Optimizing Student Success in School With the Other Three Rs

Reasoning, Resilience, and Responsibility

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CHAPTER 10

A MOTIVATIONAL PERSPECTIVE ON SCHOOL ACHIEVEMENT

Taking Responsibility for Learning, Teaching, and Supporting

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Understanding individual and group differences in school achievement is critical to designing educational environments that maximize each student's learning. Scholars from many different disciplines have worked on increasing this understanding. In this chapter, I focus on a subset of factors linked to expectancy–value theories of achievement motivation and task engagement, stressing the importance of these factors in explaining race and ethnic group differences in school achievement within the United States. On average, students from African American, Hispanic, and Native American families perform more poorly than children from Asian American and European American families throughout their school careers (Berry & Asamen, 1989). Many explanations have been offered

for these differences (see Connell, Halpern-Felsher, Clifford, Crichlow, & Usinger, 1995; Connell, Spencer, & Aber, 1994; Lee & Smith, 2001). I believe that at least part of the difference lies in the impact of discriminatory experiences at school both on students' confidence in their own ability to master the school material (the expectancy component of expectancy–value models) and on the value they place on being fully engaged in the learning tasks provided in their schools. It is very unlikely that students will decide to take responsibility for their own learning if they believe their teachers lack confidence in their academic abilities due to their race or ethnic group. It is also unlikely that they will take responsibility for their own learning if they themselves come to place little value on being fully engaged in the learning agenda of their schools because of racial discriminatory experiences at school. I elaborate this argument throughout the chapter and discuss one set of ethnic-identity-related constructs that have been shown to help these young people cope with discriminatory experiences in school and suggest ways that schools might help to support these protective psychological processes.

I believe my approach relates directly to two of the Other Three Rs stressed in this book: responsibility and resiliency. It relates to responsibility in two ways. First, my approach stresses two sets of individual motivational constructs that impact on students' willingness to engage in school tasks and accept the responsibility for their own learning. Second, I stress the importance of teachers and schools accepting responsibility both for facilitating all students' motivation for learning and for preventing experiences likely to undermine some students' desire to fully engage in the learning agenda at school.

My approach also relates to resiliency through the importance I place on psychological processes linked to experiences of either racial or ethnic discrimination. Those experiences at school are likely to undermine their confidence in themselves and their sense of belonging in the school. The conceptual framework of resiliency is a useful tool for understanding students' response to ethnic and racial discriminatory experiences at school for two reasons: First, personal experiences of ethnic or racial discrimination are a major source of risk that can increase the probability of negative developmental outcomes (Essed, 1990; Jackson et al., 1994; Phelan, Yu, & Davidson, 1994). Being in an uncaring and unsupportive environment where individuals do not feel a sense of relatedness is an important developmental risk factor (Jessor, Van Den Bos, Vanderryn, Costa, & Turbin, 1995). If experiences of racial/ethnic discrimination can lead individuals to conclude that they are devalued and not an integral part of the "in group" because of their racial/ethnic group membership, then these experiences are likely to undermine individuals' sense of belonging at school, as well as their own psychological well-being (Feagin, 1992). Racial/ethnic

discrimination can also convey the message that the teachers do not have high expectations for the students' academic efficacy (Wong, Eccles, & Sameroff, 2003). To the extent that these messages are internalized by a student, he or she is likely to lose confidence in his or her own academic efficacy. Second, the framework of resiliency (e.g., linking the response to risks to protective factors) stresses agentic components that can facilitate positive development in the face of risky experiences.

One type of racial/ethnic devaluation that has received tremendous attention in social psychology is the phenomenon of stereotype threat (Steele & Aronson, 1995). Stereotype threat occurs when individuals' awareness of society's negative stereotypes about their social group leads them to be anxious about engaging in behaviors that confirm those stereotypes, particularly those pertaining to intellectual abilities. Research with African American college students has shown that these anxieties result in decreases in valuing of school, effort to do well on academic tasks, and performance on standardized tests. A few studies with adolescents have replicated these findings. For example, there is a negative relation between Hispanic high school students' awareness of ethnic discrimination and their evaluation of their own ethnic group (Phinney, 1996a, 1996b). Similarly, qualitative research has shown that perceived ethnic discrimination at school affects participation in school and socioemotional adjustment for some high school students of color (Phelan et. al., 1994).

There is also some research on adolescents' perception of future discriminatory barriers. Many adolescents of African American, Mexican American, and Native American origins are aware that they may encounter educational and job discrimination in the future (e.g., job ceilings). Findings from qualitative research indicate that some African American and Hispanic adolescents respond to this awareness by disengaging from mainstream institutions, such as school (Ogbu, 1992). Their academic disidentification includes: (1) disaffection with school, including low educational expectations and poor academic motivation; (2) association with friends who support negative attitudes toward school; and (3) poor school performance and attainment (Fordham & Ogbu, 1986; Mickelson, 1991; Ogbu, 1992; Taylor, Casten, Flickinger, Roberts, & Fulmore, 1994).

