

Dale H. Schunk and Carol A. Mullen

Abstract

Student underachievement brought about by low academic motivation is a major factor contributing to school dropout. Motivation affects students' *engagement*, or how their cognitions, behaviors, and affects are energized, directed, and sustained during academic activities. According to Bandura's social cognitive theory, *self-efficacy* (perceived capabilities for learning or performing actions at designated levels) is a key cognitive variable influencing motivation and engagement. The conceptual framework of social cognitive theory is described to include the roles played by vicarious, symbolic, and self-regulatory processes. We discuss how self-efficacy affects motivation through goals and self-evaluations of progress and how various contextual factors may influence self-efficacy. Research is described that relates self-efficacy to underachievement and dropout. This chapter concludes with programs designed to raise school success and recommendations for future research.

School dropout is a major issue in the USA. It is estimated that in the 50 largest US cities, the dropout rate is almost 50%, with 3.5–6 million students dropping out of high school each year

(Bloom, 2010; Bloom & Haskins, 2010). Although dropout affects youth from all backgrounds, culturally ethnic and immigrant students are disproportionately represented: "The dropout rate is 6% for whites, 12% for blacks, and 12% for Hispanics" (Bloom, 2010, p. 91). Dropout incurs a major economic loss, likely totaling more than \$3 trillion over the next decade (PR Newswire, 2009). Dropout also perpetuates such social problems as unemployment, underemployment, welfare, teen pregnancy, and incarceration (PR Newswire, 2009).

Underlying these widespread problems is the disengagement of urban youth in their learning and success (U.S. Department of Education, 2008).

D.H. Schunk, Ph.D. (✉)
Department of Teacher Education and Higher Education,
The University of North Carolina at Greensboro,
Greensboro, NC 27412, USA
e-mail: dhschunk@uncg.edu

C.A. Mullen, Ph.D.
Department of Educational Leadership and Cultural
Foundations, The University of North Carolina
at Greensboro, Greensboro, NC 27412, USA
e-mail: camullen@uncg.edu

Approximately 72% of high school students who perform poorly are from lower-income families, and 53% of English-language learners are underperforming (Cuban, 2010). These trends of dropout and underachievement continue at the postsecondary level, with disproportionate attrition among undergraduates from nontraditional groups, including culturally ethnic students, immigrants, and nontraditional students (e.g., older, part-time; Smedley, Myers, & Harrell, 1993; Zajacova, Lynch, & Espenshade, 2005).

Many factors contribute to school dropout, but a major one is underachievement brought about by low academic motivation. As used in this chapter, *motivation* refers to the process whereby goal-directed activities are energized, directed, and sustained (Schunk, Pintrich, & Meece, 2008). Motivation is a complex process that can be affected by personal factors (e.g., individuals' thoughts, beliefs, and emotions) and contextual factors, such as classrooms, peer groups, and community and home influences.

Herein we present the case that low academic motivation perpetuates poor engagement in learning and that certain strategies and interventions can make a difference in the education of America's youth. By *engagement*, we mean the manifestation of students' motivation, or how their cognitions, behaviors, and affects are energized, directed, and sustained during learning and other academic activities (Skinner, Kindermann, Connell, & Wellborn, 2009). Although different theoretical approaches explain student motivation and engagement, we utilize Bandura's (1977b, 1986, 1997, 2001) *social cognitive theory* of psychological functioning, which emphasizes that much human learning and behavior occur in social environments. By interacting with others, people learn knowledge, skills, strategies, beliefs, norms, and attitudes. Students act in accordance with their beliefs about their capabilities and the expected outcomes of their actions. Social cognitive researchers have explored the operation and outcomes of cognitive and affective processes hypothesized to underlie motivation (Pintrich, 2003; Schunk & Pajares, 2009).

Our interest is in a key social cognitive variable: *self-efficacy*, or one's perceived capabilities

for learning or performing actions at designated levels (Bandura, 1977a, 1997). Research has shown that a higher sense of self-efficacy can positively affect learning, achievement, self-regulation, and motivational outcomes such as individuals' choices of activities, effort, persistence, and interests (Bandura, 1997; Pajares, 1996; Schunk & Pajares, 2009; Usher & Pajares, 2008). Self-efficacious students are motivated and engaged in learning, which promotes their competence as learners. Conversely, a lower sense of self-efficacy for learning and performing well in school can negatively affect students' motivation and engagement (Pajares, 1996), increasing the risk of underachievement and dropout. Teachers who help students experience success by fostering their development of skills, learning strategies, and a positive outlook on life and their future can positively impact self-efficacy in their classrooms (McInerney, 2004; Miller & Brickman, 2004).

Despite the solid foundation of self-efficacy research pertaining to school-aged children and school-to-work interventions, fewer scholars have assessed its relevance for urban youth struggling at school. Given that school dropout affects youth from all backgrounds but particularly those who are culturally and economically disadvantaged, the self-efficacy of urban youth has undeniable importance (Mullen & Schunk, 2011). Self-efficacy has been identified as a predictor of adolescent success in life (Perry, DeWine, Duffy, & Vance, 2007).

Examining the predictors of academic self-efficacy in ethnic adolescents to include resiliency and persistence despite hardships and obstacles, perceived control over one's own successes, and school and community engagement, will contribute to the emerging literature on this topic (Vick & Packard, 2008). Our particular focus is the roles of personal and contextual factors on disadvantaged adolescents' academic motivation.

