

H E т. V 1 F W F. R 0 М R F. S E Α R C н THE ROOTS OF SCHOOL READINESS IN SOCIAL AND EMOTIONAL DEVELOPMENT

ROSS A. THOMPSON, PH.D.

WHAT ARE THE QUALITIES THAT YOUNG CHILDREN NEED TO BE READY FOR SCHOOL?

- The first are INTELLECTUAL skills. When preschoolers have learned how printed letters relate to sounds and words, can use simple number concepts, and can express themselves clearly with language, it provides a foundation for learning in the primary grades.
- A second feature of school readiness are MOTIVATIONAL qualities. Young children should arrive at school excited about learning, curious and confident in their ability to succeed, and convinced that school is important to them and their future. These qualities provide children with the receptivity to learning opportunities that is essential to school success.

Ross A. Thompson, Ph.D.

Carl A. Happold, Distinguished Professor of Psychology

Department of Psychology University of Nebraska 238 Burnett Hall Lincoln, NE 68588-0308 phone: 402-472-3187 rthompson1@unl.edu • A third quality of school readiness is SOCIOEMOTIONAL. Learning is not an isolated activity but occurs among peers with the guidance of an adult teacher. School success requires that children are capable of understanding other peoples' feelings and viewpoints, cooperating with adults and peers, exercising emotional and behavioral self-control, and resolving disagreements constructively. These qualities ensure that children can participate in learning alongside others. When these three qualities of school readiness - intellectual, motivational and socioemotional - are considered together, they portray a child who is prepared to learn (National Educational Goals Panel, 1997). Yet many children arrive at school intellectually unprepared for new learning, and many more arrive socially and emotionally unprepared for the classroom. This is a special concern for children from stressful, socioeconomically disadvantaged circumstances who are at risk of emotional and social difficulty, and who are thus in greater danger of problems when they reach kindergarten (Brooks-Gunn, Duncan, & Aber, 1997; Dodge, Petit, & Bates, 1994).

> WHEN THESE THREE QUALITIES of school readiness — intellectual, motivational and socioemotional — are considered together, they portray a child who is prepared to learn

School readiness derives from many influences in the home, child care, community and elsewhere. Although the home is the primary setting where school readiness develops in young children, child care experiences are also important (especially for children who spend considerable time in these settings). The community also is influential for the resources and support it provides children and their families. The intellectual preparation of young children for school is central, of course, but is also the easiest for kindergarten teachers to remedy because they are accustomed to working with children with varying cognitive capabilities and skills. By contrast, kindergarten teachers report that they are most concerned with children who lack the motivational and socioemotional qualities of school readiness, because it is more difficult to assist children who are not interested in learning, lack confidence in their success, or incapable of cooperation and self-control (Lewit & Baker, 1995; Rimm-Kaufman, Pianta, & Cox, 2000). In the words of one teacher, the problem is that "the kids are sad, mad and bad, it's not that they can't add."

Kindergarten teachers understand that it is difficult to educate young minds when children have not developed the social, emotional and self-regulatory capacities that are required in the classroom. It is not simply that it is easier to teach young children who are cooperative, sociable and listen carefully. Rather, children's successful transition to kindergarten and their subsequent academic success hinge critically on the relationships that children develop with their teachers and peers, their capacities to cooperate and resolve conflict successfully in the classroom, and their successful participation in group learning activities (Ladd, Birch, & Buhs, 1999; Ladd, Buhs, & Troop, in press; Ladd & Price, 1987). In one study, conflict in the relationships between kindergarten teachers and children predicted children's academic performance and behavior problems through eighth grade (Hamre & Pianta, in press). Because young children's social and scholastic lives are linked in kindergarten, early social and emotional development is an important determinant of school readiness. This is consistent with the science of early childhood development, which shows clearly that intellectual, socioemotional and physical development are intertwined and complementary features of the young child's growth (National Research Council, 2001).

THE KIDS ARE sad, mad and bad, it's not that they can't add.

This paper summarizes the foundations of early social and emotional development with respect to school readiness. The discussion begins with children's relationships with their parents, childcare providers, and other adults who matter to them. Developmental scientists have found that child-adult relationships provide a psychological foundation for many of the socioemotional qualities that underlie school readiness, and the discussion will explain how. Next, some of the central accomplishments of early social and emotional development are profiled: understanding other people, selfunderstanding, emotional growth, selfcontrol, conscience development and the emergence of peer relationships.

The preschool years are a pivotal period for each of these accomplishments, and the relevance of each achievement to the qualities that constitute school readiness is also described. Finally, studies of the origins of school readiness are surveyed. These underscore the importance of the relationships that children share with parents, caregivers and with the teachers and peers who are part of their earliest school experiences. They also show how school readiness is not just a quality of the individual child, but of the child in interaction with particular people in a specific academic context. These conclusions are summarized with respect to how best to ensure school readiness in young children.

