reflected their expectations of students' abilities (e.g., giving "bloomers" more opportunity to respond in class). The TESA Program focuses on 15 classroom behaviors that teachers commonly display when interacting with students of different achievement levels. The behaviors are similar to those observed by Rosenthal and Jacobson as being indicative of teachers' expectations of students. The behaviors are divided into three categories: (a) response opportunities (e.g., amount of time waiting for students to answer, complexity of questions directed at students), (b) feedback to students (e.g., amount of praise

given for success, feedback given on tests and assignments), and (c) personal regard (e.g., number of positive interactions, amount of eye contact with students). Teacher training is provided in five 3-hour sessions, with each session focusing on one behavior from each category. Between sessions, each teacher observes and gives feedback on the classroom behavior of at least three other teachers, and that teacher himself or herself is also observed teaching and given feedback. The main goal of this training is to make teachers more aware of their expectations concerning students and to make them more sensitive to the way in which they respond to students.

Evaluations of the TESA Program reveal that teachers and school personnel find the training to be very helpful, and teachers report making use of the strategies outlined in the program. In addition, the program has been shown to increase teachers' positive interactions with low-achieving students (Gottfredson et al., 1991). Finally, although the effects of this training do not always lead to increases in the achievement of minority students or poorly performing students (as theory and research would suggest), teachers report that students still demonstrate more positive attitudes toward learning (Fenton & O'Leary, 1990).

Students Interacting With Other Students

Forming and maintaining friendships, acquiring leadership skills, learning how to resolve conflicts and cooperate with others, and developing a sense of self all are by-products of attending school. In the classroom, a child learns how to be a student and a member or leader of a group and also is exposed to the norms, language, and values of the community (Asp & Garbarino, 1988). From the standpoint of researchers and educators, these social, cognitive, and emotional skills not only prepare an individual for life outside of school but also can enhance academic achievement.

Academic effects of peer interaction. Children who experience social, behavioral, and emotional difficulties in school are at a disadvantage for reaching their academic potentials. In particular, children who have poor peer relationships, where they are either actively rejected or ignored by their peers, fail to develop competency in many areas of their lives, including academic competency (Bullock, 1992; Coolihan, Fantuzzo, Mendez, & McDermott, 2000). Simply playing with others helps a child to become socially competent, be more self-confident, and do better in school. Indeed, positive peer interactions as early as preschool can have significant effects on later overall adjustment, including academic success (Ladd, Price, & Hart, 1988). Furthermore, some researchers

(e.g., Welsh, Parke, Widaman, & O'Neil, 2001) have also found that the opposite may occur; that is, academic success during the early school years can lead to social competence later.

All in all, then, it seems that doing well academically is very much related to being good at interacting with one's peers and that the relationship between academic success and social competence may be reciprocal. But what happens when no one wants to be a child's friend? Adolescents who continually experience rejection by their peers are at greater risk for dropping out of school, even though many are at least average in intelligence and have the ability to graduate (Bullock, 1992). Although the effects seem to be stronger for boys than for girls, the pattern is the same for both genders: Early poor social adjustment leads to future academic difficulties, a perception that the school environment is aversive, and eventual failure in school (Bullock, 1992; Ladd et al., 1988).

Children and adolescents in disadvantaged groups, such as ethnic minorities, the poor, and the mentally or physically disabled, are especially at risk for "not fitting in" and, consequently, for experiencing difficulties in school. Coolihan and colleagues (2000) investigated how peer interactions may be connected to learning readiness in children who are from poor families. Using more than 500 children enrolled in a Head Start program, they looked at multiple dimensions of peer play and how they related to achievement-orientated variables (e.g., interest in learning, persistence on tasks,

cooperative attitude) and problem behaviors (e.g., aggressive outbursts and disruptive play). Three general relationships emerged, namely, that (a) children who demonstrated positive play behaviors also were actively engaged in classroom learning activities, (b) children who hovered around play activities but did not interact with others very much also were inattentive in class and less motivated to learn, and (c) children who were disruptive in their peer play also displayed conduct problems during classroom activities.