We next describe the conceptual framework of social cognitive theory and the key roles played by vicarious, symbolic, and self-regulatory processes. We then discuss self-efficacy and the process whereby self-efficacy affects motivation

through goals and self-evaluations of progress, as well as how self-efficacy can affect student engagement and how contextual factors may influence self-efficacy. The research evidence presented relates self-efficacy to underachievement and dropout. We also briefly highlight some programs designed to enhance school success through such means as school engagement, community activism, and career decision-making. Recommendations for future research conclude this chapter.

Conceptual Framework

Reciprocal Interactions

A central tenet of Bandura's (1977b, 1986, 1997, 2001) social cognitive theory is that human behavior operates within a framework of *triadic reciprocity* involving interactions among personal factors (e.g., cognitions, beliefs, skills, affects), behaviors, and social/environmental factors (Fig. 10.1). These interacting influences can be demonstrated using self-efficacy as the personal factor. Regarding the interaction of self-efficacy and behavior, studies have shown that self-efficacy influences achievement behaviors such as task choice, effort, persistence, and use of effective learning strategies (person → behavior; Schunk & Pajares, 2009). These behaviors also affect self-efficacy. As students perform tasks and observe their learning progress, self-efficacy for continued learning is enhanced (behavior → person).

Many students with learning disabilities hold low self-efficacy for performing well (Licht & Kistner, 1986). The link between personal and contextual factors is seen when individuals react to these students based on attributes typically

associated with them (e.g., low skills) rather than based on their actual capabilities (person → social/environment). In turn, environmental feedback can affect self-efficacy, such as when teachers encourage students by communicating, "I know you can do this" (social/environment → person).

The link between behaviors and environmental factors is evident in many instructional sequences. Environmental factors can direct behaviors, such as when teachers point to a display and say, "Look here," which students do with little conscious effort (social/environment → behavior). Behaviors can alter learners' instructional environments. When students give incorrect answers, teachers are apt to reteach the material, temporarily discontinuing the lesson (behavior → social/environment).

Social cognitive theory presents a view of human *agency* in which individuals proactively engage in creating their own career and life trajectories (Schunk & Pajares, 2005). They hold beliefs that allow them to exert control over their thoughts, feelings, and actions. In reciprocal fashion, people influence and are influenced by their actions and environments. But the scope of this reciprocal influence is broader than individuals because they live in social environments. *Collective agency* refers to people's shared beliefs about what they are capable of accomplishing as a group. Groups, too, affect and are affected by their actions and environments.

Vicarious, Symbolic, and Self-Regulatory Processes

Social cognitive theory stresses that people possess capabilities that distinguish them from others and motivate them to strive for a sense of agency (Bandura, 1986). Among the most prominent of these are vicarious, symbolic, and self-regulatory processes.

Vicarious processes. Much human learning occurs *vicariously* through observing modeled performances (e.g., live, filmed symbolic; Bandura, 1977b). The capability for learning vicariously allows individuals to acquire beliefs, cognitions,

Person ↔ Behavior

Person ↔ Social/Environment

Social/Environment ↔ Behavior

Fig. 10.1 Reciprocal interactions in social cognitive theory

affects, skills, strategies, and behaviors from observations of others in their social environments and vicariously via media outlets, which saves time because learning is not demonstrated when it occurs. This capability also allows people to shape their lives because they proactively select environmental features (e.g., individuals, materials) to which they want to attend. Thus, students who want to become teachers enroll in education programs and put themselves in situations where they can learn vicariously, such as by observing and working with classroom teachers.

Symbolic processes. Symbolic processes involve language, mathematical and scientific notation, iconography, and cognition. These processes help people adapt to and alter their environments (Bandura, 1986). They use symbolic processes when they formulate thoughts and take action and, perhaps unconsciously, to guide their actions. Cognitively in tune, students do not simply react to events but rather resolve issues and generate new courses of action. Symbolic processes also foster verbal and written communications, which further promotes learning.

Self-regulatory processes. Social cognitive theory assigns a prominent role to *self-regulation*, or the processes individuals use to activate and sustain their behaviors, cognitions, and affects that are focused on attaining goals (Zimmerman, 2000). People regulate their behaviors to conform to their internal standards and goals. Before embarking on a task, individuals determine their goals and what strategies to use, and they feel self-efficacious about performing well. As they engage in tasks, they monitor their performances, assess their progress toward goals, and decide whether their strategy needs adjusting. As tasks are completed, they reflect on their experiences, make modifications, and determine next steps. Believing they have learned and made progress strengthens their self-efficacy and motivates further learning. People who are continually engaged while learning are apt to be self-regulated (Schunk & Pajares, 2009; Zimmerman & Cleary, 2009).

Self-Efficacy

Self-efficacy is a key personal factor in social cognitive theory, which postulates that achievement depends on interactions among behaviors, personal factors, and social/environmental conditions (Perry et al., 2007). *Academic self-efficacy*, or the perceived confidence in one's ability to execute actions for attaining academic goals, plays a crucial role in adolescent motivation and learning. Self-efficacy is hypothesized to influence behaviors and environments and be affected by them (Bandura, 1986, 1997). Self-efficacy affects choice of tasks, effort, persistence, and achievement. Research in academic settings shows that students who feel efficacious about learning tend to be competent and engaged and are likely to set learning goals, use effective learning strategies, monitor comprehension, evaluate goal progress, and create supportive environments (Schunk & Pajares, 2005). In turn, self-efficacy is influenced by the outcomes of behaviors (e.g., goal progress, achievement) and by inputs from the environment (e.g., feedback from teachers, comparisons with peers). Individuals' self-efficacy impacts motivation and learning, as well as decisions and events that affect their lives (Schunk & Pajares, 2009).