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RELATIONSHIPS

Relationships have been described as the "active ingredients" of healthy psychological development in the early years (National Research Council and Institute of Medicine, 2000). Why is this so? Simply put, relationships are the prism through which young children learn about the world, including the world of people and of the self. A baby's excited exploration of new places is predicated on the companionship of a trusted adult who provides a "secure base" for the child's discoveries. A toddler who looks up expectantly toward a parent when encountering an unexpected event depends on the adult's emotions for guidance about how to respond. A preschooler shows a drawing to a caregiver, and the adult's response elicits the child's feelings of pride (or shame) in the achievement, and the motivation to achieve more. A 5- or 6-year-old is excited about going to kindergarten because of the parent's pleasure and pride in their doing so. Young children depend on their relationships with adults to tutor them about themselves and the world they inhabit.

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Relationships make people matter. The people who matter to a young child are those who know the child well, and whom the child knows well and can trust. This is the result of relationships. But relationships make people matter in another way also. Relationships cause young children to care about people by establishing the human connection between self and others. As a consequence of relationships, children seek to understand the feelings of others, people's thoughts and expectations, and the importance of cooperation and sharing. The human connection afforded by close relationships causes young children to develop psychological understanding, absorb the values of the culture and strive to become competent in ways that others are. Through relationships, young children also learn about who they are, especially as it is revealed in the ways they are seen by people who matter to them.

This is why the quality of early relationships are a far more significant influence on early learning than are educational toys, preschool curricula or Mozart CDs. Relationships guide how young children learn about the world, people and themselves.

Relationships are important, but as with adults, they vary in their quality. Developmental scientists commonly view the quality of early relationships in terms of the security or insecurity they afford the child (Cassidy & Shaver, 1999; Colin, 1996; Thompson, 1998, 1999). Although virtually all infants and young children develop deep emotional attachments to those who care for them within and outside the home, they differ in the confidence or security they experience in these relationships. Secure attachments arise from the warmth and sensitivity of an adult's care, and insecure attachments derive from care that is less reliable, consistent or supportive of the child. As a result, the extent to which young children rely on their caregivers, especially in challenging or threatening circumstances, is based on the support they have received from these adults in the past. Attachments develop during the first year and have a continuing influence on psychological and indeed, throughout life. Young children develop emotional attachments to their mothers and fathers, of course, as well as to other adults who regularly care for them — including child care providers although attachments to parents remain preeminent.



Secure or insecure attachments have consequences for many aspects of early development, whether those attachments are with parents or other caregivers. Even in infancy, securely attached children can be easily distinguished from insecurely attached children because of their more confident exploration of new situations and their more competent mastery of learning challenges (Arend, Gove, & Sroufe, 1979; Matas, Arend, & Sroufe, 1978). At later ages, securely attached young children have been found to have a more balanced *self-concept* (Cassidy, 1988; Verschueren, Marcoen, & Schoefs, 1996), more advanced *memory* in certain domains (Belsky, Spritz, & Crnic, 1996; Kirsh & Cassidy, 1997), more sophisticated emotional understanding (Laible & Thompson, 1998), a more positive understanding of friendship (Cassidy, Kirsh, Scolton, & Parke, 1996; Kerns, 1996), and more advanced conscience development (Kochanska, 1997; Laible & Thompson, 2000). Attachment theorists believe that these outcomes arise because of how a secure (or insecure) attachment influences a young child's developing understanding of emotion, morality, friendship and other psychological facets of human interaction. Caregivers influence children in many ways besides

the security they inspire, such as in the opportunities they provide for new learning and acquiring new skills. But the research on early attachments not only underscores how early relationships are indeed the "active ingredients" of healthy psychological growth, but shows how the security or insecurity inspired by these relationships has far-reaching effects on young children's socioemotional, intellectual and personal development.

UNDERSTANDING OTHER PEOPLE

One of the most important achievements of early childhood is a growing understanding of the inner, psychological world of people. Contrary to the traditional portrayal of preschoolers as egocentric and selfpreoccupied, young children have a very non-egocentric interest in how the needs and desires, beliefs and thoughts of others compare with their own. It is reasonable that they should be so interested, because understanding other people relies on an appreciation of how invisible psychological states (desires, feelings, thoughts, expectations) underlie behavior. But because internal thoughts and beliefs are invisible, this understanding is difficult to acquire. Infants show a dawning appreciation of internal states when they seek to redirect a caregiver's attention through piercing shrieks or grunts, and toddlers exhibit a more advanced understanding when

they consult a caregiver's facial expressions for cues about how to respond in an uncertain or unfamiliar situation (such as when encountering an unfamiliar person) (Feinman, 1992). At the same age, very young children also use their inferences about an adult's intentions when learning words (Baldwin & Moses, 1994), and their earliest words often make reference to desires, perceptions, emotions, needs and other internal states in themselves or others (Bartsch & Wellman, 1995).

