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# Schooling and Mental Health

**Robert W. Roeser and Jacquelynne S. Eccles**

Schools hold a central place in the “developmental agenda” set forth for children and adolescents throughout the world (Rogoff, 1990; Sameroff, 1987).<sup>1</sup> Children’s experiences in school have the capacity to promote developmental competencies associated with learning and achievement motivation, emotional functioning, and social relationships, and in some instances can potentiate difficulties in these aspects of functioning. In this chapter, we focus on the relation between children’s academic and emotional functioning, and on how school, as a central context of development, can shape both academic and mental health outcomes in children. The chapter is comprised of three main sections. First, we discuss the relevance of schooling to those interested in development, mental health, and psychopathology. Second, we briefly discuss linkages between children’s academic and emotional functioning. Third, we provide a description of the interpersonal, instructional, and organizational processes through which schools can influence the developmental course of children’s achievement-related behaviors, academic motivation, and their mental health.

### STUDYING SCHOOLING, DEVELOPMENT, AND MENTAL HEALTH

The development of an interdisciplinary approach to the study of atypical and normative child development in the context of school could make an important contribution to educational, developmental, and clinical theory and practice. The lines of inquiry we envision at the center of such an interdisciplinary approach include research on (a) the interdependent, individual-level processes that underlie academic success, difficulty, or disability at different times in development; and (b) the impact of different educational settings on the academic–

<sup>1</sup>Children and adolescents are henceforth referred to as children for reasons of simplicity.

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intellectual and social-emotional development of diverse populations of children. Several practical concerns highlight the need to develop these lines of inquiry, including the prevalence of adjustment problems among school-age children, the impact of student problems on teachers, and the need for more effective, sustainable school-based programs that address student and teacher needs related to mental health issues.

### Prevalence of Problems among School-Age Children

Many children attending schools in the United States today have significant academic difficulties, emotional/behavioral difficulties, or most likely both (Dryfoos, 1994; Knitzer, Steinberg, & Fleisch, 1991; Weist, 1997). According to current epidemiological estimates, between 12% and 30% of school-age children experience moderate to serious social-emotional difficulties that can interfere with daily functioning in and outside of school (Institute of Medicine, 1994; Verhulst & Koot, 1992; Weist, 1997). Additionally, many of the children who require services for mental health difficulties will never receive them either within schools or in service provision centers outside the schools (Knitzer et al., 1991; Tuma, 1989; Weist, 1997). The near-term educational costs of social-emotional difficulties in children are great: Kessler, Foster, Saunders, and Stang (1995) estimate that early-onset psychiatric disorders (especially conduct disorders in males and anxiety disorders in females) are related to truncated educational attainments in about 7.2 million Americans.

Equally important, poor motivation and academic failure are problems that continue to plague large numbers of children in U.S. primary and secondary schools. It is estimated that approximately 25% of all 10- to 17-year-olds in the United States are behind their "modal grade" in school (Dryfoos, 1990), and up to 20% of all students are retained a grade at least once in their academic careers (see Durlak, 1995). Research has also documented declines in children's achievement motivation as they progress from elementary into middle and high school (Eccles, Midgley, & Adler, 1984; Eccles, Wigfield, & Schiefele, 1998). The near-term emotional and behavioral costs of these educational problems include an increased likelihood of drug use and abuse, engagement in delinquent activities, teenage pregnancy, and dropping out of school during late adolescence (Cairns, Cairns, & Neckerman, 1989; Dryfoos, 1990; Fine, 1991).

Research that focuses on the developmental course of co-occurring mental health and academic problems, and the processes that underlie them, may inform the next generation of school-based reforms that aim to enhance students' readiness to learn and remove social-emotional barriers to learning through systems-level reforms (Adelman & Taylor, 1998). Designing a new generation of programs that address co-occurring problems in school-age children is essential given that the long-term costs of such problems include personal suffering, unemployment, and poverty, and social costs such as lost productivity and increased burdens on the criminal justice, social welfare, and health care systems (Cowen, 1991; Carnegie Council on Adolescent Development, 1995).

### Impact of Student Problems on Teachers

Untreated academic and social-emotional problems in children undermine not only student learning but also teachers' capacity to teach (Adelman & Taylor, 1998). Roeser and Midgley (1997) found that approximately two-thirds of a sample of elementary- and middle-

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## Schooling and Mental Health

school teachers in Michigan reported feeling "somewhat to very overwhelmed" by the kinds of emotional and behavioral difficulties some of their students presented in class. Analysis of a subsample of teachers and children revealed that the teachers who felt the most overwhelmed did in fact teach in classrooms where children reported the poorest academic motivation and the highest levels of emotional distress. In addition, teachers in these classrooms nominated approximately 13% of their students as showing problems significant enough to warrant mental health services (a figure close to national estimates; Institute of Medicine, 1994). Given the lack of mental health services in most schools, students with untreated problems present a daily challenge to many teachers. Providing clinical insights and supports to teachers and educational insights and supports to clinicians in schools that are derived from interdisciplinary scholarship may ultimately ease the burdens felt by the many teachers and administrators who serve vulnerable children (Close-Conoley & Conoley, 1991).