If experiences of racial/ethnic devaluation at school can assault students' sense of relatedness to their surroundings, as well as their confidence in their own abilities and their anxieties about their own academic performance, then protective factors are needed to compensate for and/or buffer against the potential threats posed by racial/ethnic stigma (Connell, 1990; Goodenow & Grady, 1993). One potential protective factor is students' identification with their racial/ethnic group. Different theories of racial/ethnic identity suggest that a healthy identification with one's

racial/ethnic group can buffer against prejudice and discrimination (e.g., Cross, 1991; Phinney, 1996a; Sellers, Smith, Shelton, Rowley, & Chavous, 1998). In particular, researchers have suggested that attachment to one's racial/ethnic group (i.e., feeling a strong sense of connection to one's racial/ethnic group) can play a key role in maintaining psychological health in the face of experiences of racial/ethnic devaluation.

Although some studies have shown that feeling a sense of relatedness to one's ethnic group is associated with higher self-esteem and better mental health for Asian Americans, Hispanic/Latinos, and African Americans (Crocker, Luhtanen, Blaine, & Broadnax, 1994; Phinney, 1996b), few studies have directly examined whether racial/ethnic identification is a protective factor against the potential threats of school-based racial/ethnic discrimination for school engagement and achievement. Wong and colleagues (2003) conducted a longitudinal study of African American adolescents living near Washington, DC to assess these hypotheses. First, they examined whether perceived discrimination by teachers and peers is negatively related to changes in academic, socioemotional, and behavioral indicators of psychological adjustment among African American adolescents. Based on prior research on developmental risks and on ethnic devaluation, they predicted that perceived racial discrimination would be related to decreases in both academic motivation and school performance (Fordham & Ogbu, 1986; Mickelson, 1991; Ogbu, 1992; Steele & Aronson, 1995; Taylor et al., 1994). Both of these predictions were confirmed: Those African American youth who reported the highest levels of racial discriminatory experiences during their eighth-grade school year showed the greatest decreases in their grades, their interest in school, and their confidence in the ability to master mathematics and other school subjects.

Second, Wong and colleagues (2003) tested whether racial identification could act as a protective factor against the academic threats posed by experiences of school-based racial discrimination. They defined racial identification in terms of the adolescents' belief that being African American made them a part of a rich and supportive cultural group (i.e., did they feel close to friends because of similar race/ethnicity, did they believe that people of their race/ethnicity had a rich heritage and they had rich traditions because of their race/ethnicity, and did they feel supported by people of their own race/ethnicity). As predicted, this form of racial identification did moderate the impact of racial discrimination on the school engagement and achievement of these African American adolescents: Those youth who reported a strong ethnic group identification did not show the negative impact of experiences of racial discrimination over time on their academic grade point average and their confidence in their ability to do well in their school subjects.

In the next sections, I provide an overview of the Eccles and colleagues expectancy–value model of academic achievement motivation and discuss how this model can help us understand both individual and group differences in school achievement. First, I discuss how both positive expectations of academic success and placing high value on learning at school are critical for students' taking responsibility for their own learning. Second, I discuss how experiences of racial/ethnic discrimination and race/ethnic-related low teacher expectations can undermine students' confidence in their academic abilities, students' academic aspirations, and the value students' place on being fully engaged in the learning agenda of school. Finally, I make some recommendations for school interventions that might facilitate rather than undermine the value students place on taking responsibility for their own learning.

EXPECTANCY–VALUE MODEL OF ACADEMIC ACHIEVEMENT MOTIVATION

Most currently popular motivational perspectives on school achievement are linked theoretically to classic expectancy–value models of motivation (Eccles & Wigfield, 2002) in that most perspectives stress the importance of either confidence in one's ability to master the learning tasks, or the value one attaches to mastering these tasks, or both. Eccles and Wigfield (2002) argued that classic expectancy–value models of motivation can be conceptualized in terms of two fundamental questions: Can I do the task? and Do I want to do the task? I believe that the answers to these two questions determine students' engagement in school-based learning tasks, as well as their willingness to take full responsibility for their own learning. If the answer to the first question (Can I do the task?) is no, then the students are unlikely to take responsibility for their own learning. Instead they are likely to engage in a variety of self-protective strategies designed to maintain their sense of self-worth (Covington, 1992). Too often, the consequences of these strategies include academic failure and withdrawal from the school's learning agenda.

But even if the answer to the first question is yes, full and sustained engagement depends on the answer to the second question, Do I want to do the task? If the answer to this question is no, then it is unlikely that the students will take responsibility for implementing self-regulated learning strategies. Instead, it is likely that they will either engage in a variety of avoidance strategies or put forth the minimal amount of effort necessary to minimize the negative consequences of lack of engagement. I believe that effective school reform initiatives must take into account both of these two determinants of school academic motivation. I also believe that

experiences of racial and ethnic discrimination at school influence academic achievement through their impact on the answers to both of these two questions.