The most significant advances in psychological understanding occur between the ages of 3 and 4 (Bartsch & Wellman, 1995; Flavell & Miller, 1998). By age 3, building on the achievements described above, young children have begun to grasp that behavior can be understood in terms of people's desires, intentions, needs and feelings. During the next year or so, this understanding expands significantly to include an awareness that people are also guided by thoughts, ideas and beliefs that may or may not — be accurate. For the first time, young children realize that people's mental states may not always be an accurate depiction of reality. People can be mistaken, fooled or ignorant.

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This transforms how children interact with people in several ways. First, it enables children to have a far richer appreciation of what is going on in the minds of other people - and also their own minds. This enables young children to better understand and cooperate; it also permits greater deception and *manipulation*, as children gradually appreciate that the contents of their own minds need not always be disclosed, and the contents of others' minds can be deliberately altered. Second, it enhances young children's awareness that disagreements and conflict may arise because people's goals, beliefs and understanding are discordant. Not surprisingly, therefore, young children also become more adept at resolving conflict between themselves and other people through compromise, turntaking, persuasion and even humor. Third, the young child's relationships with others, especially adults, also change because children can understand and balance others' goals and viewpoints with their own, and this enables the kind of shared understanding from which new learning can arise. Taken together, the growth of young children's capacities to understand other people makes them more competent social partners, ready for the social opportunities and challenges of a classroom that is shared with an adult teacher and many peers.

SELF-UNDERSTANDING

Early childhood is also when young children begin to define who they are: their likes and dislikes, their characteristics and their competencies. This, too, is a challenging accomplishment because psychological attributes of the self are invisible, and require the child to begin to perceive the self as an object of analysis. In infancy and toddlerhood, the prerequisites for self-understanding are established as infants enjoy the experience of "making things happen" on their own, and toddlers become capable of physical selfrecognition. Moreover, as young children gradually develop an awareness that other people have mental and emotional states that differ from the child's own, they realize that they, too, have subjective experiences that can also be shared with (or withheld from) others (Cicchetti & Beeghly, 1990; Kopp & Brownell, 1991).

Self-understanding advances significantly in the second and third years, and this is evident in the charming and frustrating characteristics of this age: young children who insist on "doing it myself" and refusing assistance, an increase in verbal self-reference (e.g., "I want," "mine," "Me big!"), and the emergence of selfreferential emotions like pride, shame, guilt and embarrassment that reflect the emotional dimensions of perceived competence or incompetence (Bullock & Lutkenhaus, 1990; Stipek, Gralinsky, & Kopp, 1990). These features of emergent self-understanding share in common the social arena in which young children assess, improve and demonstrate their competencies, and underscore how

significant are the evaluations of caregivers (explicit and implied) in the young child's emerging self-understanding and selfesteem (Stipek, Recchia, & McClintic, 1992). Consistent with classic theories of the "looking-glass self," young children evaluate themselves through the reflected evaluations of people who matter to them, whether of a grandparent who applauds the child's made-up song or a busy parent who does not notice the shoes that have been painstakingly tied for the first time.

SELF-UNDERSTANDING advances significantly in the second and third years.

After age 3, another milestone in selfunderstanding is the emergence of autobiographical memory (Howe & Courage, 1993; Welch-Ross, 1995). Prior to this time, young children can remember events from the past, but now children begin to remember events because of their personal significance, and they retain stories from their past that they can share with others. This sharing is important because, as young children talk about recent events, their caregivers add their own embellishments and details that help to consolidate the child's personal memory and to underscore its significance (Miller, Potts, Fung, Hoogstra, & Mintz, 1990; Nelson, 1993). In doing so, of course, caregivers also portray the child in dispositional and evaluative ways (e.g., as naughty or clever) that may not have been part of the child's initial recollection but is likely to become incorporated into the child's own representation of the event. In this manner, therefore, the selfunderstanding that arises from autobiographical memory incorporates the parent's own beliefs about the child's characteristics, capabilities and attributes (Thompson, 1998).