Sources of Information About Self-Efficacy

Information for assessing one's self-efficacy is acquired from actual performances, observations of others (vicarious experiences), social persuasion, and physiological indexes (Table 10.1; Bandura, 1997). Because these are tangible indicators of individuals' capabilities, one's performances constitute the most reliable information (Schunk & Pajares, 2009). Interpretations of one's performances as successful raise self-efficacy whereas perceived failures may lower it, although an occasional failure or success should not have much impact.

Table 10.1 Self-efficacy sources and consequences

Sources of self-efficacy information
<ul style="list-style-type: none"> • Mastery experiences (actual performances) • Vicarious (modeled) experiences • Forms of social persuasion • Physiological indexes
Consequences of self-efficacy
<ul style="list-style-type: none"> • Motivational outcomes (task choice, effort, persistence) • Learning • Achievement • Self-regulation

Interpretations of one's performances are important, along with the performances themselves. Individuals engage in metacognitive mediation by thinking of areas of their learning such as planning and problem-solving. In a study of college undergraduates (mixed gender, no race specified), Coutinho (2008) found that students' metacognition and self-efficacy influenced their performances.

Individuals acquire information about their capabilities through social comparisons with others (Bandura, 1997). Similarity to others is a cue for gauging one's self-efficacy (Schunk, 1995). Observing others succeed can raise observers' self-efficacy and motivate them to try the task at hand because they are apt to believe that if others can achieve, they can as well. But a vicarious increase in self-efficacy can be negated by subsequent difficulties. Persons who observe peers fail may believe they lack competence, which can dissuade them from attempting the task.

People also may assess self-efficacy when they receive persuasive information from others (e.g., "I know you can do this"; Bandura, 1997); however, such persuasion must be credible for people to believe that success is attainable. Although positive feedback can raise individuals' self-efficacy, the effects will not endure if they subsequently perform poorly (Schunk & Pajares, 2009).

Physiological and emotional reactions such as anxiety and stress also provide input about self-efficacy (Bandura, 1997). Strong emotional reactions can signal anticipated success or failure. When people experience negative thoughts and fears about their capabilities (e.g., feeling nervous when thinking about taking a test), those

affective reactions can lower self-efficacy (Zajacova et al., 2005). Conversely, when people feel less stressful (e.g., anxiety subsides while taking a test), they may experience higher self-efficacy for performing well.

Sources of self-efficacy information do not automatically affect self-efficacy (Bandura, 1997). Individuals interpret the results of events, and these interpretations generate information on which judgments are based (Schunk & Pajares, 2009). Some ways that research has shown to effectively build students' self-efficacy are to have students set difficult but attainable goals and assess their own goal progress (mastery experiences), allow students to observe models similar to themselves learning skills (vicarious experiences), and provide students with feedback that links their learning progress to their diligently applying a learning strategy (social persuasion; Schunk, 1995).

Important as it is, self-efficacy is not the only influence on behavior; no amount of it will produce a competent performance when requisite skills are lacking (Schunk & Pajares, 2009). Also important are *outcome expectations* (beliefs about the likely consequences of actions; Bandura, 1997) and *values* (perceptions of the importance and utility of learning and acting in given ways; Wigfield, Tonks, & Eccles, 2004). Even students who feel efficacious about performing well in school may disengage from learning if they do not value it or believe that negative outcomes may result, such as rejection by peers. Assuming the activation of requisite skills, positive values, and outcome expectations, self-efficacy is a key determinant of individuals' motivation, learning, self-regulation, and achievement (Schunk & Pajares, 2009).

Consequences of Self-Efficacy

Self-efficacy has diverse effects on various motivational outcomes associated with student engagement, including task choice, effort, and persistence (Bandura, 1997; Pajares, 1996; Schunk & Pajares, 2005, 2009; Table 10.1).

Individuals typically select tasks and activities at which they feel competent. Self-efficacy can affect how much cognitive and physical effort people expend on an activity, how long they persist when they encounter difficulties, and their levels of learning and achievement. Students with high self-efficacy tend to set challenging goals, work diligently, persist in the face of failure, and recover their sense of self-efficacy after setbacks. As a consequence, they develop higher levels of competence. In contrast, those with low self-efficacy may set easier goals, expend minimal effort, disassociate as difficulties arise, and feel dejected by failure, all of which negatively affect engagement and learning.

Goals and Self-Evaluations of Progress

Social cognitive theory highlights the importance of various symbolic processes for motivation. Among the most critical are self-efficacy, goals, and self-evaluations of goal progress, which work together to enhance motivation and engagement in learning.

Goals, or what people are consciously trying to attain, are symbolic processes that instigate and sustain actions. Because goals do not affect behavior without commitment, learners must commit to attempting goals (Locke & Latham, 2002). As learners work on a task, they compare their current performance with their specific goals. Positive self-evaluations of progress strengthen self-efficacy and sustain motivation. A perceived discrepancy between present performance and the goal may create dissatisfaction, which can propel effort. Goals motivate learners to expend the effort necessary and persist at the task (Locke & Latham, 2002), resulting in better performance and enhanced engagement.