Can I Do the Task?

Several theories, and a great deal of recent research, focus on a variety of constructs related to the question "Can I do this task?", including individuals' beliefs about their academic competence and self-efficacy, individuals' expectancies for academic success or failure, individual's educational aspirations, and individuals' sense of control over their academic outcomes. In general, when students answer this question affirmatively, they perform better and are motivated to select more challenging tasks. For example, Bandura's (1994) social-cognitive model emphasizes human agency and perceptions of efficacy (defined as individuals' confidence in their ability to organize and execute a given course of action to solve a problem or accomplish a task) in determining individuals' achievement strivings. Bandura characterizes self-efficacy as a multidimensional construct that can vary in strength (i.e., positive or negative), generality (relating to many situations or only a few), and level of difficulty (feeling efficacious for all tasks or only easy tasks). High levels of academic self-efficacy predict subsequent academic performance, course enrollment, and occupational choice (see Bandura, 1994; Eccles & Wigfield, 2002; Kao & Tienda, 1995; Pajares & Miller, 1994; Zimmerman, Bandura, & Martinez-Pons, 1992). Most importantly for this chapter, personal efficacy regarding academic work has been shown to be an important predictor of academic achievement among African American adolescents (e.g., Gurin & Epps, 1974; Hale-Benson, 1989).

Several scholars have focused on the importance of high domain specific ability self-perceptions and expectations for success for academic achievement in particular school subjects (e.g., Eccles & Wigfield, 2002; Harter, 1998; Marsh, 1990). These scholars argue that individuals who think they are very good at specific school subjects will earn higher grades and be more invested in working hard to master the associated learning tasks even after controlling for prior achievement levels. By and large the evidence is consistent with these predictions.

Because this set of constructs is discussed more fully in other chapters in this volume, I will not say a great deal more here. I will, however, reiterate the fact that negative racial and ethnic stereotypes can lead teachers and school districts to communicate low expectations for the academic achievements of some groups of students. Research has shown that this can be done through a variety of means, including differential

teacher–student face-to-face daily interactions (see Brophy & Good, 1974; Graham, 1984, 1994; Jussim, Eccles, & Madon, 1996), tracking into low-ability groups and then providing inferior educational experiences in these groups (Gamoran & Mare, 1989; Pallas, Entwisle, Alexander, & Stluka, 1994; Rosenbaum, 1980), failure to provide encouragement for high educational aspirations, and failure to provide high-quality educational experiences that promote both current achievement levels and confidence and lay the groundwork for continued success in future courses (Bryk, Lee, & Holland, 1993).

Many school intervention experiments have focused on increasing students' sense of personal academic efficacy. By and large, these studies show that one must simultaneously teach students the skills necessary for academic success and provide efficacy training in order to increase continued school achievement (Fosterling, 1985; Kulik, Kulik, & Bangert-Drowns, 1990). Efficacy training alone can actually set the students up for future academic failure. Teachers also need to develop and then maintain high academic expectations for all of their students and need to provide all of their students with opportunities to develop high educational aspirations. Finally, teachers and principals need to make sure that racial/ethnic discriminatory experiences that communicate low academic expectations are not tolerated at school.

Do I Want to Do the Task?

Taking responsibility for one's own learning requires a desire to do the task (Eccles & Wigfield, 2002; Meece, 1994; Pintrich & Schunk, 1996; Schunk & Zimmerman, 1994). Thus it is critical that the answer to this question be yes if students are going to take personal responsibility for their own learning and their full engagement in the learning agenda of the school. Most motivational theorists have tried, either directly or indirectly, to identify the beliefs and experiences that increase the probability of a yes answer. Eccles and her colleagues have explicitly tackled this issue in their expectancy–value model of achievement-related choices (Eccles & Wistfield, 2002; Eccles Parsons et al., 1983; see also Feather, 1992). In this section, I summarize the Eccles and colleagues perspective on subjective task value (STV), linking group differences in school achievement to specific aspects of STV, and suggest ways that educational reform might address group differences in school achievement by increasing the STV all students attach to taking responsibility for their own learning.

Over the past 25 years, my colleagues and I have studied the motivational and social factors influencing such long- and short-range achievement goals and behaviors as school grades, course selections, persistence

on difficult tasks, and the allocation of effort across various achievement-related activities. Drawing upon the theoretical and empirical work associated with decision making, achievement theory, and attribution theory (see Crandall, 1969; Weiner, 1992), we elaborated a comprehensive theoretical model of achievement-related choices that could be used to guide our subsequent research efforts. This model links achievement-related choices most directly to two sets of beliefs: the individual's expectations for success and the importance or value the individual attaches to the various options perceived by the individual as available. The model also specifies the relation of these beliefs to cultural norms, experiences, aptitudes, and to those personal beliefs and attitudes that are commonly assumed to be associated with achievement-related activities (see Eccles, 1994; Eccles, Wigfield, & Schiefele, 1998). In particular, the model links achievement-related beliefs, outcomes, and goals to interpretative systems like causal attributions and other meaning-making beliefs linked to achievement-related activities and events, to the input of socializers (primarily parents and teachers), to various social roles and other culturally based beliefs about both the nature of various tasks in a variety of achievement domains and the "appropriateness" of participation in such tasks, to self-perceptions and self-concept, to one's perceptions of the task itself, and to the processes and consequences associated with identity formation. Each of these factors are assumed to influence both the expectations one holds for future success at the various achievement-related options and the subjective value one attaches to these various options. These expectations and the value attached to the various options, in turn, are assumed to influence choice among these options.

