

Children's Coping in the Academic Domain

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Each child who fails to learn is a personal tragedy and a social loss. Children with inadequate education are more likely to become adults who are unemployed, on welfare, imprisoned, or who bear children out of wedlock. A nation whose future depends upon a smaller pool of future workers is undermined by each child who fails to acquire essential knowledge and skills.

National Commission on Children, 1993

School failure is expensive—to American society, to families, and to individual children. According to some estimates, the national rate of school dropout hovers between 25 and 30% (United States Department of Education, 1985). Its distribution across geography, race, and ethnic groups ranges from essentially zero in some predominantly Caucasian suburban school districts to over 60% for African-American inner-city children (Hamack, 1986; Levin, 1986). Over 700,000 young people drop out of school each year (Dryfoos, 1990). Adolescents who leave before completing a high school degree are more likely to face unemployment and to earn significantly lower incomes (Rumberger, 1987). In addition, they are more likely to participate in a host of socially undesirable activities, including drug and alcohol use, gang activity, teenage pregnancy, and delinquent acts (Fad & Ryser, 1993).

Costs at the individual level are more difficult to reckon with statistics, but they are easy to imagine. Leaving school changes an individual's life trajectory, including not only their career path and financial status, but also the kind of

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Handbook of Children's Coping: Linking Theory and Intervention, edited by Wolchik and Sandler. Plenum Press, New York, 1997.

person they will marry, the number and timing of their children, and even the kind of parenting they will provide (Dryfoos, 1990; Rutter, 1989). Children who remain in school, but do not do well, have more distressing interpersonal interactions with parents and teachers, do not have as many friends, and think less of their scholastic competence and abilities (Dweck & Elliott, 1983; Marge & Waters, 1988). These difficulties, which are detectable as soon as children begin formal education but seem to become relatively stable starting as early as third grade (Stipek, Recchia, & McClintic, 1992), can interfere with development in related areas, including cognition, motivation, and social functioning.

Discussions of the factors that influence scholastic success and school completion reflect the growing recognition that students' academic participation and performance are multiply determined by cultural factors, such as the uneven distribution of resources and changing demands on the labor force; by sociological factors, such as the goals and strategies of educational institutions; by the climates provided by specific schools, families, and neighborhoods; and by the individual personalities, abilities, and motivations of students and their teachers, parents, and peers. Each of these factors has its ideological and disciplinary proponents, and each leads to different implications about the targets of educational reform designed to optimize student learning and school completion (Rush & Vitale, 1994).

A relatively recent addition to these discussions, as a key factor that may influence student success and satisfaction in school, has been the concept of academic coping, or how children interpret and react to academic challenges, setbacks, and difficulties. Why has the notion of coping in schools not been considered more fully up to now? First, there is the general trend in the literature on educational reform away from the consideration of individual child factors (such as intelligence or motivation) as explanations for student outcomes and toward a consideration of more global and systemic factors. Second, from the perspective of the literatures on coping, schools have not typically been considered to be major stressors in children's lives. Traditionally, children have been considered to "cope" only with nonnormative and potentially traumatic events, such as divorce, parental illness, or medical treatments (Garnezy, 1983; Rutter, 1983). However, the recent analysis of "common stressors" has opened the way for the study of how children cope with everyday problems, such as those encountered in school (Causey & Dubow, 1992). With this shift, researchers have begun to consider the variety of issues children face at school (Dickey & Henderson, 1989), children's understanding of the nature of these stressors, such as their controllability (Causey & Dubow, 1992; Compas, Banez, Malcarne, & Worsham, 1991), and how children attempt to cope with these events through behaviors such as direct action, problem solving, support seeking, distraction, distancing, or acceptance (Causey & Dubow, 1992; Dickey & Henderson, 1989; Ebata & Moos, 1989; Tero & Connell, 1984; Work, Levinson, & Hightower, 1987).

Despite the recent recognition of its potential importance, the research on academic coping per se is small, compared both to the literatures on other factors that influence children's school performance and to the literatures on how children cope with other stressors. Only a handful of scales exist that directly assess children's domain specific coping in schools, and several of

these are unpublished. The scales that do exist are still in the validation stage, and no consensus has been reached about the core categories of academic coping, about the most effective types of coping in schools, or about the mechanisms by which such coping may be expected to affect its outcomes. Despite the fact that school performance has been considered to be an indicator of positive adjustment in intervention studies that target coping with other stresses (e.g., divorce) (Alpert-Gillis, Pedro-Carroll, & Cowen, 1989), few intervention studies to date have had academic coping as their direct target.

Although research on academic coping per se is limited, several other lines of research can be considered relevant because they examine certain reactions children may show to problems and failures in school (Compas, 1987). Work on mastery versus helplessness (Dweck, 1991; Dweck & Wortman, 1982; Harter, 1978) has examined in detail children's emotional, behavioral, and motivational reactions to failure and noncontingency in academic settings. Work on autonomy and self-determination (Deci & Ryan, 1985; Grolnick & Ryan, 1989; Ryan, 1982) has investigated children's reactions to external pressures, coercion, and extrinsically motivating tasks, and has studied their effects on behavioral engagement and intrinsic motivation for learning. And, work on help seeking in the classroom (Nelson-LeGall, 1985; special section, 1990) has analyzed the individual and interpersonal factors that make children more (or less) likely to go to teachers when they encounter difficulties with academic material.

Taken together, these theories and research represent a great deal of knowledge about children's perspectives and reactions to stressors in school. The purpose of this chapter is to draw these together, using a framework of coping to organize and integrate this work. Focusing on these processes through the lens of coping emphasizes core questions in these diverse literatures, such as the nature of stress and the consequences of different patterns of responses, and allows these questions to be answered, not only on their own terms, but also in relation to each other. A more comprehensive approach also allows for more informed speculation about intervention. The analysis of factors that facilitate and impede coping, in both children themselves and in their close relationships with teachers and parents, can suggest routes toward optimizing children's coping in school.

COPING AS AN ORGANIZING FRAMEWORK

Despite the apparent heterogeneity of the literatures on children's responses to problems in school, it may be surprising to discover that, at a very general level, they share a set of core assumptions about the factors that shape these processes. First, they assume that experiences of stress involve not just the objective features of the (in this case) academic environment, but also include the interactions of the individual child with that social and physical context, as well as the child's own interpretations of those interactions. In the coping literatures, this assumption is represented in definitions of stress that focus on person-context relations and in analyses of reactions to stress that begin with processes of cognitive appraisal (e.g., Lazarus & Folkman, 1984). In the other literatures, this assumption is represented by a focus on the self and

the role of self-perceptions (e.g., self-esteem) and interpretations of the environment (e.g., influences of powerful others) in shaping children's reactions to problems, such as whether they will seek help (Nelson-LeGall, 1985).

Second, all these approaches assume that a major task consists of describing the different patterns of action children show in response to academic difficulties and explaining the factors that contribute to these individual differences. In the coping literature, the goal has been to answer this question "extensively," that is, to identify a broad range of different reactions (such as distancing or externalizing) and then to trace their antecedents backward, for example, in children's personality (Kliewer, 1991). In the self-perception literatures, the approach has been more "intensive," attempting to start with one set of self-system processes (e.g., self-determination) and then to describe in detail the patterns of action that result when this self-system is challenged or threatened (Deci & Ryan, 1985).

Third, all approaches have emphasized that patterns of action have both short- and long-term consequences for children. Short-term consequences (often referred to as "effectiveness" in the coping literature) describe the effects of the pattern of action or coping on the resolution of the current interaction. For example, in a disciplinary encounter, an aggressive student response is likely to result in further sanctions from the teacher. Or, a helpless response to initial failure is likely to interrupt successful problem solving. Furthermore, these short-term consequences can also have long-ranging effects, for example, resulting in more subsequent stressful interactions with teachers and learning activities, and eventually even preventing children from developing the cognitive and motivational resources they need to succeed in school.

These three themes are represented in the general conceptualization of the coping process used in this chapter. According to this perspective, children's encounters with stress have an impact on their views of themselves and the world, which in turn have a direct influence on their coping and patterns of action in those stressful situations. These actions, in turn, influence the outcomes of stressful encounters, which feed back upon the context and feed forward into the child's own development.

This general view of the coping process is used to organize the sections of this chapter. First, we consider the nature of stress in the academic context. Then we review definitions, dimensions, and categories of coping used to describe children's responses to stress in school. Third, we examine the correlates or outcomes of different patterns of coping. We conclude with suggestions for optimizing children's coping in the classroom. Throughout, our own work within a motivational framework will be used in an attempt to tie together these issues (for more detail, see Skinner & Wellborn, 1994).

STRESS IN ACADEMIC CONTEXTS

Children's own reports validate the notion that schools can be stressful places for students. If children are asked to name the most upsetting event of the last month (Spirito, Stark, Grace, & Stamoulis, 1991) or to describe things that happened that made them feel bad (Compas, Malcarne, & Fondacaro,

1988), events from school are consistently among the three most common problems they name (with family and peer relations usually the other two). When asked specifically to describe what bothers them at school, children as young as kindergarten are able to report their experience of multiple stressors. In a study in which 141 kindergarten through second grade children were asked about what worried or upset them in school, they most often mentioned schoolwork (26.8%), peer relationships (21%), personal injury or loss (17.3%), and loss of personal comfort (14.7%); they also mentioned discipline (6.9%), relations with teachers (6.3%), and family events (6.3%) (Dickey & Henderson, 1989). Adolescents were also able to report the multiple stressors they experience in school, including worry about examination results and study pressures, problems with the classroom environment (such as noise or crowding), issues with school authority, the difficulty of self-management, and challenges in accepting the self and relating to peers (Fanshawe & Burnett, 1991).