Although goals are motivational catalysts, their effects depend on their properties: specificity, proximity, and difficulty. Goals that include specific performance standards are more likely to activate self-evaluations of progress and enhance self-efficacy and motivation than are general goals (e.g., “Do your best”; Bandura, 1986). Specific goals are a better indicator of the kind of

effort needed to succeed and evaluate progress. Goals also are distinguished by how far they project into the future. Because it is easier to determine progress toward goals that are closer at hand, proximal (short-term) goals enhance self-efficacy and motivation better than do distant (long-term) goals (Bandura & Schunk, 1981).

Goal difficulty, which refers to the level of task proficiency required as assessed against a standard, influences the effort people expend. In general, learners work harder to attain more challenging goals; however, perceived difficulty and motivation do not bear an unlimited positive relation to one another. Goals that students believe are overly trying can obstruct motivation because they hold low self-efficacy for attaining them. Learners are apt to feel self-efficacious for attaining goals that they perceive as difficult but attainable.

A distinction can be drawn between learning and performance goals. A *learning goal* refers to what knowledge, behavior, skill, or strategy students are to acquire, and a *performance goal* refers to what task is to be completed. These goals can have differential effects on achievement behaviors (Anderman & Wolters, 2006). Learning goals motivate by focusing and sustaining attention on both processes and strategies that help students acquire competence and new skills. Self-efficacy is substantiated as they work on the task and assess their progress (Schunk, 1996).

In contrast, performance goals focus attention on completing tasks. They may not highlight the value of the processes and strategies underlying task completion or raise self-efficacy for learning. As they engage in tasks, students may not compare their present and past performances to determine progress. Performance goals can lead to social comparisons with the work of others to determine progress. These comparisons can lower self-efficacy when students experience learning difficulties, which adversely affects motivation and engagement in learning.

Research supports these hypothesized effects of learning and performance goals. Schunk and Ertmer (1999) conducted two studies with college undergraduates as they worked on computer projects. Students received the goal of learning computer applications or the goal of performing

them. In the first study, half of the students in each goal condition evaluated their learning progress midway through the instructional program. The learning goal led to higher self-efficacy, self-judged progress, and self-regulatory competence and strategy use. The opportunity to self-evaluate progress promoted self-efficacy. In the second study, self-evaluation students assessed their progress after each instructional session. Frequent self-evaluation produced comparable results when linked with a learning or performance goal. These results suggest that multiple self-evaluations of learning progress can raise motivation and achievement outcomes.

Self-Efficacy and Student Engagement

Engaged Learning

Student engagement in learning reflects cognitive, behavioral, and affective variables that encompass aspects of motivation and self-regulation (Schunk, 1995; Zimmerman, 2000). Among cognitive variables, students engaged in learning have a sense of self-efficacy for learning. They hold positive outcome expectations and value the learning. They set goals and evaluate their progress, and they decide what they believe are effective strategies for learning the material and succeeding. They focus their attention on the task and strive to avoid distraction.

Students who are engaged also display productive achievement behaviors. They create work environments conducive to learning. Disadvantaged students must especially endeavor to overcome barriers where they lack necessary materials and equipment. While engaged with tasks, students expend effort and persist when they encounter difficulties. If they become stuck, they seek help (e.g., teachers, parents, peers, manuals). Engaged learners self-monitor to ensure good use of time. They may keep records of their accomplished tasks and what remains to be done.

Affective variables include creating and maintaining a positive attitude toward learning. Engaged learners value learning; by succeeding, they experience a sense of pride. They are strategic about

learning and know how to keep themselves from becoming discouraged. For example, if they cannot answer the easier questions on a test, they change their strategy by moving onto questions they can answer and reassuring themselves that they are making progress while internally checking their understanding.

Self-efficacy comes into play at all points in engaged learning. Prior to starting on a task, students hold a sense of self-efficacy for learning (Schunk, 1995). Their self-efficacy is substantiated as they work on tasks and observe the progress being made toward their goal. Self-efficacy helps to keep students motivated and engaged in learning activities. Students who feel efficacious about learning but perceive that their progress is inadequate make adjustments to improve their learning (e.g., changing strategy, seeking help, improving one's environment). Such modifications help foster engagement in learning.

Contextual Influences

As noted, self-efficacy is affected by contextual factors such as familial, sociocultural, and educational influences that are critical for engaged learning.

Familial influences. Families influence self-efficacy in different ways, such as through their capital. *Capital* includes resources and assets (Bradley & Corwyn, 2002), primarily material resources (e.g., income), human resources (e.g., education), and social resources (e.g., networks). *Cultural capital* refers to the wealthy norm reflected in an accumulation of specific types of knowledge, skills, and abilities that are acquired by families and valued in school settings (e.g., technological resources such as computers in the home; Yosso, 2005). Children are motivated to learn when the home has activities and materials that arouse their curiosity and offer challenges that can be met (Schunk & Pajares, 2009). Parents who are better educated and have social connections are apt to stress education and enroll their children in school and extramural programs that foster their self-efficacy and learning.

Families that foster a responsive and supportive environment, encourage exploration and stimulate curiosity, and facilitate learning experiences accelerate their children's intellectual development. Because mastery experiences constitute a powerful source of self-efficacy information, parents who arrange for their children to experience mastery in concert with their personal interests are apt to develop efficacious youngsters (Schunk & Pajares, 2009). Activities conducive to learning may include playing a musical instrument or a sport in which children have the freedom to explore. In contrast, parents can negatively affect their children's academic competence and achievement through such behaviors as providing rewards extrinsic to academic tasks, making unrealistic demands, avoiding conflict arising from learning expectations, and not valuing self-directed learning (Borkowski & Thorpe, 1994).