For example, let us consider taking responsibility for one's own learning in school. The model predicts that people will be most likely to invest time and energy in tasks that they think they can master and that have high task value for them. Expectations for success (and a sense of domain-specific personal efficacy) were discussed earlier. The STV of particular achievement tasks like learning in school is influenced by several factors. For example, does the person enjoy doing the subject material? Is the learning activity required? Is the learning activity seen as instrumental in meeting one of the individual's long- or short-range goals? Is the person anxious about his or her ability to successfully master the learning material being presented? Does the person think that the learning task is appropriate for people like him or her? Finally, does working on the learning task interfere with other more valued options?

Four features of our approach are particularly important for understanding both individual and group differences in school achievement. First, we have focused on the choice dimension of achievement-related behavior. We believe that the conscious and nonconscious choices people

make about how to spend time and effort lead, over time, to marked differences between groups and individuals in school achievement. Focusing attention on achievement-related choices reflects a second important component of our perspective; namely, the issue of what becomes a part of an individual's field of possible choices. Although individuals do choose from among several options, they do not actively, or consciously, consider the full range of objectively available options in making their selections. Many options are never considered because the individual is unaware of their existence or the individuals think these options are not realistically available to them. For example, as I discuss later, one reason to engage fully in school learning tasks is that what one will learn by this investment of time and energy will increase future educational and occupational options. If students' visions of the future do not include continued education and the types of occupations linked to college education, then spending a lot of time mastering what is being taught in primary and secondary school in order to gain access to these future options is not likely to provide a positive motivational incentive. Similarly, if doing well in school itself is not seen as part of one's social or personal identities, then putting in the time and effort to do well in school is likely to have relatively low STV.

A third important feature of our perspective is the explicit assumption that achievement-related decisions, such as the decision to invest large amounts of time and energy into one's schoolwork, are made within the context of a complex social reality that presents each individual with a wide variety of choices, each of which has both long-range and immediate consequences. Furthermore, the choice is often between two or more positive options or between two or more options that each has both positive and negative components. For example, the decision to invest time in studying and mastering one's schoolwork is typically made in the context of other important decisions such as whether to spend time with one's friends, spend time perfecting other skills, or help out at home. The critical issue is the relative personal value of each option. Given high likelihood of success, we assume that people will then choose those tasks or behaviors that have relatively higher personal value. Thus it is the hierarchy of STVs that matter rather than the absolute values.

A true life experience with my daughter provides an excellent example of these choices. In the third grade, she did not do very well on her report card. I asked her why she was doing so poorly in her schoolwork. In her first reply, she said other children also were doing poorly. I reacted by saying I really did not care how the other children were doing, I was only concerned with her poor performance. To which she replied, "But I would have to work harder to do better." I agreed and asked why she wasn't working harder. She replied "What do you want me to do? Waste my

childhood doing schoolwork?" Clearly, she had no problems with her sense of personal efficacy. Instead, she just did not value doing schoolwork as much as she valued other ways of spending her time. These two examples point to the importance of the value component of the Eccles and colleagues expectancy–value model. I focus on this component in this chapter.

The fourth feature of our approach is that the processes linked to both expectancies and STVs are both developmental and dynamic. Like many researchers interested in self processes, we assume that both personal states and situational characteristics make the various components of the self system more or less salient at different times. As such the immediate STV of various behaviors will fluctuate depending on the salience of different components of the self system. We also assume that the components of the self system also change across developmental time in response to experience with specific tasks, changing cognitive abilities and interpretative beliefs, changing socialization pressures, and changing sociocultural influences.

In summary, my colleagues and I assume that achievement-related choices (e.g., educational and occupational choices), whether made consciously or nonconsciously, are guided by the following: (1) one's expectations for success on, and sense of personal efficacy for, the various options, as well as one's sense of competence for various tasks; (2) the relation of the options both to one's short- and long-range goals and to one's core personal and social identities and basic psychological needs; (3) the individual's culturally based role schemas such as those linked to gender, social class, religious group, and ethnic group; and (4) the potential cost of investing time in one activity rather than another. All of these psychological variables are influenced by one's experiences and one's interpretation of these experiences, by cultural norms, and by the behaviors and goals of one's socializers and peers.