## Enhancing Effectiveness of School-Based Mental Health Programs

Finally, although schools have long been recognized as efficient and cost-effective sites for efforts to promote developmental competence and for identifying and redressing developmental difficulties, school-based programs often prove difficult to implement and sustain (Cowen, 1980, 1991; Cowen, Gardner, & Zax, 1967; Dryfoos, 1994; Durlak, 1995; U.S. Department of Education, 1995). Interdisciplinary scholarship may lead to new insights into how mental health programs can be integrated into the fabric of everyday life in classrooms and school, and thereby, enhance the school ownership and effectiveness of such programs (Meyers, 1989).

The needs of vulnerable children, the need to assist teachers and other school personnel serve such children, and the larger need to create long-lasting programs in the schools that address children's and teachers' needs all underscore the importance of a more integrated study of educational and mental health issues. For the remainder of this chapter, we describe two issues that relate to both education and mental health concerns. First, we describe person-level research on the connection between achievement behavior and emotional distress, the cognitive processes that underlie co-occurring academic and emotional problems in normative children, and how some children who experience elevated levels of emotional distress can nonetheless maintain good grades and demonstrate positive conduct in school (Roeser, Eccles, & Strobel, 1998). Second, we describe context-level research on general school influences on child development. In this section, we focus on how particular school-contextual processes can affect students' mental health. We conclude with our thoughts on future directions for research on schooling and mental health issues.

## THE RELATION OF ACADEMIC FUNCTIONING AND MENTAL HEALTH: INDIVIDUAL-LEVEL PROCESSES

In order to understand connections between academic and mental health outcomes, it is important to differentiate between two different conceptualizations of academic functioning: one quantitative and the other qualitative (Ames, 1987; see also Kellam, Rebok, Mayer, Ialongo, & Kalodner, 1994). Quantitative conceptualizations of school functioning are centered around notions of *what* students *do* in academic settings. A focus on quantitative behaviors, ones that can be judged by observers of the child such as teachers, parents, or peers, is central to this conceptualization. Behaviors such as performance on classroom and standard-

ized assessments, effort investment and time on task, choice of challenging work, and positive conduct in school settings are viewed as quantitative indicators of functioning. The more children manifest such behaviors, the more academically competent they are thought to be (e.g., Masten et al., 1995).

Researchers who study children's achievement motivation emphasize the importance of considering not only the quantitative indicators of what children *do* in school, but also *qualitative* indicators that assess *why* they do what they do. Such a distinction affords, for instance, an opportunity to differentiate between the high achiever motivated by anxiety and perfectionistic tendencies, and the high achiever motivated by a love of learning. Process measures such as children's beliefs about the causes of academic success or failure, their goals, their beliefs about their academic competence and the value of school, and their use of particular learning and metacognitive strategies are viewed as qualitative indicators of functioning (see Ames, 1987; Eccles et al., 1998). A qualitative perspective focuses attention on underlying processes as well as manifest behavior, and is in keeping with the focus of developmental psychopathologists on the overall organization of behavior.

### Manifest Academic Problems and Internalized Distress

Children who report frequent feelings of internalized distress show diminished academic functioning in terms of (quantitative) achievement-related behaviors. Symptoms of depression are associated with lower teacher-rated grades and standardized test scores, challenge avoidance and lack of persistence in the face of academic difficulties, and a lack of classroom participation among both children and adolescents (Blechman, McEnroe, Carella, & Audette, 1986; Dweck & Wortman, 1982; Kellam et al., 1994; Kovacs, 1992; Nolen-Hoeksema, Girgus, & Seligman, 1986). Symptoms of test anxiety are also associated with lower teacher-rated grades and standardized test scores, with these negative associations growing stronger with age (for reviews, see Dweck & Wortman, 1982; Hill & Wigfield, 1984; Wigfield & Eccles, 1989). Finally, although discrepancies exist in the literature (see Parker & Asher, 1987), there is some indication that children who manifest high levels of internalized distress and concomitant poor peer relations during the elementary school years also show academic difficulties such as lower academic grades, lower standardized test scores, and a greater likelihood of dropping out during high school (Ollendick, Greene, Weist, & Oswald, 1990).

### Manifest Academic Problems and Externalized Distress

Children with externalized distress in the form of conduct problems, attention problems, or both, also show poorer behavioral functioning in school. Externalizing difficulties in children are associated with poorer teacher-rated grades and standardized test scores, more time off-task in the classroom, and more behavioral problems within and outside class at school (Astor, 1998; Barkley, 1998; Dishion, French, & Patterson, 1995; Hinshaw, 1992; Ollendick, Weist, Borden, & Greene, 1992; Parker & Asher, 1987; Roeser, Eccles, & Strobel, 1998). Aggressive children are also more likely to experience social difficulties at school, such as rejection by peers and disfavor on the part of teachers (Parker & Asher, 1987; Wentzel & Asher, 1995), and there is strong evidence of long-term academic difficulties such as poor achievement, poor attendance, and school dropout among children who manifest high levels of externalized distress earlier in development (Cairns et al., 1989; for review, see Parker & Asher, 1987).

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In summary, there is evidence that emotional distress and academic problems often co-occur among what is likely a small (e.g., 12% of school-aged children) but socially significant minority of school-age children. Although it is not yet clear when and how co-occurring problems in the intellectual and social-emotional domains of functioning emerge prior to school entry, and though issues of causal direction in the link between intellectual and social-emotional difficulties continue to be debated (e.g., Hinshaw, 1992), co-occurring problems do become more evident as vulnerable children move through school. Thus, the next section focuses attention on some of the cognitive processes that serve to maintain co-occurring academic and emotional-behavioral difficulties, whatever their origins, during the elementary and secondary school years.