Researchers have noted the importance of establishing positive peer relationships in developing academic competence for children and adolescents with disabilities and behavioral difficulties. Children with attention deficit hyperactivity disorder (ADHD) are often at risk for academic underachievement because their behavior disrupts their abilities to attend to teachers and take part in group discussions (DuPaul, Ervin, Hook, & McGoey, 1998). In an effort to increase ADHD students' attention to their school tasks (and thereby improve their academic performance), DuPaul and colleagues (1998) had a small group of elementary school children diagnosed with ADHD tutored by their non-ADHD peers on a variety of school subjects (e.g., math, spelling). The results showed that the ADHD children's disruptive off-task behavior decreased and that their attention to academic material increased. The peer tutoring also contributed to an increase in the academic test scores of the ADHD children, suggesting that peer tutoring might be effective in raising the academic achievement of students with behavioral disorders.

So, what are the implications of the research on peer interactions and academic behaviors? One thing suggested by the research is that if we can improve children's academic performance early on in school (e.g., by providing math and reading tutoring), it can have a positive impact on their later academic and social development. The beneficial effects would be even better if social skills training also were incorporated given that having successful interactions with others can lead to stronger academic motivation and performance in later grades (Coolihan et al., 2000). As was seen in DuPaul and colleagues' (1998) study, encouraging students to help one

another learn may be effective in boosting academic achievement, promoting social and personal development, and improving interpersonal skills. The classroom intervention strategies outlined in the next subsection structure peer interactions to achieve not only learning goals but also other social and developmental goals.

Cooperative learning methods. In general, **cooperative learning** (Slavin, 1990) refers to a learning method in which students work together in groups to master academic material presented by the teacher. There are many types of cooperative learning methods, two of which are the *Student Teams–Achievement Divisions* (STAD) and the *jigsaw classroom technique.* Most of the cooperative learning methods have been shown to have positive effects on academic achievement and on the development of students' higher cognitive skills (e.g., critical thinking, problem solving) (Figure 10.2).

The beneficial outcomes are enhanced if the cooperative learning method incorporates both individual accountability and group goals as in STAD (Slavin, 1990). The four-member learning teams used in the STAD technique are heterogeneous, composed of male and female students from different performance levels and ethnic backgrounds (Slavin, 1990). The teacher presents a lesson to the class (e.g., learn about the solar system), and then all members of each team are responsible for making sure that their team members master the content. In essence, students in the group become the "teachers" to their fellow students. Although students work on the lesson in their groups, they are quizzed individually on the material and points are awarded based on the extent to which each student has exceeded his or her own earlier performance. Then each student's points are added to those of the other team members, and the entire team receives a composite score. Teams that meet certain criteria may receive rewards or certificates of achievement.

Another effective cooperative learning method is the jigsaw classroom technique (Aronson, Stephan, Sikes, Blaney, & Snapp, 1978; Slavin, 1990). With this procedure, the students in the class are divided into small groups of five or six members. Each group is
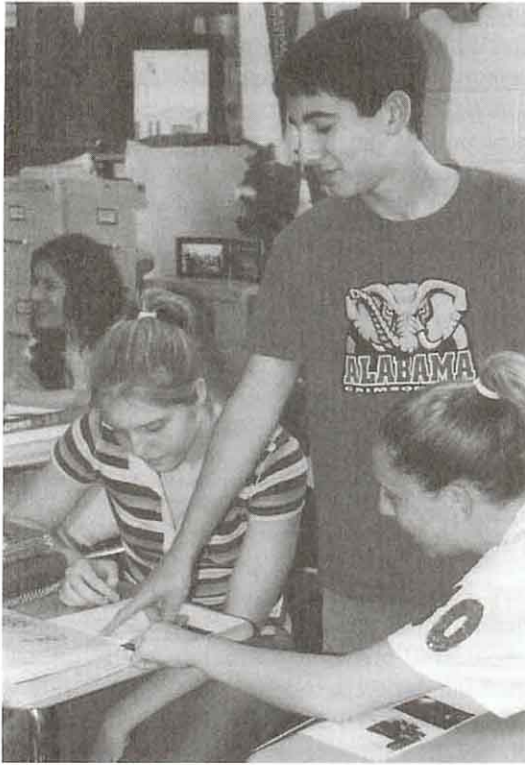
Figure 10.2   Cooperative Learning: Students Helping Each Other to Learn

SOURCE: Photo courtesy of Cassandra Lee Davis

assigned the task of learning about a particular topic, and each student within the group is responsible for learning a small portion of the topic. Each student from the group meets with the members of other classroom groups who have been assigned the same subtopic; these children work together to learn the subtopic. Then the students take the information that they have learned back to their groups and teach the material to other members of their groups. Because each student is evaluated individually, it is important that all group members pay attention to what their fellow group members present. As in STAD, members of the group rely on one another to learn all parts of the assigned material, and no student is considered to be more or less important than another student. What the jigsaw classroom technique does in the long term is improve the overall atmosphere of the classroom to one in which students interact with each other in a positive and constructive

manner that helps them to achieve a goal (Aronson, 2002). In addition, students are given opportunities to interact with classmates with whom they usually might not interact (e.g., peers of different ethnic backgrounds, socially ostracized peers).