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It is unsurprising, therefore, that by the close of the preschool years, young children can describe their own personalities, and they do so in ways that resemble their mother's perceptions of them (Eder, 1990; Eder & Mangelsdorf, 1997). Although preschoolers are natural optimists with regard to their abilities — believing that they are capable of success at tasks at which they have just failed, simply by trying again and trying harder (Stipek, 1992) — this sunny self-regard can be easily undermined by social evaluations that are denigrating or dismissive. From early childhood arises, therefore, the rudiments of self-concept which motivate excitement about learning and growing competency, and are a foundation for a young child's selfawareness as competent or incompetent, bright or slow, and prone to success or failure.

YOUNG CHILDREN can describe their own personalities.

EMOTIONAL GROWTH

Emotions color the experience of every young child, whether the emotions consist of exuberant delight, frustrated fury or anguished distress. There are significant advances in emotional development from infancy to kindergarten that offer a window into the psychological growth of the child (Saarni, Mumme, & Campos, 1998; Thompson, 1999b). Newborns' emotions are evoked by their *physical* condition: whether they are hungry, cold or hot, or too tired. By contrast, preschoolers' emotions are tied to their psychological condition: how they interpret their experiences, what they think others are doing or thinking and their expectations of future events. In early infancy, emotions can be allconsuming and are not easily managed by the child or, for that matter, by parents. But by the end of the preschool years, young children are capable of anticipating and talking about their emotions and those of others, and can begin to enlist *psychological strategies* to manage their feelings. A baby's emotional repertoire is *basic*, ranging from cooing to crying, and shaped by temperamental individuality. By kindergarten, children have become capable of self-referential emotions like pride, shame, guilt and embarrassment, can feel *empathy* for other people, and experience more subtly nuanced blends of feelings (such as the combination of anger and fear) that are tied to their developing personalities. Children beginning school are emotionally more sophisticated people than they were only a few years earlier.

BUT YOUNG CHILDREN require the assistance of adults in understanding and interpreting their feelings.

The emotions a child feels and observes in others are visible and apparent, by contrast with underlying thoughts and beliefs. But young children require the assistance of adults in understanding and interpreting their feelings. Parents guide children's understanding of the causes and consequences of emotions, coach children concerning the emotional behavior that is appropriate in social situations, and provoke the feelings of pride, guilt and shame that underlie self-concept (Brown, Donelan-McCall, & Dunn, 1996; Miller & Sperry, 1987; Stipek, 1995). Thus young children's understanding of emotion and its effects depends on what they learn from their conversations with parents about the feelings they experience in themselves and observe in others. The broader emotional climate of the home also guides early emotional growth (Gottman, Katz, & Hooven, 1997). The quality of the home emotional climate is a special concern when young children grow up in homes rent by marital conflict (Cummings & Davies, 1994), the parent's affective disorder like depression (Zahn-Waxler & Kochanska, 1990), parental substance abuse problems, or parent-child relationships are abusive or coercive (Patterson, DeBaryshe, & Ramsey, 1989). In these circumstances, healthy early emotional growth is impaired by overwhelming emotional demands and inadequate support from parents and other caregivers in coping.

This is important because recent studies show how significantly young children are capable of deep sadness and grief, overwhelming anger and other emotions that researchers previously believed that young children were incapable of experiencing.

Developmental scientists now recognize that the origins of depression and affective disturbances, enduring conduct and behavioral problems, and heightened anxiety are often found in emotional disturbances in the early years (Cassidy, 1995; Shaw, Keenan, & Vondra, 1994; Zahn-Waxler & Kochanska, 1990). These early risks for emotion-related psychopathology are heightened in family environments that are abusive, troubled or coercive for young children. Because of their reliance on the emotional support of their caregivers for understanding and managing their feelings, troubled parent-child relationships make young children particularly vulnerable to emotionlinked disorders. These problems can also prove to be significant challenges for school readiness when children reach kindergarten.

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SELF-CONTROL

Early childhood is when young children begin to manage their impulses, desires and emotions. This developmental process is inaugurated in early childhood by emerging brain capacities in the prefrontal cortex (Diamond & Taylor, 1996; Gerstadt, Hong, & Diamond, 1994). How these capacities develop depends also on the social context. Although preschoolers have far to go in achieving successful self-control, they are becoming more capable of regulating their behaviors, managing their emotions and focusing their attention by the time they reach school.