Another means of influence is vicariously through role models. Family members who model ways to cope with difficulties, persistence, and effort strengthen their children's self-efficacy. Family members also provide persuasive information. Parents who encourage their children to try different activities as appropriate to their ages facilitate their capability for welcoming challenges and meeting them (Schunk & Pajares, 2009).

The plight of delayed adulthood affects self-efficacy as well. Western societies now have a longer transition to adulthood and thus a prolonged time for youth to finish school, become employed, and start families (Settersten & Ray, 2010). Youth from impoverished backgrounds do not meet these adult milestones at the same rate as their more privileged peers. Modern families can experience undue stress where their youth remain semidependent for different types of assistance. Youth from low-income families receive approximately 70% less material assistance than those in the top quarter of the income distribution (Settersten & Ray, 2010).

Sociocultural influences. A major factor associated with self-efficacy and achievement is socioeconomic status. Borkowski and Thorpe (1994) reviewed empirical studies and found that students from lower-income families tend to lack

positive visions of themselves over time and as related to school, career, and life. Metacognitive processing of information and development are fostered as longer-term goals are formed (e.g., "future time perspective"), and self-schemas (e.g., "possible selves") are imagined (Borkowski & Thorpe, 1994; Shell & Husman, 2001). Future time perspective is not a self-schema per se, but these two concepts share similarities. Notably, future time perspective is implicit in an individual's capability for projecting possible selves into the near and distant future (Miller & Brickman, 2004; Shell & Husman, 2001; Simons, Vansteenkiste, Lens, & Lacante, 2004).

For example, students who relate to their school subjects in the context of what they want to become (e.g., lawyer, teacher) improve their mental competence and engagement in learning goals and tasks (Shell & Husman, 2001). Based on their study involving almost 200 primarily White undergraduate students, Shell and Husman found that students' future time beliefs (i.e., relative importance of attaining immediate versus long-term future outcomes) were associated with higher self-efficacy, achievement, and study time and effort.

Youth and children from different sociocultural backgrounds must be guided to express future-oriented conceptions of themselves (possible selves) and of society (Borkowski & Thorpe, 1994). The idea is that the present self imagines the future, envisioning a future self to orient current choices and behaviors. Notably, short- and long-range goals are critical building blocks for the development of possible selves, which represent goals and opportunities for making executive decisions about the future (Borkowski & Thorpe, 1994; Oyserman & James, 2009). Teachers who have a future time perspective can influence engagement and motivate students by explaining the "future importance of their present behavior" in fostering ideas of development, identity, and community (Simons et al., 2004, p. 122). While student goal setting needs to be clear and specific, future goals—and especially their anticipated benefits—also play a role in motivation (Bandura, 1986). Optimal outcomes can be increased where students understand that their "current task engagement is instrumental to attain

a future goal” (Simons et al., p. 122). Intrinsic benefits (e.g., personal development) and extrinsic benefits (e.g., career satisfaction) can increase overall motivation by way of instructional interventions that change individuals’ limited attitudes toward their future and time.

Teachers engage their students by taking into account each individual’s capacity to think about the future and by being attuned to their discovery process. One direction for personal development involves integrating the meaning or instrumental value of activities into one’s concept of self (Husman & Lens, 1999). Importantly, as Miller and Brickman (2004) attest, teachers exert sociocultural influence as role models when they help students understand what possibilities can be acted upon in their environment and when they assist with problem-solving in such areas as limited knowledge of one’s context and goal setting for achieving future goals. On the other hand, teachers must be aware of students’ impressions of or beliefs about negative teacher bias and/or obstacles to learning. Teachers can exert a positive influence by changing the classroom environment, modifying their instructional or interpersonal strategies, or addressing students’ individual goals (Miller & Brickman, 2004).

Possible selves is a concept that places value on unrealized but better selves and habits or orientations that learners wish to possess. Habits such as persistence, flexibility, and civic centering are high-level ideas that should be integrated in the early stages of students’ education (Settersten & Ray, 2010). Because a gap exists between the present self that dwells on what is and the possible self on what can be, individuals mentally strain to see the future. In a 5-year study of the motivational levels of Native Americans and White Americans, McInerney, Hinkley, Dowson, and Van Etten (1998) found that middle schoolers generally experienced difficulty in imagining the future (e.g., employability and other long-term goals). Students may need to be encouraged to connect their present and future goals by determining an instrumental route to the future (McInerney, 2004). McInerney et al. (1998) found that some of the middle schoolers, by the time they reached high school, became more

receptive to imagining their futures and projecting themselves into colleges and jobs.

Peers constitute another sociocultural influence. With development, peers become important influences on self-efficacy (Schunk & Meece, 2006). Parents who steer their children toward efficacious peers provide opportunities for vicarious increases in self-efficacy. When children observe their peers succeed, they are likely to experience higher self-efficacy and motivation.

Social influence also operates through *peer networks*, or groups of friends and others with whom students associate. Students who belong to networks tend to be similar (Cairns, Cairns, & Neckerman, 1989), which enhances the likelihood of influence by modeling. Networks help define students’ opportunities for interactions and observations of others’ interactions, as well as their access to activities. Over time, network members tend to become even more similar, as in the case of racially and psychologically identified members. Some researchers, such as Arroyo and Zigler (1995) who studied African American and White peer groups in urban high schools, have found that the “racial identification” can “impact academic achievement and affective states” where members believe that others hold a negative perception of their group (p. 912). The African American participants reported having lessened their identification and engagement with their racial group, concerned about jeopardizing the approval of nonmembers.