But how is it that an individual personal process such as learning can be improved by a group activity? What can social psychology tell us about why cooperative learning is effective in promoting learning? Cooperative learning works in several ways. First, competition among individual students, which can be detrimental to an individual's self-esteem and performance, is reduced. Second, a sense of belonging in the classroom is increased, and this especially can have a positive effect on students who, for whatever reason, may be initially excluded. In addition, even though students work in a group and the group is assigned a score, there is still individual accountability, thereby reducing the potential for *social loafing,* that is, the reduction in individual effort when engaged in collective tasks. Because students are assigned points based on their improvement over their own past performance rather than on an absolute standard of success, any student can be a "star" at any given time. This not only makes learning more rewarding for students but also increases their motivation toward completing schoolwork. Teamwork also adds an element of fun and helps to emphasize that learning is important and valuable, creating an overall positive climate (Ellis & Feldman, 1994; Slavin, 1990). In particular, peers can provide feedback and encouragement to each other, model different levels of thinking, and bring different perspectives to the group. All of this creates an appreciation and positive expectation for the diversity of skills and thinking present in the classroom (Ellis & Feldman, 1994).

So far, we have discussed how student-teacher and student–peer interactions can affect students' academic performance and overall development both positively and negatively. For example, cooperative learning methods can lead to better academic performance and better social interactions among students. Because individuals spend so much time in the social environment of school, some of the negative social behaviors that plague our society, such as
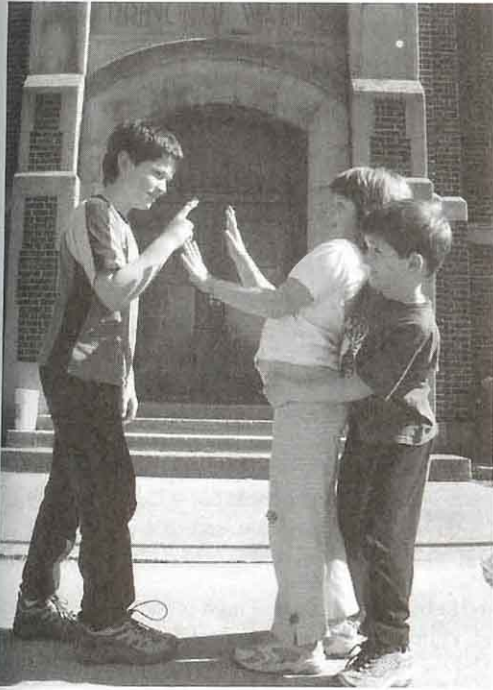
Figure 10.3 The Need for Anti-Bullying Programs to Be Implemented in Schools

SOURCE: Photo courtesy of University of Windsor.

prejudice and violence, also may get their start and receive reinforcement in school settings. As a result, social psychologists view the school system as providing a handy medium to study and address broader social issues such as aggression.

When Interactions Turn Deadly: School Violence

In March 1998, two boys, 11 and 13 years of age, shot to death four students and a teacher at their middle school in Jonesboro, Arkansas. In April 1999, two heavily armed male adolescents, wearing masks and black trench coats, walked into their Colorado high school and opened fire on students, teachers, and staff members. By the time the shooting was over, dozens of people were dead or injured, and the two young gunmen were also dead from self-inflicted gunshot wounds. Just a week later, a 14-year-old high school student in Taber, Alberta, opened fire with a rifle in his high school, killing one student and

seriously injuring another student. Unfortunately, as Table 10.2 shows, these are only three terrible incidents of school violence out of many other similar ones during the past two decades.