### Qualitative Processes Linking Academic Problems and Emotional Distress

Research on achievement motivation and child mental health have illuminated several psychological processes that explain, in part, why academic and emotional-behavioral problems co-occur in some children, and why such problems are mutually reinforcing over time (Eccles, Wigfield, & Schiefele, 1998; Kendall & Dobson, 1993; Weiner, 1986). Some of these psychological processes are depicted in Figure 8.1.

#### Academic Problems Lead to Distress

In one pathway, certain cognitive processes translate academic problems into subsequent emotional distress. One such process involves the manner in which children cognitively

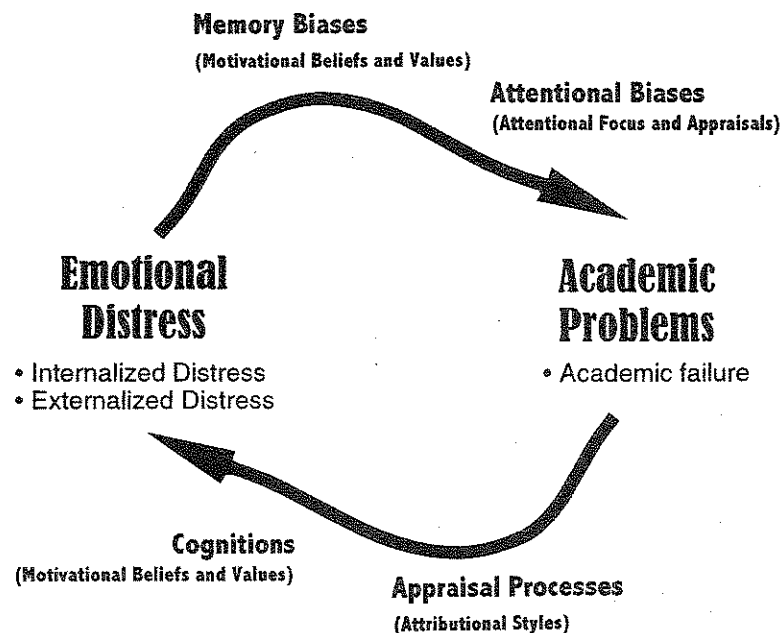


FIGURE 8.1. Psychological processes linking academic problems and emotional distress.

✓ appraise their academic difficulties, with specific kinds of attributions for difficulty leading directly to feelings of internalized or externalized distress (Ames & Archer, 1988; Weiner, 1994). Children who do poorly in school, and who attribute such difficulties to a fixed sense of personal incompetence, generate feelings of shame, self-doubt, low esteem, and alienation from learning (e.g., internalized distress, see Dweck & Wortman, 1982). Alternatively, ✓ children who attribute academic problems to the influence of hostile or unsupportive people generate feelings of anger, academic alienation, and hostility toward others (see Connell & Wellborn, 1991; Roeser, Eccles, & Strobel, 1998; Weiner, 1994).

Children's appraisals of academic difficulty can also contribute indirectly to their mental health through the impact of such appraisals on their developing self-perceptions of academic competence, academic value, and beliefs about the relative supportiveness of others in learning situations. Competence beliefs, values, and feelings of support are associated with feelings of esteem, interest, and belonging, whereas feelings of incompetence, low value, and low support are associated with feelings of shame and doubt, disinterest and boredom, and isolation or victimization (Ames, 1992; Eccles et al., 1998; Roeser, Eccles, & Strobel, 1998).

### *Distress Leads to Academic Problems*

✓ In a second pathway, emotional distress influences cognitive processes, which in turn lead to subsequent academic problems. As Lazarus (1991) reminded us, emotion is not only an outcome of cognitive processes, but it also shapes them. Thus, children who experience predominant negatively emotions sometimes show mood-congruent biases of memory and attention (e.g., Gotlib & MacLeod, 1997) that can affect academic functioning. For instance, feelings of distress can activate negative academic motivational beliefs in memory during learning activities. For sad or anxious students, this biasing may be reflected in ✓ pervasive worries about incompetence in learning situations, whereas angry students may perseverate on presumed hostile intentions of others (Cole, 1991; Crick & Dodge, 1994; Dweck & Wortman, 1982; Gotlib & MacLeod, 1997). Negative, mood-induced biases of this sort can divert the investment of psychological resources into self-protective goals and coping efforts rather than into academic mastery goals and learning strategies (Boekaerts, 1993). Reduced attentional, cognitive, and emotional investments in learning can precipitate subsequent academic problems.

A second, related process by which negative mood can influence academic functioning involves the biasing effect of mood on attention. Distress-induced attentional biases operate to filter out information that is at odds with any particular, prevailing negative emotional state (Segal & Cloitre, 1993). Thus, children experiencing high levels of either internalized or externalized distress in academic settings may discount positive experiences (e.g., moments of academic success or support by others), and focus instead on mood-consistent experiences (e.g., difficulties with learning and garnering social support), thereby maintaining the original negative emotional state.

✓ The reciprocal nature of the processes in Figure 8.1 helps to explain why many children with academic difficulties also show emotional difficulties, and vice versa. In the next section, we describe two maladaptive patterns of in-school functioning, one involving internalized and one involving externalized forms of distress. In addition, because the cognitive processes presented in Figure 8.1 not only link academic problems with particular forms of distress, but also positive academic outcomes with positive mental health, we describe an optimal pattern of in-school functioning that co-occurs with feelings of wellness and enthusiasm.