Peer groups promote motivational socialization when perceived in reassuring ways. Changes in children’s motivation across the school year are predicted by their peer group membership (Kindermann, McCollam, & Gibson, 1996). Children affiliated with highly motivated groups change positively, whereas those in less motivated groups change negatively. Steinberg, Brown, and Dornbusch (1996) tracked students throughout their high school years, finding that those with similar grades but affiliated with academically oriented crowds achieved more than those affiliated with less academically inclined peers. Peer group academic socialization can influence the academic self-efficacy of individual members and their groups (Schunk & Pajares, 2009).

Another influence on academic self-efficacy is perceived stress and anxiety. Stress has the potential to depress students' self-efficacy, especially among disadvantaged college populations (e.g., nontraditional, immigrant, and minority; Zajacova et al., 2005) and urban high school students (Gillock & Reyes, 1999). Although stress affects performance, self-efficacy has been shown to be the stronger influence, as demonstrated by Pajares and Kranzler (1995) who found that mathematics anxiety exerted a weaker influence than self-efficacy on high school students' mathematical performances. Zajacova et al. assessed self-efficacy and the stress of freshmen immigrant and minority college students. While they found that social stress did not seem to have a negative effect on the students' GPA and credits, stress did seem to have an effect, albeit marginal, on persistence and enrollment.

Researchers have emphasized the important role of self-efficacy in alleviating the effect of stressors on perceived stress and academic success (Pajares & Kranzler, 1995; Zajacova et al., 2005). Minority and immigrant students experience "acculturative stress," making them more susceptible to social stress than native-born and White students (Zajacova et al., 2005). For such reasons, King (2005) argued that despite the increasing diversity within their classrooms, many African American and Hispanic students feel disengaged and culturally segregated.

Educational influences. Self-efficacy has been explored in various educational domains and among individuals differing in age, developmental level, and cultural background. Researchers have established that self-efficacy influences individuals' motivation, achievement, and self-regulation (Bandura, 1997; Pajares, 1997; Schunk & Pajares, 2009; Stajkovic & Luthans, 1998). Multon, Brown, and Lent (1991) found that self-efficacy accounted for 14% of the variance in academic performance. Stajkovic and Luthans (1998) determined that self-efficacy resulted in a 28% gain in performance. Schunk (1981) obtained evidence that self-efficacy exerted a direct effect on children's achievement and persistence in mathematics. Additionally, Pajares and Kranzler

(1995) found that mathematics self-efficacy had a direct effect on performance and that it mediated the influence of mental ability on performance.

Experimental research has shown that instructional and social practices that convey to students that they are making progress and becoming competent learners raise self-efficacy, motivation, and achievement (Schunk & Pajares, 2009). Some beneficial instructional and social practices are having students pursue proximal and specific goals, using social models in instruction, providing feedback indicating competence, having students self-monitor and evaluate their learning progress, and teaching students to use metacognitive strategies while learning (Coutinho, 2008; Schunk & Ertmer, 2000). Other benefits on students' self-efficacy occur from role models who provide encouragement of and high expectations for achievement, a feeling of control over and empowerment within one's environment, and rewards for doing well in school (Jonson-Reid, Davis, Saunders, Williams, & Williams, 2005; Miller & Brickman, 2004).

Research also shows that competence beliefs such as self-efficacy, as well as academic motivation, often decline as students advance through school (Eccles, Wigfield, & Schiefele, 1998; Jacobs, Lanza, Osgood, Eccles, & Wigfield, 2002). However, a few studies caution that the attitudinal and developmental patterns of young adolescents defy tidy summarization (McInerney, 2004). This widely reported decline has been attributed to such factors as increased competition, more norm-referenced grading, less teacher attention on individual student progress, and stresses associated with school transitions (Schunk & Meece, 2006). These and other school problems, including teacher bias and obstacles to learning (Miller & Brickman, 2004), can negatively affect the development of academic self-efficacy, especially among those who are poorly prepared to cope with academic challenges and first-generation college students (i.e., those whose parents are not college graduates; Majer, 2009). Rigid sequences of instruction frustrate some students, and lower-ability groupings can weaken the self-efficacy of members. Classrooms in which students are allowed to socially compare

their work can have the unintended effect of lowering self-efficacy for those who judge themselves deficient.

Periods of transition in schooling also can affect self-efficacy (Schunk & Meece, 2006). Because elementary students remain with the same teacher and peers for most of the day, teachers can better provide focused attention and feedback on their individual progress. In middle school, though, children move among rooms for subjects and are exposed to new peers. Learning often is rote, evaluation becomes normative, and teacher attention to individual progress lessens (McInerney, 2004). The expanded social reference group and the shift in evaluation standards require students to reassess their academic capabilities and regulate their learning, which can lower self-efficacy for some.

Educational influences on self-efficacy also vary depending on the sociodemographics of the institution. Allen (1992) reviewed studies that investigated educational advantage and disadvantage as linked to type of institution and race. While historically Black colleges and universities (HBCUs) have fewer educational resources than many predominately White institutions, the self-efficacy and competence of African American students at HBCUs often is higher. For example, they earn higher grades and are more academically socialized, better psychologically adjusted, and more culturally aware than their counterparts at White institutions. On White college campuses, African American males may display lower academic motivation, in contrast with African American females, whereas at HBCUs, African American males exhibit less anxiety about their peer networks and role. The African American females' experience on White campuses is thought to be mixed, though, with acceleration in their assertiveness and competence due to a decrease in the need to cultivate relationships with same-race males, on the one hand, and feeling socially isolated and even ostracized, on the other. Hence, educational institutions can play a significant role in the acculturative stress and adaptation of culturally ethnic and disadvantaged students.