COMPONENTS OF SUBJECTIVE TASK VALUE (STV)

We conceptualize STV in terms of four components: (1) intrinsic or interest value (i.e., expected enjoyment of engaging in the task); (2) attainment value or the value an activity has because engaging in it is consistent with one's self-image; (3) the utility value of the task for facilitating one's long-range goals or in helping the individual obtain immediate or long-range external rewards; and (4) the cost of engaging in the activity. In this section, I describe each of these components and discuss how they might be related to discriminatory experiences.

Intrinsic and Interest Value

My colleagues and I reserve the term "intrinsic value" to either the enjoyment one gains from doing the task or the anticipated enjoyment one expects to experience while doing the task. In this sense, our notion of intrinsic value is similar to the idea of flow proposed by Csikszentmihalyi (1988), who discussed intrinsically motivated behavior as the immediate positive and exhilarating subjective experience that occurs when people are engaged in an activity. Flow is only possible when people feel that the opportunities for action in a given situation match their ability to master the challenges. The challenge of an activity may be something concrete or physical like the peak of a mountain to be scaled, or it can be something abstract and symbolic, like a set of musical notes to be performed, a story to be written, or a puzzle to be solved. Recent research has shown that both the challenges and skills must be relatively high before a flow experience becomes possible (Massimini & Carli, 1988). For us, an anticipated sense of flow would add to the intrinsic value of the task and increase the likelihood of taking responsibility for fully engaging in the task. In contrast, many aspects of evaluative techniques and teacher–student interactions can undermine students' intrinsic motivation to do schoolwork (e.g., Lepper & Cordova, 1992; Mac Iver & Reuman, 1993; Mac Iver, Stipek, & Daniels, 1991).

Also related to our notion of intrinsic task value is the idea of interest value as evident in the work of people like Hidi, Renninger, and Schiefele (Hidi, 1990; Renninger, Hidi, & Krapp, 1992; Schiefele, 1991). These researchers differentiate between individual and situational interest. Individual interest is a relatively stable evaluative orientation toward certain domains that one enjoys doing; situational interest is an emotional state aroused by specific features of an activity or a task.

We know little about the origins of either within-individual or between-individual differences in interest. In some ways, individual differences in patterns of interest are related to the issues I discuss later under attainment value: The attraction to, or enjoyment of, particular types of activities are undoubtedly linked to core aspects of the self such as temperament, personality, and motivational orientations. Also, it is likely linked to both genetic propensities and to classical learning associated with either positive or negative emotional experiences during initial encounters with particular activities.

Over the last 30 years, educational psychologists have become interested in trait-like individual differences in what might be referred to as the desire to learn (see Gottfried, 1990; Harter, 1998; Nicholls, 1984, 1989; Schiefele, 1996). These researchers define this enduring learning orientation in terms of three components: (1) preference for hard or chal-

lenging tasks, (2) learning that is driven by curiosity or interest, and (3) striving for competence and mastery. Empirical findings suggest that the three components are highly correlated and that high levels of a trait-like desire to learn is related to a mastery-oriented coping style for dealing with failure, high academic achievement, and the use of appropriate self-regulated learning strategies (Benware & Deci, 1984; Pintrich & Schrauben, 1992; Schiefele, 1996).

We know much more about the task characteristics linked to situational interest in part because the research on school-related situational interest has focused on the characteristics of academic tasks that create interest (e.g., Hidi & Baird, 1986). Among others, the following text features arouse situational interest: personal relevance, both familiarity and novelty, high activity level, and comprehensibility (Hidi & Baird, 1986). We also know that there is strong empirical support for the relation of both individual and situational interest with text comprehension and recall, as well as with deep-level learning (see Renninger et al., 1992; Schiefele, 1996).

All of these findings suggest that it is important to do all one can to increase the interest value of school learning tasks if we want to optimally motivate our students to engage fully in the learning agenda of school and to take responsibility for their own learning. Several intervention studies have demonstrated that attempts to increase the interest value of academic achievement tasks do increase school engagement and performance (e.g., Bateson & Johnson, 1976; Blumenfeld et al., 1991).

Attainment and Utility Value

My colleagues and I identified two more psychological sources of value: attainment and utility value. As they grow up, individuals develop an image of who they are and what they would like to be. This image is made up of many component parts, including (1) conceptions of one's personality and capabilities, (2) long-range goals and plans, (3) schema regarding the proper roles of men and women, (4) instrumental and terminal values (Rokeach, 1973), (5) motivational sets, (6) ideal images of what one should be like; and (7) social scripts regarding proper behavior in a variety of situations. We conceptualize attainment value in terms of the needs and personal values that an activity fulfills. Those parts of an individual's self-image that are central or critical to self-definition should influence the value the individual attaches to various activities; these differential values, in turn, should influence the individual's desire to engage fully in school-based learning activities (Eccles, 1994). For example, if doing well in school is a central part of an individual's self-image, then that person

should place higher value on investing time and energy in doing well in school than in other pursuits because doing well in school has high attainment value for this.