Both parents and children are ready for this to occur. For young children, selfcontrol is a reflection of being "big" and competent, and during the preschool years children acquire many of the psychological capacities for self-control, including the ability to remember and apply standards of conduct, and to be self-monitoring and self-correcting (Kopp, 1982). Parents, too, are ready for young children to exercise self-control with respect to safety, consideration for others and self-care, and parents gradually increase their expectations for young children's self-control while using parenting strategies that rely on the child's cooperation (Belsky, Woodworth, & Crnic, 1996). The juxtaposition of child and family interest in the development of self-control does not mean that all goes smoothly, however. At the same time that they are becoming more self-managing, young children are also seeking greater autonomy, which means that they are increasingly likely to refuse parents before they comply, and to negotiate, compromise, delay, ignore and exhibit other forms of self-assertion ----consistent with parents' portrayal of the "Terrible Twos" (Kuczynski & Kochanska, 1990; Kuczynski, Kochanska, Radke-Yarrow, & Girius-Brown, 1987). All of this makes the second and third years of life especially significant for the growth of self-control and of conscience development. When all goes well, parents can sensitively balance a child's need for autonomy and cooperation in a psychologically constructively manner, but too often young children's refusals vield parental coercion and punitiveness.

EARLY CHILDHOOD is when young children begin to manage their impulses, desires and emotions.

A YOUNG CHILD'S capacities for emotion regulation rely on the support of caregivers

The growth of *emotion regulation* is an especially salient feature of the growth of self-control in the preschool years because of its importance to social competence, self-confidence and maintaining feelings of well-being. Although managing emotions is a lifelong challenge, young children develop a variety of strategies for doing so, such as by seeking the comfort of a caregiver, shifting attention away from distressing events (or toward pleasurable ones), self-soothing, changing goals, verbalized self-reassurance and related behavior (Thompson, 1990, 1994). A young child's capacities for emotion regulation rely on the support of caregivers who provide soothing when it is needed, suggest alternative goals when initial goals are frustrated, and provide reassurance that things will get better. Parents and other caregivers also coach children in strategies for managing their emotions appropriate to the situation, whether it involves comforting a distressed friend, learning to take turns or expressing anger with words rather than by hitting. More broadly, the security and trust that has developed between young children and their caregivers provides children with the confidence that their feelings are manageable and not overwhelming, frightening or confusing. However, when family life is troubled, children may experience emotions as overwhelming because of the emotional demands of family dysfunction, together with the limited support that parents can provide in managing these feelings.

GETTING ALONG WITH OTHERS: EARLY CONSCIENCE

Learning how to get along with others integrates and builds on the developmental accomplishments described above. This is why it is such a challenging task for young children. Learning how to get along with others requires sophisticated skills of social understanding. It requires the selfawareness of appreciating how one's goals interact with those of others. It requires skills of emotional understanding and emotion regulation, together with capacities for selfmanagement in accord with behavioral standards. Conscience requires that young children become capable of understanding, as well as complying with, others' expectations for them. It is little wonder, therefore, that young children's capacities for cooperation, conflict management, and moral compliance are so easily exceeded by the challenges of everyday life.

Yet young children make remarkable strides in conscience development, especially late in the preschool years. Contrary to the traditional view that young children are self-concerned and respond best to the enforcement of behavioral standards through firm discipline, children are highly motivated to cooperate because of their relationships with caregivers (Kochanska & Thompson, 1997). Their emotional attachments to people who matter cause young children to care about the expectations of others and, on most occasions, seek to comply. Within the context of a warm relationship, the

behavioral standards of trusted adults. their explanations for these expectations, and their rewards for compliance provide a foundation for conscience development (Belsky et al., 1996; Dunn, Brown, & Maguire, 1995). The young child's capacity to empathize with the feelings of others provides another emotional resource for conscience development (Zahn-Waxler & Radke-Yarrow, 1990). By contrast, when punitive coercion substitutes for relational incentives, young children are often compliant but do not as readily attain the concern for the others that is the true heart of moral awareness.

> CHILDREN ARE highly motivated to cooperate because of their relationships with caregivers

PEER RELATIONSHIPS

Relationships with peers provide the most stringent tests of a young child's ability to get along with others. Conflict as well as cooperation occurs during peer encounters, peaking between the ages of 2 and 3 because young children lack the social understanding necessary to easily resolve disagreements at these ages (Hay & Ross, 1982). As children mature, they become more adept at playing with peers in more complex ways, in larger groups and in resolving conflict (Garvey, 1990). Experience helps. Children play more cooperatively with familiar than unfamiliar peers, and children with extensive experience in child care tend to be more cooperative and positive with peers than those

without such experience, *when the child care is of good quality* (Howes, 1990; Phillips, McCartney, & Scarr, 1987).

Caregivers are important to the development of peer social skills. Parents who actively encourage social competence, provide warmth and support to their offspring and provide many opportunities for young children to play with others have children who get along better with other children (Goodnow, Knight, & Cashmore, 1985; Rubin, Mills, & Rose-Krasnor, 1989). Likewise, when young children are securely attached to their child care providers in stable relationships, children are more socially competent with adults and with peers (Howes, Matheson, & Hamilton, 1994; Howes, Phillips, & Whitebook, 1992; Peisner-Feinberg, Burchinal, Clifford, Culkin, Howes, Kagan, Yazajian, Byler, Rustici, & Zelazo, 2000). Child care quality is important: secure relationships with care providers have significant benefits for early social development in centers of good quality.