A closer examination of their specific answers reveals that children report being bothered by a multitude of big and small events: bad grades on tests and homework, anxiety about not doing well in the future, not understanding material presented in class, not knowing the answer if asked by the teacher, following the rules and threats of punishment for infractions, and concern that the teacher does not like them. These lines of research clearly support the notion that school can have costs for children (Ingraham, 1985). However, they are not very informative about *why* these experiences should be stressful or about the theoretical dimensions that underlie these experiences.

A Motivational Perspective on Stress in Schools

In answering questions about why certain school experiences threaten or challenge children, motivational theories rely on the concept of "psychological needs." The model of motivation used here posits three basic innate psychological needs: relatedness, competence, and autonomy (Connell, 1990; Connell & Wellborn, 1991; Deci & Ryan, 1985). These three needs are challenged or supported by opportunities provided by the social context. According to this perspective, school contexts are stressful to the extent that they challenge or threaten children's basic fundamental human needs.

If the model assumes that all children come with needs for relatedness, competence, and autonomy, however, how can it be useful in explaining individual differences in children's reactions to common school experiences? All children will sometimes fail in their attempts to solve problems or to understand material presented in class. All children must follow school rules, which by their nature are often constraining. All children will sometimes be overlooked by teachers. Why are these experiences stressful for some children, whereas they are not noticed or are even seen as challenges by other children? According to the motivational perspective, one answer lies in individual differences in children's self-system processes.

Consistent with many self theories (Harter, 1983), the motivational model posits that children actively construct beliefs or internal representations of themselves, the social context, and interactions between the two. We refer to these belief sets as *self-system processes* or organized constructions about the

self in relation to the social context. These are based on an individual child's history of interactions with the social and physical environments and are shaped by the cognitive and social processes that help interpret these interactions. Consistent with the notion of fundamental needs, we posit that children's self-system processes are organized around relatedness, competence, and autonomy (Connell & Wellborn, 1991). To understand these issues completely, it is necessary to explain the nature of the innate psychological needs postulated, the kinds of experiences that can impinge on them, and the individual vulnerabilities that make these experiences stressful.

Competence, Chaos, and Control

The need with which most researchers in the academic domain are familiar is children's need for competence. Competence or effectance refers to the need to experience oneself as effective in interactions with the social and physical environment (White, 1959). Although sometimes not mentioned explicitly, the assumption of this need underlies explanations of many theories of control, causal attributions, helplessness, and self-efficacy (Skinner, 1995).

Children's needs for competence can be challenged or threatened by social contexts that are characterized by chaos. Chaotic contexts are noncontingent, inconsistent, random, arbitrary, discriminatory, or unfair; they also include social contextual situations in which information is lacking about how to produce desired effects, such as when the rationales for rules are not explained, when children are asked to attempt activities that are too difficult for them, when strategies for producing outcomes are not well-specified, when practice and opportunities for independent attempts are not sufficient, or when guidance and feedback for strategy implementation are not provided.

The self-system processes connected to the need for competence have been studied by researchers interested in perceived control (for reviews, see Bandura, 1977, 1986, 1989; Dweck, 1991; Folkman, 1984; Schunk, 1984; Seligman, 1975; Skinner, 1995, 1996; Weiner, 1979, 1985, 1986; Weiss, 1986). In general, these belief sets refer to convictions about the capacity of the self to enact effective strategies and about the responsiveness of the environment to one's efforts. Situations that are highly chaotic or children who are pessimistic with respect to their own competence are hypothesized to produce interpretations of setbacks and failures as evidence of incompetence and as forecasting long-term difficulty. In general, children with self-system vulnerabilities react to academic difficulties with appraisals that reflect an overly generalized negative view (1) of the self (which we label "self-derogation") and (2) of the possibility of the context being responsive to the child's needs (which we label "catastrophizing"). In the coping literature, these are referred to as primary appraisals and they contribute to the initial distress children experience in reaction to negative events.

In the specific case of competence, we have found that children with low perceived control, when imagining school problems ("When something bad happens to me in school, like not doing well on a test or not being able to answer an important question in class . . ."), are more likely to endorse items reflecting self-derogation of competence (e.g., "I feel like the dumbest person in

the world" or "I feel totally stupid") and catastrophizing about the impossibility of future control (e.g., "I worry that I won't do well on anything" or "I worry that I'll never learn how to do it") (Edge & Skinner, 1997; Skinner, 1993).

Based in part on these appraisals, children with low perceived control tend to react to even relatively mild instances of failure or resistance (such as not being able to think of an answer right away) with confusion and panic. In contrast, children with high perceived control do not react with extreme distress to academic failures and setbacks. They seem to focus instead on overcoming these obstacles with goal-directed concentrated action (for reviews, see Dweck & Elliott, 1983; Skinner, 1995).

Autonomy, Coercion, and Self-Determination

Also familiar to many researchers in the academic domain is children's need for autonomy. Autonomy or self-determination refers to the need to experience oneself as the origin of one's actions, to perceive oneself as free to choose one's own goals and course of action (for reviews, see deCharms, 1968; Deci & Ryan, 1985). Again, although not always explicitly acknowledged, this need can provide one explanation for why certain experiences in school, such as graded performance or competition, can be stressful: Because they can undermine children's autonomy (Ames & Ames, 1984, 1985; Ryan & Grolnick, 1986). The general term used to describe interactions that can undermine autonomy is *coercion*. These refer to interactions in which children are pressured, for example, by rules or rewards, to behave in certain ways or to express certain feelings; it may refer to a lack of autonomy support or to direct attempts to pressure, constrain, or force children to accept certain goals or courses of action.

Children's perceptions about the extent to which they are free to show the goals and course of action of their choice have been studied by researchers interested in self-determination, autonomy orientations, goal orientations, or self-regulatory styles (Ames & Ames, 1984, 1985; Deci & Ryan, 1985; Dweck & Leggett, 1988; Ryan & Connell, 1989). In general, these belief systems refer to children's internalized reasons for engaging in behaviors that may or may not be intrinsically interesting (such as homework or tests).

Situations that are highly coercive or children with low autonomy produce interpretations of difficult interactions that emphasize their pressured quality. For example, we found that the lower a child's self-determined autonomy orientation, the more likely he or she was to appraise challenging situations (e.g., "When something bad happens to me in school, like not doing well on a test or not being able to answer an important question in class) with self-derogation ("I feel like it's all my fault" or "I feel like I'm to blame") and catastrophizing ("It really spoils the subject for me" or "I don't care about that subject any more") (Edge & Skinner, 1997; Skinner, 1993).

Children with orientations that are nonautonomous can react to even mild resistance with high distress or frustration and are unable to prevent themselves from responding in underregulated ways (e.g., rebellion) or can pressure themselves to respond in overregulated ways (e.g., perseveration), both of which are nonautonomous. In contrast, when children are autonomous in their orientations for engaging in learning activities, they react to obstacles and

setbacks with little distress and, instead, with interest and flexibility, interpreting environmental feedback as information that can be used to guide performance and not as pressure to act in some specific manner.

Relatedness, Neglect, and Internal Working Models

The third need, although long recognized as paramount in family settings, has only recently come to the attention of researchers interested in children's school experiences; it is children's need for relatedness. Relatedness or belongingness refers to the need to experience oneself as lovable and loving, as a valued member of a group or community (Ainsworth, 1979, 1989). This need may contribute to explanations of why attachments to teachers and peers as well as feelings of community within schools may predict children's participation and learning in those settings (Lynch & Cicchetti, 1992).

Social interactions that undermine a child's need for relatedness can be summarized in the construct of neglect. In the school context, neglect refers to the absence of involvement, such as when children are ignored or overlooked by teachers, or when teachers fail to communicate their regard and affection for children, or when teachers or the school climate in general are cold, distant, and uncaring, or even hostile and rejecting of children. Parents may also show neglect, if they express no interest in their children's school work or experiences.

The self-system processes of relatedness have been conceptualized by attachment researchers as internal working models of attachment figures (Bretherton, 1985; Cassidy, 1988; Crittendon, 1990; Lynch & Cicchetti, 1992) and relational schemes (Baldwin, 1992). In general, these refer to children's convictions about their own lovability or intrinsic worth, and their expectations that social partners can be trusted to be warm and available in times of need. We have found that children with insecure internal working models tend to report that they react to challenges (e.g., "When something bad happens to me in school, like not doing well on a test or not being able to answer an important question in class") with more self-derogation ("I feel like nobody will like me" or "I feel like nobody will have anything to do with me") and catastrophizing (e.g., "I feel like I let everybody down" or "I feel like I didn't come through for people") (Edge & Skinner, 1997; Skinner, 1993).

Children with maladaptive beliefs about relatedness, for example, who doubt their own value or who view social partners as likely to be dangerous, react to even mildly stressful events with anxiety and expectations for severe social consequences. Hence, they would be more likely to conceal problems or avoid social contacts. In contrast, children with adaptive self-system processes in this area react to potential threats to relatedness, such as neglect or being overlooked by a teacher, with little distress and with active attempts to reestablish contact.