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### *Academic Internalizing Pattern*

One pattern of co-occurring academic and emotional problems that can arise in educational settings involve children who show academic difficulty joined with internalized symptoms of emotional distress. Studies have shown that academic difficulty can cause subsequent internalized distress (Dweck & Leggett, 1988; Weiner, 1986); and internalized distress can cause subsequent academic difficulties (Nolen-Hoeksema et al., 1986). In Table 8.1, we have summarized some of the academic behaviors, beliefs, emotions, and self-regulatory processes that characterize such children.

Achievement-related behavioral characteristics of such children include avoidance of academic challenges, failure to persist on difficult tasks, withdrawal from classroom activities, and poor achievement. These are all signs of learned helplessness, here manifest in educational settings; thus, such children have been labeled as "helpless" by those who initially described such a subgroup (see Dweck & Elliott, 1983; Nolen-Hoeksema et al., 1986; Seligman et al., 1984). Qualitative cognitive, emotional, and self-regulatory processes associated with this pattern include (1) the adoption of goals in which the concealment of one's perceived sense of inability relative to others is the main focus (called "ego avoidance goals"); (2) low self-perceptions of academic competence; (3) frequent worries about incompetence and concomitant feelings of sadness or low esteem; (4) a tendency to use ineffective learning strategies; (5) a tendency to attribute academic difficulties to a personal, stable inability to achieve; and (6) a tendency to cope with academic difficulties by blaming oneself (Connell & Wellborn, 1991; Covington, 1992; Dweck & Leggett, 1988; Dweck & Wortman, 1982; Nolen-Hoeksema et al., 1986; Urdan, 1997; Weiner, 1986). In general, an organizational pattern of behavior that could be characterized as somewhat avoidant, ruminative, rigid, and overcontrolled would describe the functioning of such children in educational settings (Block & Block, 1980; Deci & Ryan, 1985; Dweck & Leggett, 1988). Such a pattern may describe not only a small percentage of normative children who show primarily academic difficulties but also some unknown percentage of children who manifest clinical levels of depression and anxiety.

### *Academic Externalizing Pattern*

A second pattern of academic and emotional problems that is seen among some children in educational settings involves achievement difficulties that co-occur with externalized forms of distress such as disruptive behavior and aggression (e.g., Hinshaw, 1992). Such children do poorly in school, show academic skills deficits and a great deal of time off-task in learning settings, have poor peer relations, and are disruptive in the classroom (Dishion et al., 1995; Hinshaw, 1992). Less research has been devoted to understanding this particular pattern in school settings, so our description of it remains somewhat speculative and preliminary.

Empirical research has shown that, among some children, academic difficulty can cause subsequent feelings of frustration, inferiority, anger, and aggression that can result in behavior problems in and out of school (Connell & Wellborn, 1991; Graham, 1997; Hinshaw, 1992; Weiner, 1997). There is some indication that symptoms of externalized distress such as anger and aggression can also cause subsequent academic problems. Angry children often show heightened fears, concerns, and attention to issues of victimization, provocation, and control by others. These heightened sensitivities distract such children from focusing on academic work and learning academic skills. If such sensitivities are accompanied by aggression toward others, such children actually create conditions in which peers and teachers are less willing to



**TABLE 8.1. Selective Properties of Maladaptive and Optimal Patterns of Academic Functioning**

	Maladaptive academic functioning		Optimal academic functioning	
	Academic internalizing pattern	Academic externalizing pattern	Intrinsic-mastery pattern	
<i>Quantitative properties</i>				
Academic behaviors	Easy tasks	Disruption/acting out	Moderately challenging tasks	
Preferred level of academic challenge	Lack of persistence	Low	Redoubled effort	
Response to academic difficulty	Withdrawal		Participation	
Classroom behaviors			Moderate to high	
Level of achievement	Low			
<i>Qualitative properties</i>				
Academic-related cognitions and emotions	Ego avoidance goals	High academic confidence	Task mastery goals	
Achievement-related goals	Low academic confidence		High academic confidence	
Achievement-related self perceptions	Academic worry	Boredom/anger	High value for school	
Achievement-related task beliefs	Poor learning strategies		Interest	
Predominant classroom emotion	Rumination	Reaction	Deep learning strategies	
Academic regulatory processes	Self blame	Projection	Reflection-action	
Learning strategies	Lack of ability	Influence of others	Problem-focused	
Self-regulatory process			Lack of effort	
Academic coping processes				
Coping with academic difficulties				
Attributions for academic difficulties				

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offer assistance. Inattention and lack of support due to the child's misconduct can in turn precipitate subsequent academic problems (Coie & Jacobs, 1993; Dishion et al., 1995; Graham, 1997).

Table 8.1 summarizes some of the qualitative cognitive, emotional, and regulatory features of what we call the "academic externalizing pattern." Note that there is some indication that, despite their academic difficulties, such children may report high levels of perceived academic competence. This seems to be a function of the fact that such children attribute blame to others when they receive poor grades, and thus use such occasions not as an opportunity for self-relevant feedback, but rather as an opportunity to confirm their beliefs about the controlling, unsupportive qualities of others (see Coie & Jacobs, 1993). In general, children who manifest the "academic externalizing" organizational pattern of behavior could be characterized as somewhat reactionary, rigid, and undercontrolled in classroom situations (Block & Block, 1980; Crick & Dodge, 1994; Graham, 1997). The "academic externalizing pattern" may characterize not only a small percentage of normative children who show primarily academic difficulties but also an unknown percentage of children with externalizing disorders.