Understandably, we are shocked when we learn of such occurrences. We may wonder what is going on in our schools. Are students, particularly adolescents, more violent than ever before? Typically, their classmates describe many of the young perpetrators of school violence as outcasts or outsiders. Some of the shooters report incidents of rejection or bullying by others. Although extreme incidents of school violence are not as widespread as the media would have us believe, there is no denying their tragic results. Furthermore, although there is legitimate concern over the increasing use of weapons by children and adolescents to settle disputes, other types of aggression and violence (e.g., bullying, fighting) are much more common. Can social psychology help to explain what causes some young people to take such harmful actions against others? If we can identify the factors that lead to school violence, perhaps we can develop policies and interventions to prevent such incidents from occurring in the first place (Figure 10.3).

Causes of youth aggression. What makes young people behave violently? Are they suffering from some neurochemical imbalances? Can mental illness or a personality disorder be the culprit? These are, of course, possible answers. Social psychologists, however, have focused on the social environmental factors that can precipitate violent behavior.

Fatum and Hoyle (1996) noted that the way in which today's adolescents react to the harmful or offensive behavior of other individuals may provide some explanation for the incidence of youth aggression. In the past, antisocial interactions, such as those involving rejection, insults, and bullying, were regarded as experiences to be endured as a normal part of adolescence and as opportunities for developing inner strength and maturity. Today, too often such events seem not to be tolerated at any cost. Of course, these interactions have always had detrimental effects on self-esteem and self-image, but it is the way in which children and adolescents deal with them that

Table 10.2   Sample of School Shootings in North America

Date	Location	Perpetrators and Victims
February 10, 2000	Toronto, Ontario	Three teens are seriously wounded in the parking lot of a suburban high school.
April 29, 1999	Taber, Alberta	A 14-year-old boy walks into his secondary school and opens fire with a .22-caliber rifle, killing one teen and wounding another.
April 20, 1999	Littleton, Colorado	Two heavily armed 17-year-olds walk into their high school and start shooting, targeting minorities and athletes. After the rampage, 12 students (including the perpetrators) and 1 teacher are dead, and 23 others are wounded.
March 24, 1998	Jonesboro, Arkansas	Two boys, 11 and 13 years of age, open fire on students, teachers, and staff members from the woods near their middle school after luring people out with a false fire alarm. After the shootings, 4 students and 1 teacher are dead, and 10 others are wounded.
December 1, 1997	West Paducah, Kentucky	A 14-year-old boy opens fire at a high school prayer meeting, killing 3 students and wounding 5 others.
October 27, 1975	Ottawa, Ontario	A 13-year-old boy kills a student and a teacher and injures five others before shooting himself.
May 28, 1975	Brampton, Ontario	A 16-year-old boy kills one student and a teacher and wounds 13 other students at his high school. He also kills himself.

SOURCE: Adapted from news reports in *The Globe and Mail, The National Post,* and *Newsweek.*

has changed significantly. It now seems that any sign of disrespect or intolerance is regarded as justification for immediate retaliation and as a way of maintaining one's status and dignity. As Fatum and Hoyle put it, "The credo becomes 'disrespect deserves disrespect,' and aggression is seen as a tool for defending that credo" (p. 29). Many students see violence and other forms of aggression as the only effective ways of dealing with conflict. The bottom line is that they believe that their aggressive actions are appropriate. This points to a set of values and attitudes that supports the use of aggression. It also indicates that these students see no alternative means of coping effectively with harmful antisocial behavior that is directed at them or others.

Where do these aggressive attitudes and values originate? Why is it that young people come to believe that violence is an effective (sometimes the *only*) response to negative encounters with other individuals? Social psychologists typically view aggression as a learned response that can be precipitated by social and psychological factors. According to the tenets of **social learning theory** (Bandura, 1983; see also Chapter 8), through observation of the aggressive behavior of others (e.g., peers, parents, movie characters), children learn that aggression may be an effective means of obtaining desired goals. Children also observe that aggressive behavior is not always punished and, in fact, is sometimes rewarded. Moreover, they learn how to be aggressive (e.g., what strategies and weapons to use) and learn who are acceptable targets for aggression.

Kashani, Jones, Bumby, and Thomas (2001) identified multiple psychosocial risk factors associated with youth violence; no one causal factor or combination of factors accounts for every instance of youth violence. Risk factors occur at the individual, family, peer group, school, and community/cultural levels. For example, cognitive deficits at an individual

level, such as lower levels of moral reasoning and poorer verbal skills, have been associated with aggressive behavior in children and adolescents. In addition, family dysfunction, such as a family history of substance abuse, domestic violence, and little modeling of prosocial behaviors by parents, is also a contributor. One may argue, then, that what we are dealing with is a larger societal issue revolving around the access and use of weapons, the media's glorification of violence as a means of solving problems, and the modeling of aggressive behavior both inside and outside the home.