THE QUALITY OF children's peer relationships in preschool is a significant determinant of their adjustment to kindergarten

> Thus children arrive at school with social skills, derived from a history of peer interactions, child care experience and the contributions of parents that strongly influence their capacities to function well in a classroom with other children. Indeed, the quality of children's peer relationships in preschool is a significant determinant of their adjustment to

kindergarten, because the positive or negative social skills that children have acquired in early childhood shape the relationships they develop with adults and peers in the kindergarten classroom (Ladd & Price, 1987).

RELATIONSHIPS AND EARLY LEARNING

In this overview of early social and emotional development, the intersection of a young child's readiness to grow and an adult's nurturant support is apparent in every aspect of social and emotional development. It is also clear with respect to early learning. Young children are human sponges for new knowledge, and adults do so much to saturate them with opportunities for learning and understanding. Here again, relationships are central.

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In everyday circumstances, sensitive adults at home and in child care do so much to stimulate early learning. They structure shared activity — whether working on a jigsaw puzzle, reading a storybook, or preparing a recipe together — to enable a young child to develop new skills with supportive assistance. They arrange the daily schedule to provide predictable routines that provide a scaffold for memory. They converse with young children — almost from the time that children can make any meaningful verbal contribution to "conversation" — in ways that help them to understand the events they observe and experience. In doing so, they provide a window into the invisible psychological experience of people, including the child's own thoughts, feelings, impulses, motives and goals.

Most important, by remaining attentive and responsive to the child's changing interests, sensitive adults capitalize on what has captivated a young child's attention at the moment and use it as an opportunity to instill new understanding. All of this is influential because of the warm, positive relationship that makes these learning incentives salient and meaningful to young children. It is because of their relationships with adults who value learning that children also value learning and becoming competent individuals. In a sense, this is why shared activity with a trusted caregiver is so much more influential in early intellectual growth than is an instructional video, computer program or educational toy. People provide individually tailored interaction from which young children can benefit, and the child's relationship with the person instills their shared activity with greater meaning.

IT IS BECAUSE OF THEIR RELATIONSHIPS with adults who value learning that children also value learning and becoming competent individuals



This has been found to be true of a child's experience at home, and also of young children's experiences with caregivers in child care centers. Highquality care in early childhood is associated with enhanced intellectual growth that can persist into the school years (NICHD Early Child Care Research Network, 2000; Piesner-Feinberg et al., 2000). As with mother care, child care providers who are more sensitively responsive and who offer greater verbal and intellectual stimulation enhance the cognitive development of the children in their care (Lamb, 1998). In a sense, the same qualities of caregiving that instill trust, confidence and competence in young children at home have the same outcomes in the relationships that children share with their child care providers.

SOCIAL AND EMOTIONAL FOUNDATIONS OF SCHOOL READINESS

At least two conclusions arise from the research on early social and emotional development summarized above. First, the preschool years are a period of considerable growth in the psychological foundations of school readiness. Besides the core cognitive capabilities that develop in early childhood, advances in the child's understanding of other people, self-understanding, emotional growth, self-control, conscience and peer relationships provide an essential bedrock of skills necessary for learning in the classroom. Young children with positive early experiences are wellprepared to be attentive, cooperative, motivated to succeed and capable of working with others.

Second, supportive relationships are the common core ingredient of positive early social and emotional development. More specifically, the science of early childhood development shows that:

• The quality of relationships with parents are significant and primary. Owing to the deep emotional

attachments of young children, the security (or insecurity) of these relationships influence how children see themselves and other people. Parents guide the earliest forms of selfunderstanding and self-concept that make children confident in exploring and learning by how they respond to the child's achievements and misbehavior. Parents influence the development of capacities for selfmanagement, emotion regulation and cooperating with others through instruction, support and example. Parents shape the growth of social skills through opportunities for the child to interact with other people (including peers) and gentle coaching in social competence. Parents provide learning opportunities through everyday experiences that they sensitively exploit to promote new understanding. Warm, nurturant, sensitive parenting is a cornerstone of healthy social and emotional development because of how parent-child relationships tutor a young child about the world they inhabit.