### *Intrinsic-Mastery Pattern*

A third pattern noted among some school children involves co-occurring academic success and emotional well-being. The same set of processes depicted in Figure 8.1 that link academic problems with emotional distress also link academic successes with emotional well-being. In this case, positive attributions for success (e.g., effort and hard work) contribute to these children's sense that they are competent and school is valuable. These beliefs in turn lead to feelings of pride, high self-esteem, and enjoyment of learning (Covington, 1992; Deci & Ryan, 1985; Weiner, 1986). Feelings of psychological well-being in turn activate positive motivational beliefs (e.g., competence beliefs, values) and serve to focus such children's attention on mood-congruent, positive aspects of the classroom environment such as moments of success, the intrinsically motivating qualities of tasks, and supports for learning. These motivational beliefs, in concert with attention to supportive contextual factors and experiences, predict subsequent academic successes (Eccles, 1983; Pintrich & De Groot, 1990).

Table 8.1 summarizes some of the characteristics of such children. They tend to show a preference for moderately challenging tasks, a redoubling of effort following difficulty, participation in classroom activities, free-time choice of academic activities, and high achievement. In terms of qualitative processes, such children pursue goals associated with the academic mastery and self-improvement, attribute successes to hard work, and cope with the inevitable setbacks that occur during learning by redoubling their efforts and seeking help. In general, children who manifest the intrinsic-mastery organizational pattern of behavior can be characterized as somewhat optimistic, reflective, flexible, and intrinsically self-regulating (Ames, 1992; Block & Block, 1980; Deci & Ryan, 1985; Dweck & Leggett, 1988; Nicholls, 1984). We believe this pattern of academic functioning should form an integral part of any definition of mental health in children insofar as it reflects a form of "optimal functioning" (Kazdin, 1993) and "wellness" (Cowen, 1991).

### *Academic Resilience*

Table 8.1 lists holistic patterns of academic functioning that are likely to describe the classroom adjustment of children who manifest internalizing problems, externalizing prob-

lems, or positive mental health. Just how tightly linked such motivational patterns of academic functioning are to broader patterns of social-emotional functioning that extend beyond the classroom context remains an open question. Possibilities exist for youth to show mixed patterns of functioning in relation to school and more general mental health. For instance, in a recent series of studies, we found that some adolescents who reported high levels of emotional distress compared to their peers nonetheless continued to show the intrinsic-mastery pattern of academic functioning described in Table 8.1 (Roeser, Eccles, & Sameroff, 1998; Strobel & Roeser, 1998). Somehow these youth, despite other life adversities, retained their capacity to learn and to behave appropriately in school: Their academic functioning was not "tightly coupled" with their broader feelings of emotional distress. Such resilience may have been due to factors such as intelligence (Masten & Braswell, 1991), self-affirmation through school achievement (Eccles, 1983; Steele, 1988), an interest-induced cognitive space of functioning that is protected from the disruptive effects of sadness and anger (Roeser, Eccles, & Strobel, 1998), a positive school climate (Roeser, Eccles, & Sameroff, 1998; Rutter, 1980), or a combination of these factors and others. Just how some children with emotional difficulties manage to stay motivated to learn, get high grades, and act appropriately in school is an important topic for future research on what can be considered "academic resilience." In the next section, we consider how school environments probabilistically cultivate or potentiate these three coherent patterns of academic-emotional functioning in the classroom.

## SCHOOL ECOLOGY AND MENTAL HEALTH

Our understanding of how the ecology of the classroom and the school as a whole influence children's cognitive, emotional, and social development remains underdeveloped at the present time. For the most part, researchers interested in children's education have focused on the impact of schools on intellectual rather than social-emotional outcomes in children (Eccles, Lord, & Roeser, 1996), and researchers interested in children's social-emotional development have focused mainly on the socializing influence of the family, peer group, and neighborhood rather than the school (Maughan, 1988). Thus, it has proven difficult to build an integrated body of knowledge about school effects on child development, especially non-academic aspects of development. Below we summarize findings from research on school effects and then use this summary to build a descriptive model of schooling that can be applied to the study of children's education and mental health. A discussion of how *changes* in school factors affect *changes* in different aspects of children's development can be found in Eccles and Roeser (1998).

### Modeling School Influence

The presence or absence of adequate physical and curricular resources in schools is an important aspect of how they influence children, but this seems more a political than a scientific issue at this time (Speece & Keogh, 1996). Therefore, we focus here on research that documents how particular curricular, instructional, interpersonal, and organizational processes that occur in classrooms and schools on a daily basis influence aspects of children's mental health (see Good & Weinstein, 1986; Rutter, 1983). Several broad generalizations can be made regarding research on school effects. First, proximal contextual processes are as important as distal school resources in assessing school influences on children (Rutter, 1980). Second,

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school effects operate at different levels: at the interpersonal, classroom, school, and district levels (Zalutimo & Sleeman, 1975). Third, school contexts change or “develop” as children move through different types of schools (Eccles & Midgley, 1989; Simmons & Blyth, 1987). Fourth, children’s perceptions of the classroom or the school environment are stronger predictors of their adjustment than are more “objective” indicators of the environment such as observers’ ratings (see Eccles, 1983; Maehr, 1991; Ryan & Grolnick, 1986; Weinstein, 1989). Fifth, school effects on achievement and other achievement-related behaviors are mediated through children’s perceptions of the environment, as well as their motivational beliefs (e.g., confidence), goals (e.g., to master material), and emotions (e.g., interest; for a review, see Eccles et al., 1998).