Self as a Source of Distress and as an Intrapersonal Resource

In sum, a motivational theory suggests that one source of individual differences in children's coping arises as a function of their appraisals of potentially stressful events as threatening or impinging on their basic needs. Children's

self-system processes of relatedness, competence, and autonomy should influence whether a failure or setback in school is viewed by a child simply as a source of information about where more work and help are needed or, instead, as an indication of sweeping incompetence, with shameful and anxiety-provoking interpersonal consequences. This analysis of the role of the self in coping allows for the a priori identification of children who are likely to respond to difficulties in school with distress. And it explains why some children are so overwhelmed by daily hassles in school: Because these setbacks feed directly into existing self-system vulnerabilities. An overview of this model is presented in Fig. 1.

These self-systems may also be a route by which parents, even though physically absent from the school setting, can make their presence felt (e.g., Connell & Wellborn, 1991; Grolnick & Slowiaczek, 1994; Wellborn, 1996; Yoder, 1996). Children bring their history of interactions with parents around issues of relatedness, competence, and autonomy with them to the classroom in the form of their self-system processes. For example, maladaptive relatedness beliefs formed in neglectful interactions with parents may make children fearful of their teachers' reactions to their failures, and so may lead them to conceal their difficulties from teachers. In a parallel vein, children's low perceived control, based on interactions with noncontingent parents, may lead children to assume that there is nothing they can do to overcome initial failures to understand academic material. Or, children's highly reactive autonomy orientation based on coercive interactions with parents may provoke them to react obstinately to even the mildest rule enforcement from teachers.

WAYS OF COPING IN SCHOOL

How do children respond to the challenges and threats provided by their everyday school experiences? What are the different ways children can cope with stressors in the academic domain? Although this issue is central to any conceptualization of coping in school, no current theory claims to be comprehensive in its answer. Theories and measures derived from a coping perspective suggest a variety of possible responses to classroom stresses. Theories derived from self-perception perspectives tend to focus in more detail on one or two patterns of responses. Each of these perspectives will be reviewed briefly, followed by a presentation of the motivational perspective which tries to integrate both.

Coping Perspective

Despite disagreement about the precise definition of coping itself, consensus seems to exist about some general parameters of children's coping (Compas, 1987). First, children can cope, not only through behavioral acts, but also with emotional and cognitive responses. Second, coping includes not just responses that are effective in ameliorating stress, but also attempts that do not succeed. And third, instead of being considered as a traitlike "style," coping in most situations can be thought of as a profile of activities that may vary depending

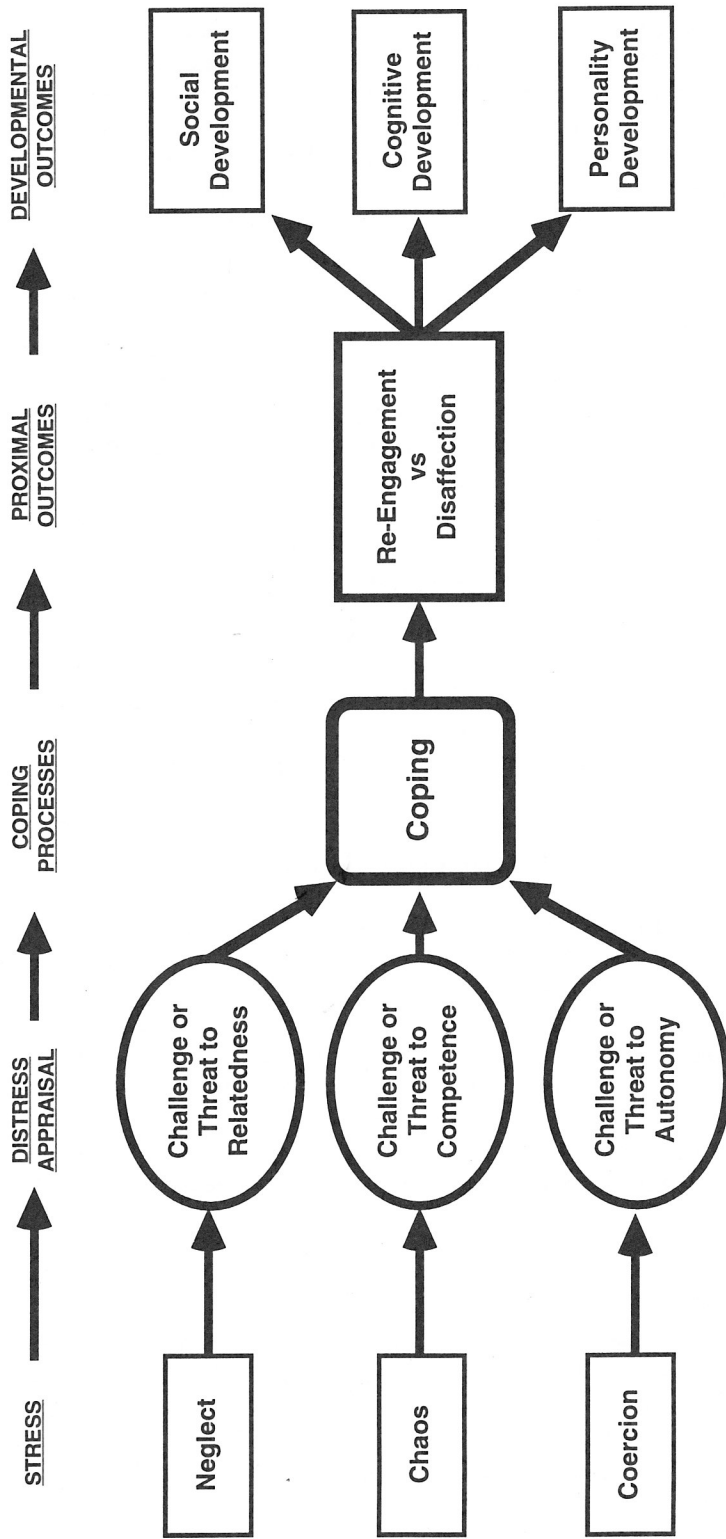


Figure 1. A simple model of the coping process. (Adapted from Skinner & Wellborn, 1994.)

on the kind of stressor, its domain, and the point in time during the coping process (see Lazarus & Folkman, 1984, for a discussion of these issues in adults).

Theorists have sometimes found it useful to think in terms of overarching dimensions. Two different perspectives, both adapted from the adult literature, have tended to guide thinking in this area. The first distinguishes coping that is problem focused, or aimed at solving the problem that created the stress, from coping that is emotion focused, or aimed at reducing the emotional distress created by the problem (Compas et al., 1988; Lazarus & Folkman, 1984; for a review of assessments based on this distinction, see Knapp, Stark, Kurkjian, & Spirito, 1991). The second main perspective distinguishes kinds of coping that bring the child into more contact with the stressful situation from coping that removes the child from the interaction, using such terms as approach versus avoidance (Roth & Cohen, 1986), blunting versus monitoring (Miller & Green, 1990), or repression versus sensitization (Ebata & Moos, 1991; see Skinner et al., 1997 for a review).

Most coping theories and measures of coping, building on these general distinctions, have looked at a variety of coping "strategies" or ways of coping. Only a few of these theories and measures have been designed explicitly to tap children's responses to problems and setbacks in the academic domain. They are listed in Table 1. The general formats of most of these scales include "stems," which describe the stressful academic situation, and "items," which describe children's coping responses. In addition, some scales are formatted like checklists, in which children are asked to imagine a problem they are having in school and then to check off from the list of coping items those that they used in response to that problem. Others include domain-specific stems (such as, "Think of a time something bad happened in school") and children are asked to rate different coping responses, usually on a scale of 1 to 4 or 1 to 5. To derive coping categories, theorists usually start with a range of possible responses and then used factor analyses to discover sets of items which may tap one "way" or category of coping.*

As can be seen in Table 1, the resulting categories are heterogeneous, ranging from very general syndromes, such as internalizing and externalizing behavior, to relatively specific responses, such as problem solving, distraction, or resignation. In addition, the number and kinds of categories differ from measure to measure. However, some commonalties can be discerned. All category systems refer to a cluster of reactions involving "planful problem solving." Categories in this cluster include problem solving itself, as well as cognitive decision making, self-reliance, direct action, and logical analysis. A second cluster common to many approaches involves seeking contact with others, including seeking problem-focused support and guidance and seeking social support or emotional reassurance.

A third cluster involves avoiding contact with the stressful situation,

*Other operationalizations have been used as more indirect indicators of coping, such as the use of mastery or self-image questionnaires (Klebanov & Brooks-Gunn, 1992), DSM-III-R global assessment of functioning (Plante, Goldfarb, & Wadley, 1993), or combinations of achievement motivation and anxiety (Wade, 1981). Although they may be related to children's adaptation to school, these "inferred" strategies do not directly map onto notions of coping categories, and so are not discussed in this section.