Utility value is determined by how well a task fits into an individual's goals and plans or fulfills other basic psychological needs. For example, if a student plans to become an engineer, then mastering arithmetic in elementary school will have high utility value because it will allow him or her to take college-track mathematics in secondary school.

What might influence both the centrality and usefulness of doing well in school and taking responsibility for one's own learning in school? Connell and Wellborn (1991) proposed that there are three basic human needs that might relate to both the centrality and usefulness of taking responsibility for one's own learning: the needs for competence, relatedness, and autonomy. Connell and Wellborn argued that people's motivation to engage in a task is influenced by the extent to which the task provides opportunities to experience autonomy, social relatedness, and a sense of competence. If tasks do not provide these opportunities, then individuals will not become engaged or will try to disengage by whatever means are available to them. Harter (1998) and other more classic theorists (e.g., White, 1959) also pointed to the centrality of effectance, competence, and social relatedness needs. If classroom experiences provide opportunities for students to fulfill these basic needs, then the attainment value of fully engaging in the learning agenda of school should be increased. Eccles and her colleagues documented this prediction (Eccles, Early, Frasier, Belansky, & McCarthy, 1997).

The importance of competence needs, in particular, has received a great deal of attention in the achievement literature. For example in her model of mastery or effectance motivation, Harter (1998) described the effects of both success and failure experiences on mastery motivation. She proposed that successful mastery attempts that (initially) are positively reinforced lead to internalization of the reward system. They also enhance perceptions of competence and perceived internal control over outcomes, give the individual pleasure, and ultimately increase mastery motivation. In contrast, when mastery attempts fail, the need for approval by others persists, with a corresponding increase in external control beliefs, lower competence beliefs, higher anxiety in mastery situations, and, ultimately, lower mastery motivation. This model is important because it includes the effects of both success and failure on subsequent motivational orientations, which we believe influence the attainment value of various types of activities. If an individual has had a history of school mastery attempts being both successful and rewarded by key individuals, then the value of school-based learning tasks that provide opportunities for mastery and competence development will be high because the person has come to

value feelings of mastery and competence. In contrast, if the individual has failed at mastery attempts on particular tasks and feels incompetent at those tasks, then individuals are likely to lower the value they attach to being competent at these particular types of tasks because such tasks will not be seen as providing the opportunity to feel competent. In this way, prior successes and failures can influence the value of future tasks through their impact on the attainment value of those tasks.

Given this perspective, it is essential that teachers set up their instructional practices in ways that allow all children to experience success at their mastery attempts. Researchers in the area of achievement goal theory (e.g., Anderman & Maehr, 1994; Maehr & Midgley, 1996; Pintrich & Schunk, 1996) have explored the importance of mastery-oriented classrooms quite extensively. Achievement goal theory researchers hypothesize that school learning tasks vary along at least two important dimensions: (1) the extent to which mastery or improvement is stressed (i.e., a mastery focus); and (2) the extent to which doing better than others is stressed (i.e., a performance focus). They argue that the greater the focus on mastery instead of performance, the greater the likelihood that all students will feel competent and will have repeated experiences of mastery. Maehr and Midgely (1996) conducted an extensive school intervention effort to test these ideas. They worked with a middle school for several years to help the teachers create new forms of evaluation and new learning opportunities that focused attention on mastery of new material and reduced focus on socially comparative grading systems based on one's relative performance compared to other students. The results were quite positive. Other work by Midgely and her colleagues has also shown that age-related declines in both the value students attach to doing their schoolwork and their confidence in their ability to master their school subjects are linked to teachers' increasing stress on doing better than other students rather than on working for one's own increased understanding and competence (e.g., Midgley, Anderman, & Hicks, 1995).

Being successful at taking responsibility for one's own learning also requires having the meta-cognitive skills necessary to engage in self-directed learning (Pintrich & Schunk, 1996) including the ability to assess one's current competence and to seek out help in developing new competencies, as well as the ability to control one's behavior in a planful manner designed to "get the job done." Some students come to school with these skills already in place; some do not. If students are to have the kinds of mastery experiences necessary to increase the attainment value of engaging fully in school-based learning tasks, teachers must make sure they have these meta-cognitive skills and that their use of these skills is supported.

Although less research has been done on the other two basic needs (i.e., social relatedness and autonomy), evidence is beginning to accumulate supporting their importance for school engagement. As I noted in the introduction to this chapter, research based in a variety of subfields has pointed to the critical importance of social relatedness and a sense of belonging for human development. Individuals are likely to enjoy being in contexts that provide opportunities for the fulfillment of this basic need and the activities that are central to such contexts are likely to take on high attainment and utility value. Both Goodenow (1993) and Roeser (Roeser, Midgley, & Urdan, 1996) have shown that feelings of belongingness in classrooms and schools predict increased engagement and school learning. Similar results have been reported by Anderman (1999), Birch and Ladd (1997), Furrer and Skinner (2003), and Wentzel (1997). Finally, one of the major benefits of cooperative learning structures is that they increase all students' sense of belonging in their classroom's agenda (Stevens & Slavin, 1995).