Violence in the schools. School violence is a heavily researched topic. In a review of the literature on school violence, Furlong and Morrison (2001) identified some general findings:

- Males are more likely than females to be involved in instances of school violence, either as perpetrators or as victims.
- Bullying is more common among elementary school children than among high school students.
- The use of weapons is more common among high school students than among elementary school children.
- There is very little difference among urban, suburban, and rural schools in levels of violence.
- Guns are brought to schools by a relatively small proportion of students (estimates are usually less than 15% and vary widely).
- Students who bring guns to school tend to be male, report frequent use of alcohol and drugs, designate themselves as gang members, and are more likely to be involved in aggressive behavior (e.g., assaults at school, juvenile crimes).

Because children and adolescents spend a great deal of time within the school environment, incidents of aggression resulting in physical and psychological harm have repercussions not only for the students involved in the incidents but also for all students, teachers, and staff members. The overall school climate can be deeply affected. School is no longer seen as a safe environment in which the emphasis is on academic achievement and on building interpersonal skills and relationships. Students can no longer focus solely on their learning because they also must be very vigilant about who they interact with, where they walk, and so forth. If students notice that teachers, staff members, and others in positions of authority ignore violent behavior, the students are likely to feel that they are alone and that violence is an accepted (or at least tolerated) means of dealing with conflict. Thus, school may be viewed as simply an extension of the community and home environment where violence and aggression may be prevalent and the norm (Furlong & Morrison, 2001).

Based on the thinking of Furlong and Morrison (2001) and Fatum and Hoyle (1996), it seems that a child's behavior in school may influenced by what he or she perceives to be typical, expected, and normal. The child perceives the consequences of certain actions by observing others and then behaves accordingly. A number of researchers (e.g., Cialdini, Kallgren, & Reno, 1991; Deutsch & Gerard, 1955) have identified three normative social processes that may operate within a social setting: (a) **descriptive norms** (i.e., what an individual perceives to be *typical* behavior in a setting), (b) **injunctive norms** (i.e., what people are *expected* to do or *ought* to do in a setting), and (c) **norm salience** (i.e., to what extent the norms are clearly *conveyed* in the setting). Descriptive norms help the individual to define a situation and process the information from the situation efficiently; it may be easier just to follow what others are doing in a setting, especially if the individual is unfamiliar with it. Injunctive norms dictate what ought to be done in a situation and inform the individual of the rewards or punishments associated with following (or not following) the norms. Lastly, descriptive and injunctive norms are said to affect the individual's behavior if the individual is made aware of them; if the norms in a situation are made salient, the individual knows how to behave in norm-consistent ways. We also can relate these processes back to Bandura's social learning theory; the observation of others' behavior and the consequences attached to that behavior are important influences on the individual.

How can social norms, then, operate in the classroom environment in relation to aggression? Aggressive behavior in the classroom may be an everyday occurrence (descriptive norm).

A teacher may discourage aggressive behavior in a student by a look, a gesture, or words indicating that the behavior is not appropriate in the classroom (injunctive norm). The teacher also may make these norms clear to others by excluding the student who has aggressed from the setting (high norm salience). Other students in the class may also convey norms of behavior by actively including or excluding peers who are aggressive (highly salient injunctive norms).

Based on the theoretical concepts developed by Cialdini and colleagues (1991) and others, Henry (2001) studied the normative social processes in the classroom environment that may influence aggressive behavior in children. Using a large sample of elementary school children, he had children report on their perceptions of classmates (i.e., aggressive behavior of peers, popularity and rejection of aggressive peers) and on their beliefs about the appropriateness of physical aggression and verbal aggression. In addition to the children's self-reports, Henry used observational methods to assess teacher and student behaviors in the classroom. He employed these measures to examine the descriptive norms in the classroom (perception of average aggression level of the child's classmates), injunctive norms (the child's expectations concerning aggression in the classroom), and norm salience (the child's views about the popularity of aggressive classmates and the teacher's reactions to aggressive behavior).