Table 1. Categories of Coping on Assessments That Include Children's Academic Coping

Author(s)	Ways of coping	
Ayers et al. (1989)	Cognitive decision making Problem-focused support Seeking understanding Expressing feelings Distracting actions Cognitive avoidance Lack of coping	Direct problem solving Positive cognitive restructuring Emotion-focused support Physical release of emotion Avoidant actions Problem behavior
Band & Weisz (1988)	Direct problem solving Problem-focused crying Problem-focused aggression Problem-solved avoidance Pure cognition Doing nothing	Social/spiritual support Emotion-focused crying Emotion-focused aggression Cognitive avoidance
Brown, O'Keefe, Sanders, & Baker (1986)	Coping strategies Positive self-talk Attention diversion Relaxation, deep breathing Thought stopping Task orientation Talking with someone else Problem solving	Catastrophizing cognitions Focus on negative/pain Escape/avoidance Fear of unlikely consequence Fear of response of other Self-denigration, self-blame Anxious anticipation Worry/rumination
Causey & Dubow (1992)	Approach Social support, problem solving/self-reliance Avoidance Distancing, internalizing, externalizing	
Coleman (1992)	Confrontative coping Self-controlling Accepting responsibility Planful problem solving Helplessness	Distancing Seeking social support Escape avoidance Positive reappraisal
Compas, Malcarne, & Fondacaro (1988)	Problem-focused coping Emotion-focused coping	
Dickie & Henderson (1989)	Direct action Social support Redefinition Relaxation/fun activity	Distraction Acceptance/resignation Catharsis/venting
Ebata & Moos (1989)	Approach Positive reappraisal, logical analysis, guidance/support, problem solving Avoidance Cognitive avoidance, resigned acceptance, alternative rewards, emotional discharge	
Fad & Ryser (1993)	Copes appropriately when insulted Copes acceptably when bossed	

Table 1. (Continued)

Author(s)	Ways of coping	
	Able to express anger appropriately Can handle being lied to Avoid arguments when provoked Copes in acceptable way if someone takes something belonging to him/her Copes with being blamed unfairly	
Fagen (1984)	Changing self when frustrated Modify goals, try new paths to goal, identify positives in self, accept limitations Changing environment when frustrated Encounter external source of frustration, seek help/assistance	
Fanshawe & Burnett (1991)	Negative avoidance Anger Family communication Positive avoidance	
Horowitz, Boardman, & Redlener (1994)	Social support/ventilating feelings Optimistic appraisal and change Distancing	
Lepore & Kliever (1989) (from Kliever, 1991)	Monitoring Blunting	
Rush & Vitale (1994)	Difficulty accepting adult authority Unable to solve conflicts without negative verbal or physical confrontation Disciplinary action is not serving as a deterrent Unable to make and keep friends in his or her age group Unable to cope with new situations	
Spirito, Stark, Grace, & Stamoulis (1991)	Distraction Wishful thinking Blaming others Emotional regulation Social support	Social withdrawal Self-criticism Problem solving Cognitive restructuring Resignation
Tero & Connell (1984); Mellor-Crummey et al., (1989)	Positive coping Problem-focused strategies Placing positive values on negative events Defensive coping Projection Denial Anxiety amplification	
Timberlake, Barnett, & Plionis (1993)	Use of words to eradicate difference Use of activity to camouflage differences Use of actions to encapsulate difference	
Work, Levinson, & Hightower (1987)	Approach Seeking social support, self-reliance Avoidance Distancing, wishful thinking	

through means such as distracting or avoidant action, cognitive avoidance, distancing, escape, denial, social withdrawal, or wishful thinking. A fourth cluster involves uncontrolled emotional discharge, including responses such as venting, physical release of emotion, externalizing behaviors, aggression, confrontation, and blaming others. A final cluster includes "not coping," that is, doing nothing, becoming helpless, resigned, and accepting failure. This is sometimes accompanied by anxiety and self-blame. Less frequently mentioned are more cognitive strategies, such as cognitive re-structuring, positive reappraisal, optimism, accepting responsibility, redefinition, and active attempts to modify goals, accept limitations, or identify the positive in the self.*

Self-Perception Perspective on Reactions to Stress

The literature on self-perceptions shows more consensus about the kinds of reactions to problems and setbacks promoted by different views of the self. However, the range of reactions described is correspondingly more narrow. For each self-perception studied, only a handful of "coping categories" are considered relevant.

According to the attachment perspective, the self-systems associated with relatedness predict reactions to stressful events (such as separation or novelty) that involve going to trusted others for aid or comfort (Ainsworth, 1979, 1989). Extrapolating this work to the academic domain, the prediction would be that children with a warm and trusting relationship with teachers and parents would be more likely to turn to them in times of distress or need, such as when they are having academic difficulties. The research that directly addresses help seeking in the academic domain (Nelson-LeGall, 1985; Newman, 1990) suggests that other self-perceptions may be involved in addition to self-esteem, such as perceived competence, but it reinforces the notion that one important response to difficulties in school is to seek help from the teacher.

In the literatures on perceived control, two reactions to difficulties or failure have been characterized as "mastery oriented" versus "helplessness" (Dweck, 1991; Seligman, 1975). A helpless response to setbacks includes passivity, confusion, anxiety, self-recrimination, withdrawal, and attempts to escape from the situation. In contrast, a mastery-oriented response includes

*A continuing question in this area has been the validity of children's reports of their own coping responses (e.g., Weisz, 1993). Occasionally, researchers have tried to examine whether children's self-reports of their coping responses in school are related to the reports of their coping provided by peers (Causey & Debow, 1992) or teachers (Connell & Illardi, 1987). Although some positive correlations have been found, especially with more observable behavioral coping response categories (such as externalizing behavior or seeking social support) (Causey & Debow, 1992), the correspondence, especially for more intrapsychic coping (such as denial or anxiety amplification), is modest at best. This low correspondence may suggest caution about the use of children's own self-reports of coping or it may suggest that many of the coping responses of interest to researchers are not directly accessible to outside observers. Following a year-long observational study, in which we attempted to capture different types of coping through videotapes in the classroom, we have concluded that both the expression and display rules of the classroom context make many forms of academic coping unavailable to observers, even though our interviews and questionnaires confirmed that these same coping processes are very salient to the children who are experiencing them.

boosting concentration, narrowing the focus of attention, strategy generation and testing, and augmented effort and persistence. These responses have been produced in academic situations in the laboratory and have also been observed in classrooms, from kindergarten to college.

In the work on autonomy, two nonautonomous reactions to environmental pressures have been suggested: rebellion and conformity (Deci & Ryan, 1985). Conformity is considered nonautonomous because it consists of simply submitting to external pressure. Perhaps surprisingly, rebellion is also considered nonautonomous because it consists of doing the opposite of what is requested, and so is still controlled by external forces. Autonomous responses to external (or internal) constraints can include either going along with them or not, but doing so in a way that is choiceful, intentional, voluntary, willing, flexible, free of tension, and fully committed.

A Motivational Perspective on Patterns of Coping

The goal of the motivational conceptualization of coping was to formulate a definition of coping that was motivationally based and yet "developmentally friendly," that is, appropriate to work with children as well as adults. We define coping as action regulation in the face of psychological stress (Skinner & Wellborn, 1994). Action is the critical outcome of motivational processes (Wellborn, 1991) and consists of behavior, emotion, and orientation (or outlook). Hence, coping refers to the ways children (and people more generally) mobilize, manage, energize, guide, channel, and direct their behavior, emotion, and orientation in stressful circumstances, or how they fail to do so. We consider this definition to be developmentally friendly, because it assumes that how action regulation is accomplished not only differs between individuals but also changes with age and developmental level. Specifically, this definition links the coping concept with the rich literatures on the development of children's regulation of behavior (Kopp, 1982), attention (Mischel & Mischel, 1983), and emotion (Fox, 1994; Chapter 2, this volume).

In generating a list of ways children could cope, we wanted a set of dimensions of coping that could be derived from the coping definition and could in turn be used to generate a set of categories that would be reasonably comprehensive, encompassing categories used by both coping and self-perception theories, and also be flexibly applicable across domains and age groups (see Skinner & Wellborn, 1994).

Dimensions of Coping

To form a matrix of kinds of coping, we crossed the three objects of regulation (behavior, emotion, and orientation) with the three sources of psychological stress (neglect, chaos, and coercion). To these core dimensions, we hypothesized that one additional dimension would be added as children became able to differentiate self from context in their self-system processes. We expected that in their appraisals of the stressful situation, children would come to target, as the source of the distress, either the self or the context or both. The matrix of coping dimensions is presented in Fig. 2. We have filled in the 36 general