Racial and ethnic discrimination are likely to undermine minority students' sense of belonging at school. As noted earlier, Wong and colleagues (2003) showed that experiences of racial discrimination predicted declines in school achievement. It seems likely that part of this relation reflects the negative impact of experiences of racial discrimination on students' feelings of social relatedness to both their teachers and the other students at school (i.e., their feelings of belonging at school). For example, Steele and his colleagues argue that students who believe that their teachers have low expectations for their academic performance will disidentify with school learning as a way of coping with experiences of racial and ethnic discrimination at school (e.g., Steele & Aronson, 1995). Qualitative studies of ethnic minority youth in various schools also support the hypothesis that experiences of racial and ethnic discrimination undermine African American, Hispanic, and low-achieving students' engagement in learning activities at school through the impact on these students' sense of belonging at school (e.g., Phelan et al., 1994; Suarez-Orozco & Suarez-Orozco, (2001).

Deci, Ryan and their colleagues have done most of the work on the importance of support for autonomy in classrooms for students' motivation to fully engage the learning agenda of the classroom (Deci & Ryan, 1985; Pajares & Miller, 1994). They argue that individuals need to feel personally responsible for their behavior and their goals. To the extent that teachers create opportunities for this to be true, students are more motivated to do their schoolwork and learn the material better. The longitudinal work that I have done with my colleagues also illustrates the importance of perceived opportunities for autonomous control over one's learning behaviors. We have found that students' interest in schoolwork

declines as they move from elementary schools into secondary schools (see Eccles et al., 1993, for review of this work). In part, this decline is mediated by declines in the students' perceptions of the opportunities provided for autonomous decision making regarding learning behaviors (Midgley & Feldlaufer, 1987). Declines in teachers' sense of efficacy as teachers and declines in the perceived social support from teachers also contribute to these declines in students' motivation as they make the transition to secondary school (see Eccles et al., 1993; Roeser & Eccles, 1998).

My colleagues and I have become quite interested in another possible basic need: mattering. We believe that people need to feel like they are considered to be valuable contributors to their social groups and institutions. Researchers interested in service learning also stress the importance of opportunities to make meaningful contributions to ones' school and community for maintaining the motivation to take responsibility for one's academic learning (see Eccles & Templeton, 2002). One very impressive intervention study was done based on this need: the Coca-Cola study (cited in Eccles & Templeton, 2002). In this project, at-risk adolescents were assigned to give cross-age peer tutoring in reading to first graders. Those adolescents who had this experience over an extended period of time showed an increased commitment to their own academic performance as evidenced by increases in their grades and high school graduation rates. Again, such opportunities are likely to be especially important during the secondary school years because adolescents are quite sensitive developmentally to increases in such opportunities (Eccles et al., 1993). Evidence from the field of service leaning supports these hypotheses (see Eccles & Templeton, 2002).

Individual differences in school motivation are also likely to be linked to individual differences in self-schema and both personal and social goals and identities. As noted above, these differences should be directly related to the perceived attainment value of various activities. Our gender research is an excellent example of these processes for both group-level and individual-level differences in school-related achievement choices. Our work on gender and individual differences in high school math and science course enrollment is an excellent example of the importance of the perceived utility value of various course options. In our first longitudinal study of the math course enrollment decisions of intellectually able, college-bound high school students, gender differences in students' decisions to enroll in advanced mathematics were mediated primarily by gender differences in the value that the students attached to mathematics (Eccles, Adler, & Meece, 1984). More specifically, the young women were less likely than the young men to enroll in advanced mathematics primarily because they felt that math was less important, less useful, and less enjoyable than did the young men. We also found clear evidence of gen-

der differences in the value attached to various school subjects and activities in our study of elementary school-age children enrolled in a gifted program (Eccles & Harold, 1992). Even though there was no gender differences in expectations for success in mathematics, these girls reported liking math less than the boys and rated math as less useful than the boys. In addition, the boys also attached greater importance to sports than did the girls. Not surprisingly, the boys were much more likely to be engaged in sports activities throughout their elementary school years than the girls. Finally, we have now followed a sample through high school and found that both gender and individual differences in enrollment in advanced math courses and physics courses are mediated by the perceived utility of these courses for the individual's long-range educational and occupational goals (Vida & Eccles, 2003; Updegraff, Eccles, Barber, & O'Brien, 1996). Furthermore, interventions based on making physics more interesting to females by using more human biological examples of physical principles have been quite successful at increasing females' engagement in physics classes (Hoffmann & Haeussler, 1995; Lehrke, Hoffmann, & Gardner, 1985).