With these generalizations in mind, we now turn to a description of some of the processes by which schools influence children’s mental health. Based upon conceptions of systems theory (Sameroff, 1987), Figure 8.2 depicts the school environment as a set of hierarchical and interdependent levels of organization, and emphasizes our assumptions that schools are systems comprised of structural levels, each characterized by organized processes (interpersonal, instructional, and organizational in nature); that these levels of organization are interrelated vertically; and that the processes corresponding to these levels are more or less dynamic in nature, sometimes being worked out each moment between social actors (e.g., teachers and students). The time dimension along the bottom of Figure 8.2 denotes the fact that these processes “develop” or change as children move through different types of schools (elementary, middle, and high school). Finally, we assume that it is through children’s explicit

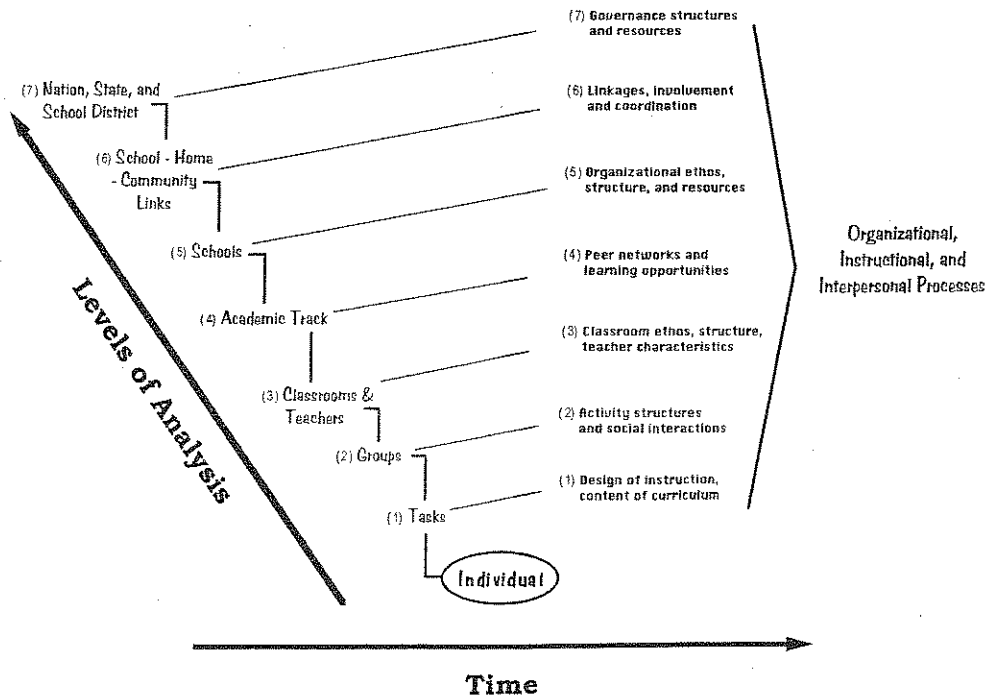


FIGURE 8.2. Multilevel description of school ecology.

or implicit experience of such processes that schools probabilistically exert an impact on their cognitive, social-emotional, and behavioral development. Together, these systems-theory concepts define a process-oriented, multilevel, developmental, and phenomenological view of schooling and its potential influence on children's mental health.

### *Level 1: Academic Tasks*

The nature of academic work is at the heart of schooling and includes both the design of instruction and the content of the curriculum. Poorly designed instruction can reinforce cycles of failure in children who need well-structured academic tasks and explicit instruction in the strategies required for successful learning. Such children include those with poor achievement histories and those with learning disabilities in the areas of short-term memory, language, attention, or spatial perception (Adelman, 1989; Brophy, 1988; Schumm & Vaughan, 1995; Silver, 1996). Given that interest seems to be an important factor in how some children maintain their engagement in school despite other life difficulties, the meaningfulness of the curriculum in relation to children's developmental needs and contemporary experiences seems to be another important factor at this level of analysis, one that can keep some troubled students engaged in school and prevent others from dropping out (Fine, 1991; Glasgow, 1980; Roeser, Eccles, & Sameroff, 1998a).

### *Level 2: Groups*

Classroom instruction is delivered through different activity structures, including whole-group instruction, individualized instruction, and grouped instruction. Cooperative grouping in classrooms can enhance learning, self-esteem, and interethnic relations, and can diversify the number of friendships that form in the classroom (Cohen & Lotan, 1997; Slavin, 1983). In contrast, the use of whole-class instruction and within-class ability groups can make ability differences more salient, increase social comparison among students, make differential teacher treatment of high and low achievers in the classroom more noticeable, and lead to more social isolation among students who are not high achievers (Eccles et al., 1984; Karweit & Hansell, 1983; Marshall & Weinstein, 1984).