COPING RESPONSES

Regulation of Behavior
Regulation of Emotion
Regulation of Orientation

	APPRAISALS				
SELF	CHALLENGE	"I will love."	Cooperate (<i>"I work on it with somebody I like."</i>)	Appreciate (<i>"I'm glad my teacher is there."</i>)	Support (<i>"I think of all the people I can go to."</i>)
	THREAT	"I am alone."	Delegation (<i>"I try to get someone to do it for me."</i>)	Self-pity (<i>"I feel sorry for myself."</i>)	Abandonment (<i>"No one even cares."</i>)
	CHALLENGE	"I will reduce neglect."	Contact-seeking (<i>"I talk with the teacher about it."</i>)	Comfort-seeking (<i>"I talk to someone who will cheer me up."</i>)	Help-seeking (<i>"I think about how to get help next time if I need it."</i>)
	THREAT	"The world is cold."	Concealment (<i>"I try to keep anybody from finding out about it."</i>)	Detachment (<i>"I say 'Who cares what anybody thinks.'"</i>)	Isolation (<i>"I stay away from people."</i>)
CONTEXT	CHALLENGE	"I will learn."	Strategize (<i>"I try to think of different ways to do it."</i>)	Resolve (<i>"I tell myself 'You can do it.'"</i>)	Repair (<i>"It makes me want to try even harder."</i>)
	THREAT	"I am helpless."	Confusion (<i>"I get all confused."</i>)	Self-doubt (<i>"I tell myself 'You can't do this.'"</i>)	Discouragement (<i>"I just don't want to do any more."</i>)
	CHALLENGE	"I will reduce chaos."	Information-seeking (<i>"I try to find out more about it."</i>)	Optimism (<i>"I can usually get it right in the end."</i>)	Prevention (<i>"I try to figure out how to do better next time."</i>)
	THREAT	"The world is unpredictable."	Escape (<i>"I try to get out of it."</i>)	Pessimism (<i>"I'll probably miss it."</i>)	Procrastination (<i>"I put off working on it."</i>)
SELF	CHALLENGE	"I will decide."	Flexibility (<i>"I skip it and come back to it later."</i>)	Accept Responsibility (<i>"I think about the part I may have played."</i>)	Reevaluation (<i>"I decide whether I want to do anything about it."</i>)
	THREAT	"I don't know what I want."	Perseveration (<i>"I go over the problem again and again and again."</i>)	Self-blame (<i>"I blame myself for not working hard enough."</i>)	Obsession (<i>"I can't stop thinking about it."</i>)
	CHALLENGE	"I will reduce coercion."	Negotiation (<i>"I go along with it for now."</i>)	Blamelessness (<i>"I say 'These things happen.'"</i>)	Rededication (<i>"I think about how this may be useful to me later on."</i>)
	THREAT	"The world is hostile."	Aggression (<i>"I'd just like to rip it to shreds."</i>)	Projection (<i>"I say the test was not fair."</i>)	Devaluation (<i>"I say 'Who needs school anyway.'"</i>)

R E L A T E D N E S S

C O M P E T E N C E

A U T O N O M Y

Figure 2. Categories of coping.

categories of coping that we believe correspond to the combinations of dimensions.

Development and Domain of Coping

Fortunately or unfortunately, the exact categories that fill the matrix will probably differ depending on the developmental level of individuals and the contextual constraints of the domain of the stressor. For example, in reports of their coping with everyday stressors in school and friendship (Skinner, Altman, & Sherwood, 1991a), younger children (age 7) showed more evidence of actively regulating their behaviors than their emotions (for parallel developmental differences, see also Band & Weisz, 1988; Compas et al., 1988), and even older children (age 10) did not often spontaneously report regulation of their orientations or outlooks.

Furthermore, children's coping responses were constrained by the power structures, norms, and rules of the classroom (Skinner et al., 1991a). With friends, children were able to show aggression or to simply avoid peers with whom they had difficulties. However, in school, children cannot easily aggress against their teachers; they can only be "oppositional." They cannot easily avoid taking tests or escape from school; therefore, they can only express this option through procrastination or mental escape (see also Band & Weisz, 1988; Causey & Dubow, 1992; Compas et al., 1988; Spirito et al., 1991; Stark, Spirito, Williams, & Guevremont, 1989; Wellborn, Mellor-Crummey, Connell, & Skinner, 1990, for domain differences in coping).

Categories of Academic Coping

We attempted to capture the variety of ways children can cope in school through a self-report questionnaire of the 36 categories of coping (Skinner & Wellborn, 1992). It was based on open-ended interviews with children about their responses to problems and difficulties they had actually experienced in school (Skinner, Altman, & Sherwood, 1991b). We based the items on the general categories, then adapted them to the academic domain and to the developmental level of school-aged children, using children's own words from the open-ended interviews to describe the coping responses whenever possible (see Skinner et al., 1991a). The analysis of these scales is underway, including their psychometric properties as well as their interrelationships to each other and to short- and long-term coping consequences. For example, the competence ways of coping show high internal consistencies and factor structures consistent with the matrix (Edge & Skinner, 1997). However, the complete structure of this matrix remains to be tested.

The different coping categories can, as is typical for coping research, be considered separately. However, given the structure of the matrix (see Fig. 2), they can also be grouped into complexes of behavior, emotion, and orientation, corresponding to the rows of the matrix. For example, a helpless pattern of coping can be found in the row corresponding to competence, self, and threat; this combination of confused behavioral regulation, self-doubt, and discouragement would be expected to co-occur when children do not believe that they are

competent to overcome academic failures and setbacks. As another example, an externalizing coping combination can be found in the row corresponding to autonomy, context, and threat; behavioral aggression, projection (blaming others), and devaluation would be expected to co-occur in children who rebel against the coercion of school activities. Hence, each row can be considered a complex of action (behavior, emotion, and orientation) in response to psychological stress.

Implications of a Motivational Model of Coping Categories

This more comprehensive way of thinking about coping may add to the literatures on coping and on self-perceptions, at both the specific and the general levels. Specifically, this dimensionalization suggests several differentiations that may be useful to work on help seeking, perceived control, and autonomy. For help seeking, it suggests that the opposite of help seeking may not simply be passivity, it may be "concealment"; that is, children may actively try to prevent adults from discovering that they need assistance. The different categories in the matrix are also consistent with suggestions in the literature that it may be important to distinguish different kinds of contact seeking with adults (Nelson-LeGall, 1985). We have differentiated contact seeking in general from going to the teacher for comfort or for help. We have also distinguished help seeking (going to the teacher for instrumental aid needed to complete the task oneself) from attempts to get someone else to do the work (termed "delegation").

To the research on perceived control, this dimensionalization adds the notion that helplessness due to perceived incompetence may manifest itself differently than helplessness due to perceived noncontingency. A combination of confusion—self-doubt—discouragement is distinguished from an escape pattern, which includes active attempts to leave the situation, pessimism, and avoidance or procrastination. In a similar vein, this dimensionalization recognizes a characterization of two nonautonomous responses to threats to autonomy: one often referred to as internalizing behavior (perseveration, self-blame, and obsession) and the other as externalizing behavior (aggression, projection, and devaluation).

At the specific level, this dimensionalization also may add something to coping theories: a wider range of positive coping. Most lists of coping categories have only one or two positive modes (usually centered around problem solving and support seeking), whereas they include a much larger variety of negative modes (see Table 1 for examples in the academic domain). The current dimensionalization maintains a one-to-one correspondence between positive and negative modes, and specifically suggests that information seeking, flexible experimentation, cooperation, contact seeking, and negotiation be added to positive ways of coping. The dimensionalization also dispels the impression that behavioral or problem-focused coping is homogeneously positive, whereas emotion-focused coping is usually maladaptive. An equal number of positive and negative behavior and emotion regulation responses are included. Finally, this dimensionalization also explicitly adds an orientation or outlook component to coping. This aspect of coping may become increasingly important as children approach adolescence (Fanshawe & Burnett, 1991).

At the most general level, the motivational dimensionalization implies that many different perspectives can be considered as different facets of coping. It suggests that the different categories of coping may be best considered in relation to each other. For example, it becomes clear that high perceived control is not sufficient to produce optimal coping. Children also need to feel autonomous and related if they are to remain flexible in their responding and to go to adults when they need additional help. And it suggests that whether help seeking has positive or negative consequences may depend on its effects on other forms of coping, for example, whether help seeking interferes with strategizing (e.g., as "delegation") or is used to supplement more independent forms of coping.

It also suggests that a deeper set of dimensions than approach versus avoidance may be needed to detect when different ways of coping will be adaptive or maladaptive. Following the regulation literature (for a review, see Chapter 2, this volume), we suggest that coping will be adaptive to the extent that it is organized (vs. disorganized), flexible (vs. rigid), and benign (vs. punitive). Hence, two ways of "approach coping," such as strategizing versus perseverance, may be shown to be differentially adaptive, because the former is flexible whereas the latter rigid. Or two forms of "avoidance coping," such as escape versus reevaluation, may be differentially adaptive, because the former is disorganized whereas the latter is organized. Finally, two modes of emotion regulation, such as accepting responsibility versus self-blame, may differ in adaptiveness, because the former is benign whereas the latter is punitive.

OUTCOMES IN ACADEMIC COPING

What are the outcomes of children's coping in the academic domain? What are the costs and benefits that can accrue to children based on the way they respond to problems in school? The few studies that pertain to these questions are summarized in Table 2. They are of two types. One set of studies describes the correlates of different ways of coping; the second set examines the differences between preselected groups on their profiles of coping.