Self-Efficacy and Underachievement

The role of self-efficacy in student underachievement and dropout is receiving much attention (Alexander, Entwisle, & Kabbani, 2001; Hardre & Reeve, 2003; Lee & Burkam, 2003; Rumberger & Thomas, 2000). Factors contributing to underachievement and dropout are varied. These include poorly developed academic and social skills, little interest in school subjects, classrooms that stress competition and ability social comparisons, low perceived value of school learning, little sense of belonging or relatedness to the school environment, and no sense of purpose or vision of the future (Alexander et al., 2001; McInerney, 2004; Meece, Anderman, & Anderman, 2006; Wentzel, 2005). Students' involvement and participation in school depend in part on how much the environment promotes their perceptions of autonomy and relatedness, which in turn can influence self-efficacy and achievement (Hymel, Comfort, Schonert-Reichl, & McDougall, 1996). Parents, teachers, and peers affect students' feelings of autonomy and relatedness, and peer groups exert increasing influence during adolescence (Kindermann, 2007; Steinberg et al., 1996).

We have discussed how low self-efficacy can weaken motivation and lessen engagement in learning. But high self-efficacy does not automatically translate into strong motivation and deep engagement. Students who feel efficacious about learning but disconnected from the school environment or mainstream society may be unmotivated and disengaged. Families supporting youth who have low motivation to succeed and who are disengaged from school, other educational institutions, and military and service programs are particularly burdened. Families with low incomes and educational levels would benefit from new kinds of institutions that can help fulfill this necessary role of provider and motivator, as well as civic pathway to lifelong success (Gibbons & Shoffner, 2004; Settersten & Ray, 2010).

Socially, structurally, and historically, students who have been socialized through caste systems (i.e., segregated schools and neighborhoods) have had to overcome multiple challenges to

nourish developing belief systems that support achievement and self-efficacy (Cuban, 2010). Disadvantaged students' academic self-efficacy and engagement are "deeply entangled in histories of segregation, desegregation, and resegregation" (Cuban, 2010, p. 204), and the negative consequences of school desegregation on Black families have been documented (Horsford, 2010). Cuban's analysis of school district reforms and leadership is associated with failed initiatives across the USA. Given the discriminatory forces at work in socially stratified hierarchical systems, lower socioeconomic status and personal cognitive deficits, then, are only part of a multifaceted problem that drives underachievement and engagement. Other researchers also have viewed the poor academic performance of students of color, particularly African Americans and Hispanics, as perpetuated by systems of inequity and other social ills that make academic efforts seem futile and penalizing (Horsford, 2010). To succeed academically and vocationally in mainstream communities, disadvantaged students have had to minimize their associations with same-race peers, unlike privileged White students (Arroyo & Zigler, 1995; Cuban, 2010).

Intervention as seen in the forms of social policies and second-chance programs have been in effect for years; however, many of these are restrictive in scope and problem-based, not developmental (Bloom, 2010). They often have not assessed students' self-efficacy. These programs should also focus on ethnic identity issues and prevention orientation at the high school level or earlier to not only be more effective but also have a lasting effect (Bloom, 2010). Engagement strategies for assisting high-risk dropout populations (e.g., immigrants, disabled, young mothers, foster care youth, and youth offenders) include identity development, paid work, internships, job training, community service, and life skills.

Some of these components appear to be evidenced in YouthBuild and Service and Conservation Corps, and other programs. The Challenge and City Year programs engage participants in residential building projects and team-based civic work. For high school and middle school students, the Advancement Via Individual Determination (AVID) program found in 45 US

states and 15 countries prepares students, including first-generation populations, for 4-year colleges (Chapel Hill–Carrboro City Schools, 2009). Strategies that the AVID program uses include developing analytic thinking, improving organizational skills, providing tutoring support, and exposing students to higher education institutions, all of which have the potential of raising self-efficacy and motivation. We suspect that these programs might benefit from thorough evaluation of their effect on participants' self-efficacy. Studies of community college students indicate that success interventions are necessary for facilitating the academic self-efficacy of diverse first-generation students (Majer, 2009).

Despite the importance of such societal interventions, their degree of effectiveness has yet to be established. Some postdropout programs select the most motivated and competent individuals, making high-risk dropouts especially difficult to engage in any organized way (Bloom, 2010). While the long-term effects of such programs are unknown, consolidated efforts across communities and the USA are needed. Such programs would gain from becoming more inclusive, cohesive, and intensive enough to engage youth over a long period.

Future Research Directions

There is much evidence that self-efficacy relates to achievement outcomes including motivation and engagement. Students who hold a sense of self-efficacy for learning and performing well are apt to be engaged, competent learners.

But our discussion also raises many issues. We recommend more research, especially on contextual factors and influences, students from different cultures, and high-performing schools.

Contextual Influences on Self-Efficacy

Self-efficacy—a personal factor—can affect and be influenced by contextual factors. Enhancing students' self-efficacy, motivation, and engagement requires that we understand how contextual variables operate.

We have noted that school transitions (e.g., middle school to high school) bring about many changes in learning contexts. Research is needed that explores which contextual factors affect self-efficacy and how students combine the influences of these new contexts with their prior experiences to arrive at self-efficacy judgments. New practical knowledge can inform the design of effective learning environments at school, home, and elsewhere.