### *Level 3: Classroom Practices and Teacher Characteristics*

Classroom instructional practices, teachers' pedagogical beliefs, and teachers' ability to relate to students all can influence children's cognitive and social-emotional development (for extensive reviews, see Ames, 1992; Berliner, 1985; Brophy, 1988). Here we highlight a few relevant findings from research on these processes.

*Teacher Role Beliefs.* Teachers' beliefs about their role can influence the nature of the interactions they have with students. In a study of 98 elementary school teachers, Brophy (1985) found that teachers who saw themselves primarily as "instructors" (e.g., oriented toward teaching academic content and fostering the "good student") responded the most unfavorably to scenarios involving students who were underachievers, academically unmotivated, or disruptive during learning activities. In contrast, "socializers" (e.g., those oriented toward addressing children's social-emotional needs and fostering the "good citizen") responded the most unfavorably to scenarios involving aggressive students or those who thwarted teachers' efforts to form close personal relationships. These findings require further

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research in actual classroom settings with children who manifest different types of academic maladjustment (e.g., academic internalizing vs. externalizing patterns) but suggest the possibility that teacher-student transactions that potentiate such maladaptive patterns may occur partially as a function of teachers' beliefs concerning their role (see Greene, 1996; Roeser & Midgley, 1997).

*Teacher Efficacy.* Teachers who believe they are able to reach even the most difficult students and feel they can influence developmental outcomes in students above and beyond other social influences tend to communicate such positive expectations and beliefs to their students. In turn, these messages enhance children's own beliefs about their ability to master academic material, thereby promoting effort investment, achievement, and feelings of self-worth (Ashton, 1985; Covington, 1992; Midgley, Feldlaufer, & Eccles, 1989a; Rutter, 1980). The building of student confidence by highly efficacious teachers is likely to be particularly important for children who are having academic difficulties due to personal feelings of incompetence (e.g., academic internalizing pattern) or victimization and neglect (e.g., academic externalizing pattern).

*Teacher Academic Goal Orientation.* Teachers' beliefs about the goals of learning and the instructional practices that follow from such goals also can affect students' mental health. Some teachers emphasize the demonstration of ability relative to others in the classroom through instructional practices such as grouping by ability, differential rewards for high achievers, public evaluative feedback, academic competitions, and other practices that promote social comparison. Children who display the academic internalizing style described earlier (see Table 8.1) are likely to be more vulnerable in such environments because, by the very nature of these classrooms, the threat of public displays of incompetence are more likely (Ames, 1992; Covington, 1992; Dweck & Elliott, 1983; Midgley, 1993; Nicholls, 1984). Additionally, if these kinds of ability-focused, competitive classroom practices are perceived as controlling, they may also exacerbate feelings of victimization and anger among children manifesting the academic-externalizing pattern described earlier.

Other teachers emphasize what are called "task-mastery goals" in their classrooms through practices such as the recognition of individual effort and improvement regardless of a child's current ability level, provisions for choice and collaborative work, opportunities for revision, and an emphasis on learning from mistakes, mastering content, and investing effort in learning (Ames, 1992; Midgley, 1993). Such practices reduce children's concerns about their ability relative to peers and the feelings of self-consciousness, anxiety, or disenfranchisement that can accompany such concerns. In mastery-focused environments, children are more likely to show the kinds of behaviors and psychological characteristics associated with the intrinsic-mastery pattern described earlier (Ames, 1992) and may explain why some distressed students maintain a positive orientation toward schooling (Roeser, Eccles, & Strobel, 1998). Some students who appear "academically resilient" may actually be in resilience-enhancing school settings (Roeser et al., 1998a).

*Teacher Autonomy Support and Control.* A related classroom practice concerns the structure of authority in the classroom (Ames, 1992; Deci & Ryan, 1985). In classrooms where teachers assert a great deal of control by offering students few provisions for self-determined behavior and by using frequent rewards, punishments, competitions, and praise, children are more likely to feel that their behavior is being controlled by factors outside themselves. Controlling practices can potentiate both the academic internalizing and externalizing patterns

described earlier. Some children may feel unable to live up to expectations and external demands, and thus feel inadequate in such settings (academic internalizing pattern; Boggiano et al., 1992; Deci, Vallerand, Pelletier, & Ryan, 1991; Flink, Boggiano, & Barrett, 1990). Other children (e.g., those manifesting the academic externalizing pattern) may respond to frequent punishments and competitions with defiance, especially if they are often the target of negative feedback and punishments (Coie & Jacobs, 1993; Deci et al., 1991; Rutter, 1980).

Other teachers design their classes so as to support student autonomy. They do this by giving students opportunities to make choices, pursue their interests, and contribute to classroom discussions and decisions. Such practices promote a sense of autonomous, self-determined behavior on the part of children in relation to their schoolwork and are related to children's intrinsic valuing of school, quality of cognitive engagement during learning, performance, and feelings of self-esteem and personal control (Deci & Ryan, 1985). Such environments, in essence, foster the intrinsic-mastery pattern of academic functioning and, again, seem protective for some children who experience high levels of emotional distress (Roeser et al., 1998a,b).

The authority structure in the classroom also has important effects on children's social relationships with each other. In secondary classrooms, opportunities for students to participate in academic decisions are associated with less social isolation, a broader range of acquaintances, and less status-based friendship networks (e.g., Epstein, 1983). Thus, it could be that autonomy support in the classroom reduces peer neglect, though little research on this has been done to date.