Table 2. Outcomes and Correlates of Coping in the Academic Domain

Author	Subjects	Coping and outcome
Causey & Dubow (1992)	4th to 6th grades	<p>Problem solving was positively correlated with perceived control, self-esteem, academic performance.</p> <p>Social support was positively correlated with perceived control.</p> <p>Internalizing was positively correlated with perceived control and anxiety.</p> <p>Externalizing was negatively correlated with perceived control, self-esteem, and academic performance.</p>

(continued)

Table 2. (Continued)

Author	Subjects	Coping and outcome
Coleman (1992)	N = 42M 21 gifted IQ LD 21 average IQ LD 6th-9th grade	Gift/LD reported more playful problem solving coping than Avg/LD Avg/LD reported more distancing, escape/avoid, and helplessness coping than gift/LD. No differences between gift/LD and avg/LD in confrontive, self-control, social support, accepting responsibility, and positive reappraisal coping. No differences between gift/LD and avg/LD in total number of coping categories employed.
Connell & Illardi (1987)	N = 121	Denial coping and anxiety amplification coping were negatively correlated with teacher reports of cognitive competence and self-esteem. Positive, denial, and anxiety amplification coping are negatively correlated with academic achievement.
Fad & Ryser (1993)	N = 96	Academically successful students were rated by teachers as having better coping skills than were academically unsuccessful students.
Illardi & Bridges (1988)	N = 55 M; 57 F 4th-6th grade	Subjects did not differ on anxiety amplification or projection. Males who underrate their competence used more denial coping compared to teacher report. Males who overrate their competence used more positive coping compared to teacher report.
Klebanov & Brooks-Gunn (1992)	N = 126 F	"Mastery and coping" were significantly related to English and math grades in middle school and to math grades 4 years later.
Mantzicopoulos (1990)	N = 54 M; 66 F 4th-6th grade	Academic coping style did not differentiate subjects on behavioral conduct. Subjects with positive coping styles had significantly higher social acceptance and global self-worth scores compared to subjects with defensive or self-blame coping styles. Subjects with positive coping styles had higher scores on scholastic competence than subjects with self-blame coping styles. Subjects with a positive coping style had higher scores on academic achievement tests than subjects with defensive and self-blame coping styles.
Plante & Goldfarb (1993)	N = 61 M; 39 F	Coping was positively correlated with verbal/comprehension factor, perceptual/organizational factor, and the freedom from distractibility factor on the WISC-R intelligence test. Coping was significantly correlated with reading achievement, math achievement, and written language scores. Main effects for coping were reported for scores on

Table 2. (Continued)

Author	Subjects	Coping and outcome
		the performance factor and the freedom from distractibility factor. An interaction effect for stress and coping was also reported for scores on the achievement test with poor copers who are stressed scoring lower on the Reading measure.
Wade (1981)	N = 475 M; 481 F 4th grade	Approach coping subjects performed better on English, math, and reading achievement tests compared to avoidance coping subjects.

For some coping categories, these studies present a consistent picture. First, coping responses that fall into the cluster of "planful problem solving" were generally positive; they were connected with higher perceived control, self-esteem, self-worth, school grades, and achievement test performance. Second, helpless responses (such as confusion and avoidance) and externalizing behaviors (such as venting or aggression) both seemed maladaptive; they were negatively correlated with this same set of variables.

The picture was less clear for social support-seeking and internalizing behaviors (such as anxiety and self-blame). In some studies, support seeking was unrelated to academic outcomes; in others it was positively related, for example, to perceived control. This may reflect a general problem in the literature on academic help seeking (Nelson-LeGall, 1985): Children with low academic competence tend to need help more frequently (producing a negative relation between frequency of help-seeking behavior and academic competence), but children with high academic self-confidence are more likely to actually seek help on the infrequent occasions when they need it (producing a positive relation between help seeking and performance).

The work on internalizing responses to problems in school is likewise unclear. Although it has been found that anxious and self-blaming responses to failure can hinder performance, nevertheless, internalizing responses are sometimes positively linked with academic competence and performance, perhaps because they may reflect the desire to do well in school, generally considered a positive force in performance. When Wade (1981) separated high anxious subjects into those with high versus low achievement motivation, she indeed discovered that subjects who were highly anxious but also highly motivated showed higher levels of attainment (in English, math, and reading) than correspondingly high anxious subjects whose achievement motivation was low. Wade (1981) speculates that these groups may differ on whether they use their anxiety to fuel increased work on difficult subject material (an approach strategy) or to guide escape responses (an avoidance strategy).

Critique of Research

As suggested repeatedly by researchers in this area, studies of the correlates of coping generally suffer from several shortcomings. First and foremost is

a general issue, critical to the evaluation of research on the short- and long-term outcomes of different ways of coping: the distinction between ways of coping and consequences of coping. In some studies, externalizing behavior is used as a coping category (sometimes labeled "venting" or "emotional discharge") and in some studies it is an outcome of interest. The same holds for internalizing behaviors, in which self-blame and anxiety have been used as both coping responses and outcomes. And, in our own work, when "strategizing" (attempting to think of alternative solutions for a problem) is the coping response, it seems not too surprising that continued engagement is the short-term outcome.

Empirical solutions to this problem seem straightforward. Researchers should minimize overlap between measures of coping categories and consequences within a study. Or, as we have in our studies, researchers can use higher levels of abstraction (not tied to a single coping response and consequence) and consider the use of alternative reporters (e.g., children for coping and teachers for engagement). Nevertheless, the conceptual solution is not so clear. What criteria should be used to determine whether a set of emotions or behaviors is a coping response or a coping outcome? Fuller discussion of this issue should be useful.

A second important issue is that almost all studies examining "outcomes" of coping are cross-sectional and correlational in nature and so cannot distinguish the nature of the relationships among the variables. These different school "outcomes" may, of course, in fact be antecedents to different ways of coping, or both coping and the "outcomes" may be the product of some other factor. Studies are needed that have a prospective and longitudinal focus (e.g., Klebanov & Brooks-Gunn, 1992) to allow for the disentanglement of antecedents and consequences and for the detection of possible reciprocal relations between coping and school performance.

A Motivational Perspective on the Outcomes of Academic Coping

Consistent with the general coping literatures, we distinguish short-term from long-term outcomes of academic coping. According to the motivational model, the proximal consequences of children's coping in the academic domain are their engagement versus disaffection with learning activities. And the long-term consequences of this engagement versus disaffection for children are their successful completion of school or early dropout, and in the most general terms, their cognitive, social, and personality development (see Fig. 1).

Engagement versus Disaffection

According to the motivational model, children whose coping is organized, flexible, and benign, who when they run into academic difficulties are likely to strategize, seek information, and contact adults for comfort and help, are more likely to maintain active vigorous interactions with academic material. They are likely to be more fully engaged in learning activities. They show more effort, persistence, concentration, interest, and enthusiasm; they ask more questions, try out new activities, prefer difficult tasks, and actively seek novelty and challenge.

In contrast, children whose coping is disorganized, rigid, or punitive, who in the face of obstacles become confused and try to escape, who persevere, rely on others, become oppositional, or try to conceal their difficulties, are more likely to become disaffected from school. They are more likely to be passive, withdrawn, anxious, depressed, fearful of novelty; they refrain from asking questions or volunteering in class, they prefer easy tasks, shy away from novelty, and avoid challenge.

Children's engagement versus disaffection in school, as assessed by students themselves, their teachers, or school records (such as absenteeism or effort grades), are central predictors of children's learning and school success, as indexed by school grades and achievement test results (e.g., Skinner, Wellborn, & Connell, 1990). In addition, disaffection is one of the earliest predictors of children's declining performance and eventual early leaving from school (Connell et al., 1993).

Development

Active engagement in learning activities that is full, sustained, and goal directed not only leads to better school grades (e.g., Skinner et al., 1990; Skinner, Zimmer-Gembeck, & Connell, 1995), but should also be advantageous to development. Coping with difficulties and setbacks that is organized, flexible, and benign should lead to the development of a repertoire of actual competencies and should augment beliefs about those competencies. It should contribute positively to cognitive development, in the sense both of learning and of metacognition (Hagen, Barclay, & Newman, 1982). Children should not just acquire specific information about the subjects being studied, but should also become better able to monitor their own learning, recognize when they do not understand something, and decide what the best course of action may be: to study harder, review the material, or go for help.

Mechanisms Through Which Coping Has Its Effects

A final issue critical to the study of the consequences of coping is the consideration of whether coping itself is part of the causal chain in adaptive versus maladaptive development, or whether it is simply a symptom of such development. It is conceivable that a child's suboptimal pattern of coping is primarily the result of dysfunctional child relationships and vulnerabilities in self-system processes, but does not itself contribute directly to the development of maladaptive child outcomes.

To answer this question, research may broaden its focus in order to empirically trace the pathways through which children's patterns of coping contribute to their engagement and subsequent development. We suggest three possible pathways. The first is direct, through the effects of a particular pattern of coping on engagement. For example, as previously mentioned, a helpless pattern of coping preempts a child's active struggles with learning activities. The second pathway, also mentioned briefly before, is the indirect effect of a pattern of coping on encounters with future stressors. Children who are coping in ways that do not allow them to currently grasp concepts and strategies (for example,

through concealment) are more likely to encounter difficulties and failures in subsequent learning activities that build upon previous material. Therefore, patterns of coping should predict the occurrence of future stress. Third, patterns of coping should have direct effects on the way the social context, that is, parents and teachers, react to the child. Unfortunately, contexts often react to children's coping in ways that magnify or compound the problem (Skinner & Belmont, 1993). For example, children who become oppositional are more likely to be met with arbitrary force from teachers. Children who conceal their difficulties are more likely to be overlooked by parents. Even "benign" reactions by teachers and parents may serve to remove children from interactions with learning activities. For example, in response to a child's distress, parents may help too much and so complete work that is "delegated" by the child. Or, in response to a child's confusion, teachers may reduce task difficulty but also inadvertently reduce opportunities for learning as well. Hence, the third path by which coping influences development is by shaping the reactions of parents and teachers in ways that affect the child's subsequent motivation and learning.