Henry (2001) found that children's perceptions of the level of aggression in the classroom (descriptive norms) had no relation to individual child's actual aggressive behavior but that the child's expectations about how he or she ought to behave in the classroom regarding aggressive behavior (injunctive norms) were significantly associated with the child's aggressive behavior. That is, students' beliefs about what was appropriate in the classroom influenced their aggressive behavior more than did their observations of actual levels of aggressive behavior in the classroom. Furthermore, just as theory regarding normative social processes would suggest, children believed that aggressive behavior was unacceptable if they saw that classmates who engaged in it were reprimanded or unpopular among their peers. However, if children believed that aggression was approved of and tolerated in the classroom, they regarded it as acceptable and, thus, aggressive behavior was more prevalent. Henry argued that what really influences the level of school aggression is the "moral climate of the classroom regarding aggressive behavior" (p. 210) rather than the observed behavior of classmates. **Moral climate** refers to children's beliefs about the appropriateness of aggression that are derived from the beliefs of others in the classroom. Therefore, these results imply that both teachers and pupils play important roles in the development of norms related to aggressive behavior in a classroom setting.

Creating a violence-free school environment. What can be done to undermine those aspects of school environments that promote violence? Many schools have implemented policies and programs to help reduce and discourage youth violence and, thus, create a safer environment for students, teachers, and staff members (Schwartz, 1996).

The jigsaw classroom technique discussed earlier is an example of an effective approach to improving interpersonal and intergroup relationships in a classroom, thereby reducing conflict and other antisocial behaviors among students (Aronson et al., 1978; Slavin, 1990). As you may recall, the jigsaw classroom technique is a cooperative learning strategy. Having students representing different backgrounds, social strata, and abilities working together on a common assignment not only enhances learning (as discussed earlier) but also results in the classroom norm becoming one of cooperation and interdependence rather than competition and conflict. Indeed, among students, the jigsaw classroom technique has been shown to promote greater tolerance for diversity, greater empathy and compassion for others, and increased self-esteem (Aronson, 2002; Aronson et al., 1978). Aronson (2002) suggested that the use of the jigsaw approach might have prevented the tragedies that occurred at Littleton, Jonesboro, and Taber. It is difficult to aggress against another person when your feelings and interactions with that individual have been positive.

● FOCUS ON INTERVENTION

The jigsaw classroom technique represents an intervention that occurs in the school itself and is directed toward developing a school climate that does not condone and support violence. Other intervention strategies aim at early childhood prevention. There are a number of prevention programs that have been developed, and many of them incorporate elements of social learning theory (Bandura, 1977b). Eddy, Reid, and Fetrow (2001) described an elementary school program aimed at children who are at risk for developing delinquent and violent behaviors during adolescence. The goal of the program, called Linking the Interests of Families and Teachers (LIFT), is to teach children and their parents prosocial and nonaggressive methods of dealing with anger, frustration, and conflict. Parents are included because they operate as significant role models in the children's lives. Children are encouraged and rewarded to model their behavior on that of their parents. The LIFT program contains three components: (a) a classroom-based social and problem skills training component for the children, (b) a playground-based behavior modification component for the children, and (c) a group-delivered training component for the parents.

For the classroom component, LIFT classroom instructors meet with all students in a classroom for 1 hour twice a week for 10 weeks. Each session includes listening to lectures and role-playing on social and problem-solving skills, practicing skills for interacting with peers, and engaging in unstructured free play on the playground. Students are taught relationship skills such as identifying feelings, dealing with anger, responding appropriately to others, and cooperating and problem solving within peer groups.

For the playground component, students are divided into small groups. The groups engage in various activities together, allowing them to demonstrate (and receive social approval for) prosocial behaviors and the inhibition of negative interactions with peers while playing.

For the third component, sessions are held with parents during the same 3-month period that their children are undergoing their program components. Each parent session involves information and role-playing activities aimed at fundamentals of discipline (e.g., using small positive and negative consequences, paying attention to early signs of problem behaviors) and family management skills (e.g., giving encouragement, controlling negative emotions, making behavior change contracts with children). These activities are based on social learning and behavior modification principles that state that modeling and rewarding prosocial behavior will lead to an increase in the desired behavior.

The LIFT program was implemented in an urban area in Oregon using schools from three school districts (Eddy et al., 2001). During the 3 years the program was in effect, schools randomly chosen for the program were compared with control schools in the same district.