Social factors are crucial. Students who lack a sense of belonging within their school environment are at risk for underachievement and dropout. Research on factors that affect students' sense of belonging will suggest ways to improve their self-efficacy and engagement in learning. For example, one self-efficacy-enhancing strategy involves activating possible selves by envisioning one's future and understanding the links between present and later goals (Borkowski & Thorpe, 1994; Jonson-Reid et al., 2005). Thus, high school students who want to become medical doctors might picture themselves using science and mathematics in their work as doctors, which underscores the importance of their studying in their current courses. We encourage probing of academic self-efficacy among African American students and other non-White student populations. Research can investigate their self-conceptions and possible selves, perceived influences on their self-images and learning, and experiences of academic identification and disassociation (Kerpelman, Eryigit, & Stephens, 2008).

Political factors are yet another important contextual variable. For example, school districts have been urged to systematically analyze the effects of policies aimed at increasing student achievement (Cuban, 2010). Studies of changes in test scores by both racial and socioeconomic status need to follow from district-level policy implementation, with a focus on students' self-efficacy resulting from standardized testing. As another example, districts will need to anticipate the effect on student self-efficacy of new assignment plans that enforce attendance zones closer to students' homes. Critics argue that such initiatives undermine achievement by resegregating schools and confining ethnic students to their own neighborhoods (Cuban, 2010).

Cross-Cultural Research

More needs to be known about students from different cultures and countries. Most self-efficacy studies have focused on students from the USA without sufficient attention on issues of diversity, especially as related to learning and engagement. Cross-cultural studies will expand understanding of the operation and generality of self-efficacy. Klassen's (2004b) review of 20 cross-cultural studies found that although self-efficacy was lower for non-Western students (e.g., Asian and Asian-immigrant students) than for Western students (e.g., Western Europe, Canada, USA), the more modest self-efficacy expressed by non-Western students predicted academic outcomes better than the higher self-efficacy of Western students. Klassen posited that immigration status and political factors can modify the mean self-efficacy of a cultural group.

Research that focuses on culturally ethnic students' experiences at different types of institutions is also needed, especially when unemployment and underemployment are on the increase (Allen, 1992). Hand in hand with this focus is that of social policies and programs that can address in a more specific way not only the lower achievement and higher attrition for African American college students but also what types of interventions and resources foster ethnic students' self-efficacy and success (Allen, 1992). As Jonson-Reid et al. (2005) attest, given that research on self-efficacy has mostly focused on White students at predominately White institutions, we need a better understanding of African American youths' sense of self-efficacy, in addition to strategies that foster a belief in the value of education.

Cultural dimensions such as individualism and collectivism may influence the relation of self-efficacy to academic outcomes (Oettingen & Zosuls, 2006). Kim and Park (2006) argued that theories that emphasize individualistic values—such as self-efficacy—cannot explain the high achievement of East Asian students. Instead, the Confucian-based socialization practices that promote close parent-child relationships seem responsible for high levels of self-regulatory, relational, and social efficacy. In these cultures,

relational efficacy (i.e., perceived competence in family and social relations), as well as social support from parents, may influence students' academic performances. Self-efficacy may be more other-oriented in some non-Western (particularly Asian) cultures than in Western cultures (Klassen, 2004a). In short, cross-cultural research has implications for educational practices, especially given the influx of immigrants in US schools.

Self-Efficacy in High-Performing Schools

High-performing schools create a positive environment for learning and support teachers and students so that learning can occur. The literature on high-performing schools focuses on their effects on student achievement and teacher satisfaction (Muncey & McQuillan, 1993; Sizer, 1992). We recommend that self-efficacy researchers devote attention to the features of high-performing schools that contribute to students' and teachers' self-efficacy.

Some characteristics of high-performing schools that should have positive effects on self-efficacy are parental involvement, supportive learning environments, and smooth transitions between grades and levels (Maehr & Midgley, 1996; Muncey & McQuillan, 1993; Sizer, 1992). Research directions include examining the influence of these and other factors to determine how they create and build self-efficacy for learners.

Another area deserving attention is the self-efficacy of low-income students who have transitioned to better schools and are being socialized in new surroundings within school districts that favor economic integration. Kahlenberg (2004) contended that lower-income students who attend middle-class and high-performing schools can feel out of place because their peers have clearer goals for their learning and are better prepared and more academically engaged. The culture of the school is unfamiliar to the lower-income population in other respects as well, in that parents are likely more active in the school's programs, and teachers generally are better qualified. Ways to raise the self-efficacy of low-income students

in such environments could benefit from research that is attuned to this practical focus.

Conclusion

Social cognitive theory stresses learning from the social environment. The conceptual focus of Bandura's theory postulates reciprocal interactions among personal, behavioral, and social/environmental factors. Self-efficacy is a critical personal factor that can affect motivation, engagement, learning, and achievement. Self-efficacy is shaped by personal, cultural, and social factors, making learning and achievement complex socio-cultural phenomena.

Attention to ways of building students' skills and self-efficacy will help more learners become academically motivated and engaged in learning. These outcomes should help to diminish the pervasive problem of student underachievement and dropout. Important questions remain to be addressed by researchers and school leaders, which will refine theory, expand practical knowledge, and help prepare better-educated citizens. Finally, we urge legislators to advocate more strongly for interventions that promote student success, with the goals of alleviating the nation's dropout problem and increasing educational opportunities for all youth.

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