OPTIMIZATION OF ACADEMIC COPING

Given the importance of academic outcomes, and given the reasonable assumption that how children react to failures and setbacks in school can have an impact on their successful achievement of such outcomes, it may seem surprising to discover that very few studies exist that directly target children's profiles of coping in the classroom. To be sure, there is an enormous literature on interventions designed to promote the same long-term outcomes, namely, school performance, achievement, and completion (Ingraham, 1985). In addition, there are many programs designed to ease school transitions (e.g., Jason, Kurrasaki, Neuson, & Garcia, 1993), to help children manage both anxiety (e.g., Krohne & Laux, 1982) and anger (e.g., Nelson, Hart, & Finch, 1993), and to allow children with learning disabilities to perform up to their full potential (e.g., Borkowski, Carr, Rellinger, & Pressley, 1990; Kurtz & Borkowski, 1984). Although it can be suggested that some of the effects of these interventions may be mediated by changes in children's patterns of coping responses, few, if any, of these studies directly examine the impact of these interventions on coping *per se*.

Intervention Studies

Even a literature search under the term "coping" reveals, for the most part, only intervention studies in which the term is used to refer generally to the process of dealing with problems, but is neither explicitly defined nor assessed (e.g., Lewis, 1984). The lines of intervention most closely related to coping in school often do not use the term explicitly, but instead target a single way of coping. For example, Kamann and Wong (1993) trained learning disabled children to use adaptive coping self-statements, such as assessing the situation and making a plan, recognizing and controlling negative thoughts, and self-reinforcement. Schunk and Hanson (1985) promoted student's self-efficacy and

achievement through the use of peers who modeled "coping." These peers demonstrated initial fears and deficiencies, were hesitant, made errors, and verbalized negative self-statements, but gradually performed better, gained self-confidence, and illustrated how "determined effort and positive self-thoughts can overcome difficulties" (Schunk & Hanson, 1985, p. 314).

An intervention covering a range of strategies for managing frustration was designed by Fagen (1984). He defined coping as "reactions which promote *positive* change in self or environment, i.e., change which maintains or increases self-esteem, prospects for more successful striving, or increased understanding between self and others" (p. 30). The intervention targeted responses aimed at changing the self as well as those aimed at changing the environment (see Table 2 for actual categories).

In this area, most intervention studies have had as their goal to facilitate that cluster of coping strategies that includes problem solving, persistence, direct action, self-instruction, self-regulation, and positive self-statements. These coping strategies have been promoted through such means as attribution retraining, self-efficacy modeling, teaching of problem-solving study skills, cognitive behavior modification techniques, instruction in anxiety reduction procedures, or metacognitive skills training. Although some interventions target skills or behaviors and some target self-perceptions or beliefs (and some target both), in general, intervention techniques have in common that they are individually oriented; that is, the child's behavior has been the immediate target of intervention.

Targets of Intervention

Without directly criticizing these intervention efforts, which as mentioned previously do not typically target coping per se, it can nevertheless be argued that two essential issues in this area remain open questions. The first is the optimal profile of reactions to problems in school (as the target goals of intervention efforts). The second issue is the antecedent conditions, both personal and interpersonal, that impede or promote such patterns of coping. Although, ideally efforts to facilitate children's academic coping would be based on empirical answers to these questions, unfortunately this research base is incomplete. We would argue that there is reason to both question the notion that "approach coping" is always the optimal reaction in academic contexts and to rethink the assumption that the best intervention technique to promote coping is direct instruction, that is, teaching or training individual children to show desired patterns of coping.

Optimal Coping in Academic Contexts

Although there is general agreement that it is difficult to establish a priori the kinds of coping that will be adaptive in any given situation (Lazarus & Folkman, 1984; Roth & Cohen, 1986), nevertheless, in general types of coping classified as "approach" have been consistently better predictors of desirable outcomes in school than avoidance strategies (Causey & Dubow, 1992; see Table 2). However, we interpret the general empirical finding that "approach" coping

is usually better than "avoidance" coping as somewhat misleading, because in most studies approach coping included responses that were not only active and toward the stressful situation but were also emotionally positive (such as problem solving or negotiation); more negative approach strategies (such as confrontation or aggression) were typically excluded. And most avoidance coping responses studied were not only active and away from the stressor but usually emotionally negative as well (such as anxious or fearful); emotionally positive avoidance responses, such as decisions that the outcome was not worth the effort, have typically not been included (but see Brandtstaedter & Renner, 1990; Brandtstaedter, Wentura, & Greve, 1993; Heckhausen & Schulz, 1995; Rothbaum, Weisz, & Snyder, 1982, for a discussion of the effectiveness of such strategies).

Hence, optimal coping in academic contexts may not simply be approach coping. In addition to problem solving itself, children also need to know how to move away from learning interactions in order to gather more information, to cooperate, to skip to problems that they know how to solve, to conform, or to get help. Both approach and avoidance coping may be important to successful learning, and the hallmarks of optimal coping responses may turn out to be not their orientation, but their organization, flexibility, and benevolence.

Techniques of Intervention

Since the desired outcomes of coping interventions are changes in children's behavioral, emotional, and cognitive reactions to potentially stressful encounters, it has often been assumed that the most effective way to achieve change is by directly teaching children to use these patterns of behavior or self-statements (e.g., Foersterling, 1985). Underlying these practices is the assumption that the primary reason children show maladaptive reactions to stress is because they have a skill deficit or lack knowledge.

However, in studies of the antecedents of coping, two additional factors continue to surface, often labeled as personal and social resources (Garmezy & Rutter, 1983; Moos & Billings, 1982; Pearlin & Schooler, 1978). This perspective assumes that individuals' belief systems (such as their perceived control) as well as their social relationships have an impact on their coping responses in stressful situations. From this perspective, the target(s) of intervention would be expanded to include both children's belief systems and their social partners. This general viewpoint is consistent with our motivational perspective on optimization of coping.

A Motivational Perspective on Intervention

The motivational view of development makes strong predictions about the targets of intervention in attempts to optimize children's coping. The counterforces against environmental stressors and vulnerable self-system processes are interventions designed to reduce actual neglect, chaos, and coercion in schools and at home, and also designed to bolster children's experiences of themselves as related, competent, and autonomous. This position is summarized in Fig. 3. According to the motivational model, children's belief systems are constructed

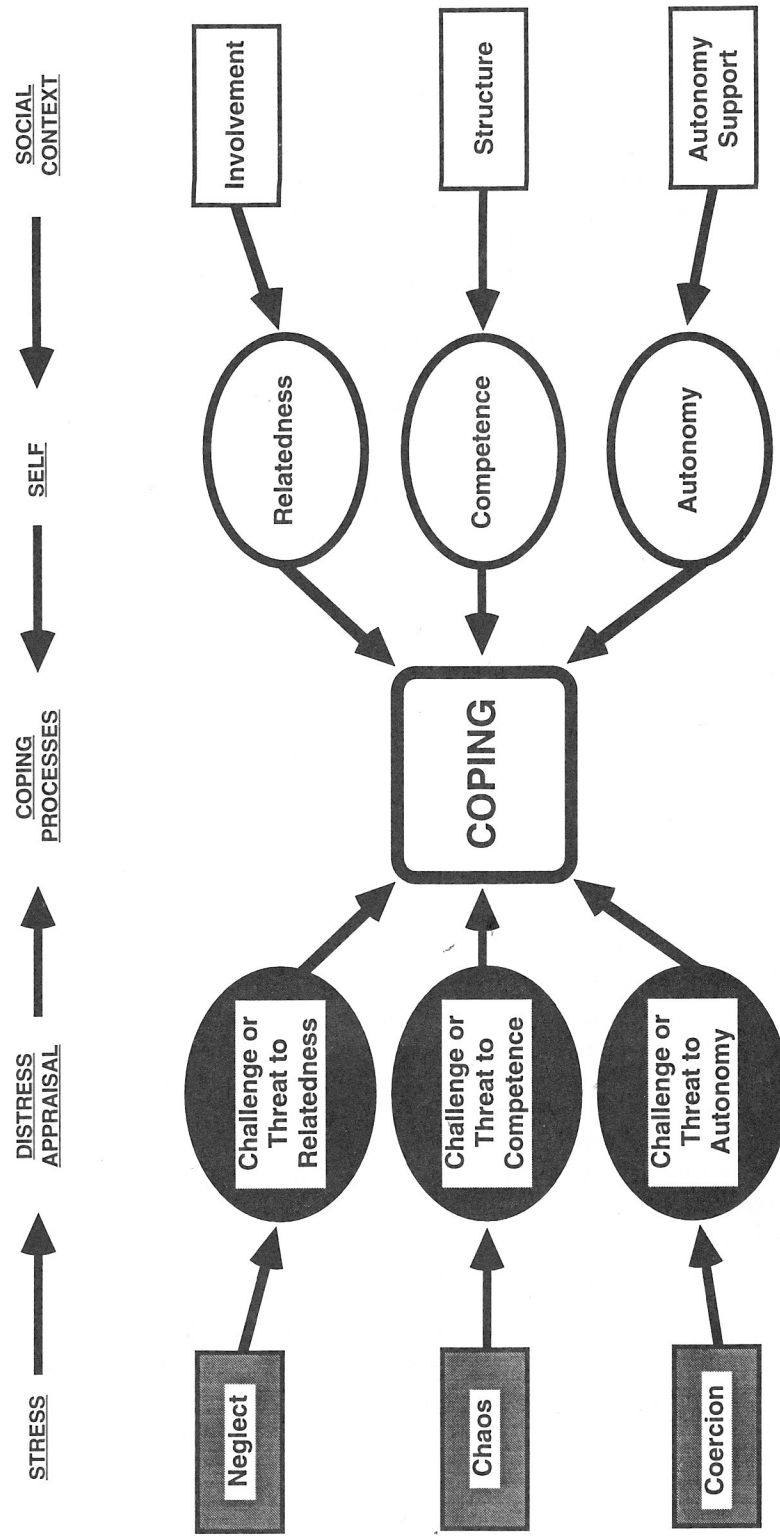


Figure 3. Context and self as coping resources. (Adapted from Skinner & Wellborn, 1994.)

through interactions with the social and physical context, and so it is these interactions or experiences (of relatedness, competence, and autonomy) that are considered to be the prime target of interventions. When these experiences are changed, then resulting changes in children's self-system processes and corresponding coping responses should be obtained. One route by which these interactions can be optimized is by changing the social context of schools (Connell & Ryan, 1984; Connell & Wellborn, 1991; Deci, Connell, & Ryan, 1985; Skinner & Wellborn, 1994).