Evaluation research of the effectiveness of the program was conducted using a variety of questionnaires and observations both at school and at home. What did the researchers find? First, there were significant immediate changes (between the fall and spring of the first year) in child and parent behaviors attributed to the LIFT program. For example, children in the LIFT program were less aggressive on the playground and were perceived as more positive by their teachers than were children in the control group. In addition, parents of LIFT children behaved less negatively with their children in parent–child problem-solving sessions. What about the long-term impact of the program? These results were also positive. Three years following the program, LIFT students were less likely to associate with delinquent peers and were less likely to engage in alcohol and drug use than were students in the control group.

Interventions aimed at prevention and reduction of school violence indicate that although violence in our schools is a serious problem, it is not an insurmountable one. It is clear from the preceding discussion that principals, teachers, and school administrators have to provide an atmosphere for students that promotes cooperative (rather than competitive) learning, that rewards prosocial behavior such as sharing and compassion, and that teaches students how to engage in effective (and nonaggressive) problem solving and communication. In short, we need to "change the process of the typical classroom so that our schools can transform themselves into more humane social environments for all students" (Aronson, 2002, p. 214).

SUMMARY

Intrapersonal (or individual) factors associated with academic achievement can affect students' perceptions of their abilities and can affect their academic performance. Attitudes (i.e., beliefs about one's ability to achieve a desired outcome or perceived importance of that outcome), subjective norms (i.e., others' expectations and how motivated one is to comply with those expectations), and perceived behavioral control (i.e., perceived control over the behavior and its outcome) may contribute to students' academic performance. The types of causes that students attach to their academic outcomes (i.e., attributions) may also affect students' motivation and expectations about subsequent academic achievement. Students who attribute their success to ability (an internal, stable, and uncontrollable factor) but who attribute their failure to controllable or unstable factors (e.g., effort) will be motivated to work harder than students who attribute their failure to ability. Belief in their academic abilities, perceived control over their outcomes, and attributing success in the mentoring program to their own abilities all were factors that helped the minority students in the opening vignette to see themselves in a more positive academic light.

Attribution patterns are also linked to self-serving strategies such as self-handicapping (i.e., handicapping one's own performance so that there is an excuse for failure). Students who rely on self-handicapping as a coping strategy for academic failure so as to protect their self-esteem may end up viewing their academic performance as uncontrollable and unstable. As a result, students might not be able to take credit for their academic performance even when success occurs, thereby undermining motivation and confidence.

The emphasis on external rewards (e.g., grades, praise, awards) may reduce the motivation to learn (overjustification effect). Focusing students' attention on the intrinsic aspects of academic tasks and giving them verbal feedback rather than tangible rewards may prevent the decline in intrinsic motivation. Motivation can be affected by how students perceive their academic performance in relation to others (social comparison). Upward social comparisons (i.e., comparisons with those who perform slightly better) may provide students with attainable goals, whereas downward social comparisons (i.e., comparisons with those who perform more poorly) may make students feel better about their own performance.

Because the school setting is a social environment, social psychologists also have looked extensively at the interpersonal processes that occur in the classroom. Teachers' expectations can become self-fulfilling prophecies (i.e., students perform in accordance with teachers' beliefs and expectations about their academic abilities and teachers' views of students are reinforced). Expectations also can be detrimental to academic performance and students' self-concepts when they differ on the basis of students' race, gender, or other preexisting group. Operating as mentors and teachers, the university researchers who interacted with the minority students in the opening vignette held positive expectations for these students and offered them a variety of learning experiences. As a result, the students became more confident in their academic abilities, completed their research projects successfully, showed improved performance in their subsequent high school courses, and expressed higher academic aspirations.

In addition to teachers, interactions with peers can affect students' academic achievement and the development of a variety of social and cognitive skills. Cooperative learning methods (i.e., students working in groups to master academic material) have been used extensively to enhance both academic competence and social competence in students. These methods reduce competition and conflict, increase a sense of belonging for the students, increase students' motivation toward schoolwork, and emphasize the importance of learning. One cooperative learning method, the jigsaw classroom technique, has been applied effectively to address the problem of aggression in schools. Although there is a multitude of causes, school violence may be reinforced through social learning (e.g., observation of others' behavior) and normative (e.g., what one is expected to do in a setting) processes present in the school environment.