• The quality of child care, and the caregiver-child relationship, are significant influences on social and emotional development. Although studied less extensively than experiences at home, it is clear that experience in child care has far-reaching consequences for early development. As parents do at home, child care providers also influence the growth of self-concept, social skills and capacities for emotion regulation, and child care may be an especially important context for learning how to get along with peers as well as adults. The quality of the relationships between caregivers and children are crucial to the benefits of child care, just as they are crucial to the impact of experiences at home. Moreover, the broader quality of the child care setting is also an important influence on social and emotional development because of how child care quality indexes the opportunities provided for new learning, support for constructive peer play and manageable, predictable routines and emotional demands on children.

• Young children have a strong intrinsic drive toward healthy development, but it can be undermined by troubled relationships with the people who matter to them. These risks have

been noted in the preceding review, and include punitive, denigrating parenting; family environments characterized by marital conflict, violence, and/or adult affective disorders; child care settings of poor quality or relational instability (the high turnover of caregivers in child care often results in insecure attachment relationships with children, see Howes, 1999); home or child care environments with overwhelming, unpredictable emotional demands for children; and the many stresses associated with poverty. Unfortunately, for the young children most at risk of social and emotional dysfunction, their life experience is characterized by more than one of these threats.

These conclusions reflect the findings of research on early social and emotional development. But when we turn to research that specifically examines the foundations of school readiness, its conclusions are very consistent:

First, the quality of the mother-child relationship in early childhood is an important influence on how well children will function in kindergarten

(Estrada, Arsenio, Hess, & Holloway, 1987; Peisner-Feinberg et al., 2000; Pianta, Nimetz, & Bennett, 1997). When young children enjoy warm, supportive relationships with their mothers, they subsequently exhibit greater academic competence in kindergarten and early primary grades, and they are more competent in the classroom — that is, they are more socially skilled, show fewer problems with conduct or frustration and have better work habits. In an important longitudinal study, Estrada and colleagues (1987) found that a measure of the emotional quality of the mother-child relationship at age 4 was associated with the child's cognitive competence at that age, and was predictive of school readiness measures at ages 5 and 6, IQ at age 6, and school achievement at age 12. These findings are consistent with a large body of research showing how the parent-child relationship influences intellectual growth (Bradley, Caldwell, & Rock, 1993; Gottfried & Gottfried, 1984), and emphasizes the relevance of this relationship to school readiness. There are many reasons why a positive motherchild relationship would enhance children's school readiness, based on the research reviewed above. A positive, secure relationship provides immediate support for the child's social and cognitive competence, as well as inspiring self-confidence, capacities for selfmanagement and interest in learning.

Second, *the quality of child care influences how well children will function in school* (Lamb, 1998; NICHD Early Child Care Research Network, 2000; National Research Council, 2001; Peisner-Feinberg et al., 2000). In another longitudinal study, Peisner-Feinberg and colleagues (2000) found that the quality of child care classroom practices predicted language and math skills through second grade. Classroom practices also predicted the quality of children's peer relationships and behavior problems several years later. In this study, "classroom practices" included assessments of whether procedures were developmentally appropriate for young children, the use of a child-centered teaching method, and the teacher's sensitivity and responsiveness to the children. Thus the overall classroom environment influenced cognitive and social competence in school up to second grade. These conclusions have been confirmed by other studies of early childhood education (National Research Council, 2001).

Moreover, the relationship between child care providers and young children also influences children's

school functioning (Lamb, 1998; Peisner-Feinberg et al., 2000; Pianta et al., 1997). Just as at home, the warmth and sensitivity of the child care provider enhances children's social competence (and reduces proneness to behavior problems) in kindergarten and the early primary grades. But research has shown that the closeness of their relationship also predicts children's subsequent classroom thinking, attention skills and concept development. In short, cognitive and social competence is enhanced when children are in child care settings with secure, positive relationships with caregivers.

In the context of warm, secure relationships with their caregivers, children's intellectual growth is also enhanced. In the conversations they share, the structure that adults provide, and the sensitivity to children's developmental readiness to learn, these relationships provide an avenue for new learning of all kinds, as well as children's curiosity and motivation to learn. Thus it is perhaps unsurprising that in care settings with caregivers who are better educated and trained, young children become more intellectually and socially competent (Lamb, 1998; National Research Council, 2001).

Third, the quality of child care may be especially influential for children who are otherwise at risk of academic or social problems in school (Caughey, DiPietro, & Strobino, 1994; National Research Council, 2001; Peisner-Feinberg et al., 2000). Children from socioeconomically disadvantaged settings benefit more significantly from highquality child care than do children from middle-income families. This may derive from how a supportive relationship with a child care provider and developmentally appropriate classroom practices can buffer some of the stresses associated with economically challenging living conditions. The quality of care is important. Poor quality care does not differentially benefit at-risk children nor, for that matter, any children.