An additional source of social context for children's schooling is their parents. Although parents rarely participate directly in the school setting itself, their concern for a child's performance in school and their participation in children's schoolwork at home can have a powerful influence on children's coping with problems and setbacks in school (Grolnick & Slowiaczek, 1994; Grolnick, Ryan, & Deci, 1991; Wellborn, 1996; Yoder, 1996). Other participants in the immediate school setting, such as other teachers, principals, bus drivers, and cafeteria workers, may also influence a child's experiences in school (Wellborn, 1991).

Supporting Relatedness, Competence, and Autonomy

What kinds of social contexts can support children's basic needs? First, children's needs for relatedness are met by social contexts that provide involvement. Involvement, a key dimension in theories of parenting and teaching, refers to the communication of warmth, affection, and caring; it includes dedication of time and resources to a child as well as emotional and physical accessibility and availability. When parents and teachers establish warm and trusting relations with their offspring and students, then children will be more likely to feel connected to them and the classroom in general and more able to turn to adults in times of academic difficulty. Interventions to increase communication, belongingness, and genuine affection, for example, by decreasing class size and increasing student-teacher contact, would be expected to result in improvements in students' internal working models of teachers (especially for insecure or alienated students), which would in turn be expected to result in more help-seeking coping on the part of these children.

Second, children have the opportunity to fulfill their need for competence in social contexts that provide structure. Structure, also an important dimension in theories of child rearing and teaching, refers to contingency and consistency; more broadly, it encompasses information provided by social partners about the strategies or routes by which desired outcomes can be reached and undesired outcomes avoided, as well as support for developing the competencies to negotiate these pathways. Structure can be communicated indirectly through rules and norms or taught more directly as strategies for solving academic or interpersonal problems. Provision of structure is central in creating interactions in which students feel able to enact effective strategies. This in turn should prevent them from interpreting failures and setbacks as signs of incompetence, which would allow them to maintain focus, concentration, and active problem solving even in the face of obstacles (Bandura & Schunk, 1981). Curricula and grading systems that allow children to work at their own pace

and to continue working on assignments until they have mastered them would be examples of increasing structure. Interventions aimed at teaching teachers and parents how to help children learn and utilize metacognitive strategies (e.g., Borkowski et al., 1990; Kurtz & Borkowski, 1984) and, in general, that focus on the processes and strategies of learning help demystify the steps to mastering new material.

Third, children's needs for self-determination are met in social contexts that provide autonomy support. Autonomy support refers to social partners who allow children the freedom to pursue their own interests and goals, who provide choices and alternatives, who respect the child's rights and wishes, and who acknowledge the child's feelings, even when they are negative (Deci, Schwartz, Sheinman, & Ryan, 1981). Interventions that are designed to increase autonomy support should allow children to experience their interactions with school personnel and materials as more self-determined, which should in turn allow them to react to necessary constraints more cooperatively and to cope in a manner that is more flexible and constructive. Interventions designed to increase children's experience of autonomy include rule systems that are democratically established, in which rules are minimized and their rationales made explicit, curricula in which children are given choices and allowed to follow their interests, and where reward structures are not competitive.

Developmental Windows in Interventions in Coping

It is not the goal of interventions into the academic context to eliminate the "stress" of learning or to create contexts in which children no longer have to "cope." Challenges and obstacles are not only inevitable, they are the building blocks for healthy development. The goal is to prevent children from being overwhelmed by stress, to create optimal challenges, and to help children move through them. "Good stress" and "good coping" are the goals of optimal learning environments (Compas, 1993; Skinner, 1993; Weisz, 1993).

In addition, interventions to optimize involvement, structure, and autonomy support will need to be adapted to children's developmental level (Eccles, Midgley, & Adler, 1984; Haggerty, Sherrod, Garmezy, & Rutter, 1994; Wigfield, Eccles, MacIver, Reuman, & Midgley, 1991; Zeitlin & Williamson, 1994). The kind of parent and teacher behaviors that communicate affection to first graders are obviously not the same behaviors that communicate affection to junior high school students. The metacognitive skills taught to third graders will differ radically from those useful to fifth graders. The choices given to adolescents will be broader than those provided to elementary school children. Also, as children reach adolescence, it may be necessary to change not only their interactions in school, but also to intervene directly into their belief systems. As children's cognitive capacities develop, so too does the scope and inferential power of their self-system processes (e.g., Skinner, 1995). This very development gives children's self-system processes increasing latitude in constructing confirming interpretations of their interactions with the social and physical context. Hence, children's views of school may need to be directly altered, if they are to interpret new interactions as experiences of relatedness, competence, and autonomy.

Development will also inform the timing of interventions. Transition times, such as from kindergarten to first grade, from elementary to middle or junior high school, and from middle school to high school, are obvious points at which interventions designed to optimize coping may influence the success of those transitions (Ingraham, 1985). In addition, several points in cognitive development, specifically third grade, when children begin to form comparative judgments about their academic abilities, and sixth grade, when those perceptions become crystallized, may be important milestones for achieving adaptive transformations in coping. It should not be assumed that single early interventions will be sufficient to "inoculate" children against all future difficulties in school. Both new patterns of coping and new environmental demands emerge. As children develop cognitively, new strategies will be available to them for the first time, such as reframing or focusing on the positive. And the demands of school change as well, as children are asked to deal with increased competition, less individual attention, multiple teacher formats, and more standardized testing.

CONCLUSIONS

Unlike many domains in children's coping, there is no one literature or set of studies examining children's coping in the academic domain. In fact, in many studies of children's reactions to problems in school, no mention of the term "coping" can be found. This makes it impossible to consider any review of the literature in this area as comprehensive or to argue convincingly that any one perspective encompasses all the relevant concepts and empirical referents. However, an attempt was made to use the strengths of a coping framework to build on the few studies that explicitly examine children's academic coping by adding the work on perceived control, helplessness, self-determination, attachment, and help seeking in the classroom. Research was reviewed from the literatures on academic coping and self-perceptions that describe children's experiences of stressors in school, their differential reactions to academic challenges and threats, and the consequences of these ways of coping for school success and satisfaction.

A motivational perspective was used to organize and integrate multiple lines of research that bear on children's coping in school. Using a definition of coping as "action regulation under psychological stress," we derived multiple dimensions of coping (e.g., self vs. context and challenge vs. threat) and from them assembled 36 categories of children's coping in school. It was argued that these patterns included both "syndromes" from the self-perception literature, such as helplessness and rebellion, as well as more specific categories from the coping literature, such as contact seeking and avoidance. This category system included an equal number of positive and negative coping responses, in regulations that were aimed at behavior, emotions, and orientation or outlook.

We argued that these patterns of action have important causal effects on children's learning and development, through their direct effects on engagement and on the reactions of social partners, such as parents and teachers, as well as through their indirect effects on subsequent encounters with more

academic stressors. Because these patterns of coping are thought to be a function of children's self-system processes connected to relatedness, competence, and autonomy, intervention implications could be drawn for bolstering these beliefs through interactions with the social and physical environments. Interventions designed to optimize interactions were described that changed the social context by increasing involvement, structure, and autonomy support and by improving children's actions and their interpretations.

Future research on children's coping with stress and challenges in school can take several directions. First, it can consider a broader range of stressful experiences in school. Most research examines how children cope with failure and difficulties in learning new material, situations that the motivational model suggests should impinge on the need for competence. Future work may also wish to analyze how children cope with the pressures and coercion of school rules and practices (which may interfere with the need for autonomy), or how children deal with teachers who are uncaring or even openly hostile (which may impact the need for relatedness).

Second, future studies may wish to consider a broader range of coping responses and especially to focus on the identification of additional positive modes of coping. Especially interesting will be the study of the interaction of different ways of coping as they interfere or supplement each other and as they change over time during the processes of coping. Third, a challenging but important area of research will be the detection of the consequences of different patterns of coping. In these studies, it will be essential to distinguish coping responses from outcomes and to look at their (possible reciprocal) relations over time. Finally, intervention research should be able to reveal much about the individual and social factors that impede or promote positive coping in schools. This research may wish to target teachers, the general school context, and parents, as well as individual children themselves. These studies, if they include multiple ways of coping and a differentiated set of possible consequences, may tell us the most about the complex relations involved in children's coping. It is hoped that this chapter may facilitate discussion among the allied areas in psychology and education that focus on the study of the challenges and stresses children face in school and on intervention attempts to promote children's active efforts to cope with them.

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