The work by Markus, Oyserman, and their colleagues (Markus & Nurius, 1986; Oyserman, Gant, & Ager, 1995) also illustrates the importance of group and individual differences in possible selves for students' willingness to take responsibility for their own learning. Oyserman and Markus (1990) found that individuals are more motivated to invest time and energy in mastering school learning materials if they included academic success in their future possible selves and academic failure in their feared future possible selves. Oyserman extended this idea by looking at the extent to which African American adolescents included academic success in their view of what it means to be a successful African American (Oyserman et al., 1995). Her survey studies have supported this hypothesis. Subsequently, Oyserman has conducted several interventions designed to increase the salience of academic achievement in both individuals' possible selves and ethnic identity. For example, using a randomized treatment intervention design, Oyserman, Terry, and Bybee (2002) provided a group of African American adolescents with a series of experiences designed to help them expand both their views of themselves in various future occupations and the means of obtaining these various occupational goals. These means included increased commitment to educational success. Those students who were part of the treatment reported greater bonding with school and greater concern with doing well in school than the controls. They also evidenced better school attendance.

Given the relation of both perceived importance and the utility value of mastering school-based learning materials to school performance, my colleagues and I were very surprised at how rarely we heard teachers provide

any explanation for why the students might want to do their schoolwork other than to do well on the next test in our many hours of math classroom observations. In our early work, we observed for 10 hours in each of 60 secondary math classrooms and coded every public teacher–student interaction. The model number of times these teachers provided any explanation for the utility of doing the math work other than to do well on tests was zero. I had always enjoyed doing math and so had sufficient intrinsic reasons to motivate my engagement in the math being taught by my teachers. As I watched other students who did not enjoy doing math, I had to wonder what would provide them with sufficient motivation for them to answer yes to the question "Do I want to do this work?" Clearly, most of these teachers provided little information to increase the probability of a yes answer.

Perceived Cost

According to our model, the value of a task should also depend on a set of beliefs that can best be characterized as the cost of participating in the activity. Cost is influenced by many factors, such as anticipated anxiety; fear of failure; fear of the social consequences of success, such as rejection by peers or anticipated racial discrimination or anger from one's parents or other key people; and fear of loss of a sense of self-worth.

This conceptualization of cost is similar to the kinds of dynamics discussed by Covington in his self-worth theory. Covington (1992) defined the motive for self-worth as the desire to establish and maintain a positive self-image, or sense of self-worth. Because children spend so much time in classrooms and are evaluated so frequently there, Covington argued that protecting one's sense of academic competence is likely to be critical for maintaining a positive sense of self-worth. However, school evaluation, competition, and social comparison can make it difficult for some children to maintain the belief that they are competent academically. Covington outlined various strategies children develop to avoid appearing to lack ability, including procrastination, making excuses, avoiding challenging tasks, and not trying. The last two strategies are particularly interesting. Covington and Omelich (1979) referred to effort as a "double-edged sword" because, although trying is important for success (and is encouraged by both teachers and parents), if children try and fail, it is difficult to escape the conclusion that they lack ability. Therefore, if failure seems likely, some children will not try, precisely because trying and failing threatens their ability self-concepts. Avoiding challenging tasks is a good way to avoid or minimize failure experiences. Thus, it is not surprising that it is used by even high-achieving students who are failure avoidant.

Rather than responding to a challenging task with greater effort, these students try to avoid the task altogether in order to maintain both their own sense of competence and others' perceptions of their competence. Similarly, recent work by Newman and his colleagues demonstrates that students may be reluctant to ask for help in classrooms because they think that this will make them appear stupid (Newman, 1994; Newman & Goldin, 1990; Newman & Schwager, 1995).

Cost can also be conceptualized in terms of the loss of time and energy for other activities. People have limited time and energy. They cannot do everything they would like. They must choose among activities. To the extent that one loses time for Activity B by engaging in Activity A and to the extent that Activity B is high in one's hierarchy of importance, then the subjective cost of engaging in A increases. Alternatively, even if the subjective value of A is high, the value of engaging in A will be reduced to the extent that the subjective value of B is higher and to the extent that engaging in A jeopardizes the probability of successfully engaging in B. Thus, cost refers to what the individual has to give up to do a task (e.g., Do I do my math homework or call my friend?), as well as the anticipated effort one will need to put into task completion. Is working this hard to get an A in math worth it? My colleagues and I have emphasized that cost is especially important to choice and that sociocultural processes linked to social identity formation and cultural socialization should have a big influence of the perceived cost of the various activities competing for young people's time and energy (e.g., Eccles, 1994). Schools need to provide young people with genuine reasons for attaching higher subjective task value to taking responsibility for one's own learning than taking responsibility for one's behavior in other aspects of their daily lives.

CONCLUSION

In this chapter, I have reviewed the relation of psychological constructs of expectancy–value models of achievement behaviors linked to students' taking responsibility for their own learning. I have also stressed the importance of teachers' taking responsibility for providing students with the types of experiences likely to increase both their own expectations for success and to the subjective task value that they attach to engaging fully in their school's learning agenda. A large body of research supports the importance of expectations for success and students' sense of personal efficacy to master school materials. Far less research has focused on documenting the importance of subjective task value as well as establishing effective interventions to increase the subjective task value students attach

to taking responsibility for their own learning. Such research is badly needed.

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