> THE QUALITY OF children's peer relationships in kindergarten are also associated with school adjustment

Fourth, *the relationship between the child and a teacher in kindergarten is an important contributor to school adaptation* (Birch & Ladd, 1997; Pianta & Steinberg, 1992). Consistent with the importance of relationships throughout early childhood, children who enjoy warm, positive relationships with their kindergarten teachers are more excited about learning, more positive about

coming to school, more self-confident and achieve more in the classroom than do children who experience more troubled or conflictual relationships with their teachers. Thus the importance of relationships to socioemotional and cognitive functioning, established from early childhood, extends also to the early primary school years. Moreover, other relationships are also important. For example, the quality of children's peer relationships in kindergarten are also associated with school adjustment: children who experience greater peer acceptance and friendship tend to feel more positively about coming to school and perform better in the classroom (Ladd, Kochenderfer, & Coleman, 1996, 1997).

FACILITATING SCHOOL READINESS IN YOUNG CHILDREN

In the broadest sense, these research conclusions have both positive and negative implications for understanding the conditions that influence school readiness.

On one hand, they highlight the circumstances that undermine a young child's social and emotional readiness for new learning. School readiness is hindered when children live in families rent by domestic conflict or violence, parental mental health or substance abuse problems, or other conditions that make the home environment stressful and difficult for young children. School readiness is undermined when young children are in child care settings that are stressful or unstimulating, with teachers who are unknowledgeable or uninterested in the importance of fostering growing minds and personalities, or with staff turnover so high that it is difficult for children to develop reliable relationships with their caregivers. School readiness is hindered when young children and their families live in communities that are drained of human resources, where children may be exposed to neurotoxins (such as in lead-based paint) that hinder brain development, and where parents can find few health-care, recreational or other resources for enhancing the positive development of offspring. School readiness is particularly undermined in circumstances where many of these risk factors to healthy early psychologcial development co-occur, such as in poverty.

More positively, this research also highlights the opportunities that exist to facilitate school readiness in young children, including:

- Strengthening family experiences, especially opportunities to develop more secure and nurturant parent-child relationships. Young children thrive when provided with unhurried, focused time with the adults who matter to them, and when those adults can be sensitively responsive to them. The core foundations of school readiness are created in these experiences.
- *Improving child care quality,* especially by (a) strengthening the training and responsiveness of child care providers through their awareness of their crucial role in early social and emotional growth, (b) reducing the turnover of child care providers through increased professionalism and compensation, (c) making classroom practices more developmentally

appropriate and child-centered (although not necessarily more curricular), and (d) fostering a language-rich environment that facilitates intellectual growth and social interaction.

- Focusing on the transition to kindergarten as an important opportunity to instill and maintain enthusiasm for learning through the development of supportive relationships with teachers, and positive peer relationships.
- Attending especially to the needs of vulnerable children who come from at-risk backgrounds, and are especially likely to encounter multiple threats to school readiness in their families, child care environments and communities.

These present significant avenues to enhancing early school readiness.

CONCLUSION

School readiness is not just an attribute of individual children, but derives from an interaction of the child with the school. Beginning school presents so many challenges to young children, from learning directed by a teacher and the challenges of social comparison to mastering a new peer group and classroom expectations. Educators, developmental scientists and parents have long recognized that some primary classrooms are more "school ready" than others. This is because some classrooms and teachers are better able to accommodate the developmental needs and individual characteristics of children who arrive at school with widely varying capabilities, expectations and self-concepts.



There are several implications of recognizing that school readiness is not an individual attribute, but an interactive concept. First, it may be difficult to assess a particular child's "school readiness" except when that child is immersed in the challenges of the primary grade classroom. Prior assessments of school readiness outside of the context of school may be poorly predictive of how children will fare when they reach the classroom door because their coping will be significantly affected by the school itself. Second, kindergarten and primary grade teachers should become more aware of the developmental needs that young children retain from the preschool years and which underlie their initial success in school. By regarding early classroom experience in developmental (rather than academic) frameworks, educators can foster the personal qualities that contribute best to young children's longterm academic success.

Third, and perhaps most importantly, understanding school readiness as an interaction of the child with the school underscores the importance of relationships to learning. Because young children's scholastic and social lives are linked in the early primary grades, it matters a great deal how children feel about themselves and the teachers and peers with whom they share the school day. Moreover, relationships that children experience in the preschool years are also important, sometimes because of their continuing influence on children after they begin school, and sometimes because of the social and emotional resources they have provided in early childhood. In each case, the curiosity, self-confidence, excitement about learning, capacities for cooperation and skills in self-management instilled in early childhood provide young children with some of their best resources for school success.

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