*Orderliness and Predictability.* In rooms where teachers have established smoothly running and efficient procedures for monitoring student progress, providing feedback, enforcing accountability for work completion, and organizing group activities, student achievement and conduct are enhanced (Moos, 1979; Rutter, 1980). On the other hand, ineffective classroom organization reflected in a lack of clear and consistent behavioral rules, routines, and procedures for transitioning between activities is related to behavior problems at school (Rutter, 1980) and has a particular disorganizing influence on the behavior and learning of children with attention-deficit/hyperactivity disorder and conduct disorder (Dishion et al., 1995; Hechtman, 1996; Kasen, Johnson, & Cohen, 1990).

*Teacher-Student Relationships.* Quality teacher-student relationships positively affect students' motivation to learn and their "bonding" with the institution of school (Goodenow, 1993; Midgley, Feldlaufer, & Eccles, 1989b; Moos, 1979; Roeser, Midgley, & Urdan, 1996). Conversely, a lack of supportive teacher relationships can fuel students' alienation from school and is an oft-cited reason among dropouts for why they decided to withdraw from school (Fine, 1991). Evidence shows that school environments designed to provide a smaller community to students within the larger context of secondary schools, and thereby enhance teacher-student relationships, can reduce emotional distress, behavioral problems, and school dropout (Carnegie Council on Adolescent Development, 1995; Felner et al., 1993).

#### Level 4: Academic Tracks

Academic tracks or "curriculum differentiation policies" refer to a widespread, if not controversial, set of practices in American schools in which different students are given different sets of learning experiences based upon some estimation of their abilities (Oakes, Gamoran, & Page, 1992). Tracking takes different forms, though here we concentrate on

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*School-Community Lineages.* Closer ties between schools and communities may be especially important in high-risk neighborhoods for preventing behavioral problems among youth. Both researchers and policymakers have become concerned with the lack of structured opportunities for youth after school, and the use of school sites as activity centers and as homes to after-school programs could do much to address some adolescents' involvement in deviant behavior during the after-school hours (Bryce-Heath & McLaughlin, 1996; Carnegie Corporation of New York, 1992; Dryfoos, 1994).

## CONCLUSIONS

School functioning is a central aspect of children's developmental competence or maladjustment, and the ecology of schooling is a central context of children's development that both cultivates and directs attentional, cognitive, and emotional energies. The need for a more integrated understanding of schooling, development, mental health, and psychopathology is underscored by current cultural needs, our fragmentary understanding of children's developmental competence and maladjustment across various psychological domains and ecological contexts, and the fragmentary nature of our public policies concerning youth development and education (Millstein, Petersen, & Nightingale, 1994). In concluding this chapter, we provide some thoughts on how an integrated study of schooling, development, mental health, and psychopathology might proceed.

### Architecture of an Integrated Study

#### *Child-Level Studies*

One line of inquiry associated with such an integrated approach is research on the psychological processes that predictably forecast academic success, difficulty, or disability among atypical and normative populations of children. "Atypical trajectories" refer to the life paths of children characterized by clinically significant cognitive, emotional, social, or behavioral difficulties that are likely to (but do not necessarily) meet educational disability or psychiatric diagnostic criteria (e.g., learning disabilities, conduct disorders, etc.). "Normative trajectories" refer to life paths of children with adequate or optimal functioning in the cognitive, emotional, social, and behavioral areas of functioning. Such integrated research would provide a more holistic conception of the intrapsychic factors that contribute to children's school functioning by (1) focusing research attention on the interdependence among attentional, cognitive, emotional-motivational, and regulatory processes in the prediction of school learning, peer relationships, and behavioral conduct; and (2) integrating our understanding of these interconnected, intrapsychic processes across atypical and normative populations of children (e.g., Case, 1988; Hinshaw, 1992; Rourke & Fuerst, 1995).

#### *Child-in-Context Studies*

A second important line of inquiry in such an integrated approach would be research on atypical and normative trajectories of child development in the context of atypical or normative educational settings. "Atypical educational settings" refer to alternative schools, special education classrooms, day-treatment centers, schools in mental health clinics and juvenile justice centers, and so on, whereas "normative educational settings" refer to regular class-

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rooms and schools. The goal of this work would be to provide a thorough description of how interpersonal, instructional, and organizational features of different educational settings influence the course of academic-intellectual and social-emotional development among different populations of children.

### Public Policy Studies

Finally, we view research on the links between child mental health (Knitzer et al., 1991; Tuma, 1989), special education (Alpert, 1985; Speece & Keogh, 1996), and public school reform (Adelman & Taylor, 1998; Dryfoos, 1994; Weist, 1997) policies as a central component of such an integrated study. These areas of policy share many important interconnections. Those who are concerned with the lack of mental health services for children in general are also involved in thinking about schools as viable centers for mental health service provision and coordination (Adelman & Taylor, 1998; Dryfoos, 1994; Weist, 1997); those who work on school reforms are also interested in the mental health of children (Deci et al., 1991; Eccles et al., 1996; Maehr & Midgley, 1991), and so on.

In conclusion, as we look to the future and toward a new generation of reforms and policies aimed at enhancing children's mental health and learning simultaneously (e.g., Cowen, 1991), we believe research that adopts an integrated and interdisciplinary approach to schooling, development, mental health, and psychopathology could do much to inform educators, social workers, clinicians, and policymakers on how to make schools even more effective and efficient in their efforts to improve the lives of children.

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