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"S he works very hard when she's trying to build a block construction." "He is so curious about how gadgets work." These are comments often made by parents and teachers in their conversations about young children. Children's motivation to solve problems, figure out how objects work, and complete tasks they set out to do is a central part of the way teachers and parents view children. Is such motivation intrinsic? Are children with developmental disabilities as motivated as other children? How is motivation influenced by caregivers? Does motivation vary in different contexts, such as the classroom and the home? What do we know about motivation, and how can preschool teachers encourage it?

**Perspectives on motivation**

Based largely on Piaget's (1952) writings, developmental theorists (White 1959; Hunt 1965) have proposed that children's motivation to explore the world around them is the foundation upon which learning occurs. Such motivation is considered to be intrinsic, universal, and an integral part of development. All children are born with curiosity and a desire to learn about the world.

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This is one of a regular series of Research in Review columns. The column in this issue was invited by Research in Review Editor Martha B. Bronson, Ph.D., professor at Boston College, Chestnut Hill, Massachusetts.

Based largely on Piaget's writings, developmental theorists have proposed that children's motivation to explore the world around them is the foundation upon which learning occurs. Such motivation is considered to be intrinsic, universal, and an integral part of development. All children are born with curiosity and a desire to learn about the world.

White (1959) contended that children have a need to produce an effect on their environment and that they achieve this through exploration and play. He proposed that children have "an urge toward competence," and he defined this urge as effectance or competence motivation. Harter (1975) further defined effectance motivation as a "desire to solve cognitively challenging problems for gratification inherent in discovering the solution" (p. 370). She highlighted several key components: curiosity, preference for challenge, internal criteria of success, and working for one's own satisfaction.
In studying motivation in school-age children, Dweck (1986) described some children as “mastery-oriented” (i.e., challenge seeking and persistent in attempting to solve difficult problems) and others as “helpless” (i.e., challenge avoidant and low in persistence). She maintained that some children exhibit “learned helplessness” because they believe, based on past experiences, that they have little control over the events that affect them. Children who exhibit patterns of learned helplessness attribute their successes to external factors, such as luck, and their failures to internal factors, such as ability (Dweck & Elliott 1983). Researchers suggest that teachers can promote mastery-oriented, rather than helpless, behavior by providing tasks in which the goal is learning (i.e., developing different strategies) rather than performance (i.e., focusing on correct or incorrect responses) (Stipek 1996).

Studies on toddlers and preschool-age children have focused on mastery motivation, which is assumed to be a precursor to later development of motivation to achieve academically. Mastery motivation is defined as a “psychological force that stimulates an individual to attempt independently, in a focused and persistent manner, to solve a problem or master a skill or task which is at least moderately challenging for him or her” (Morgan, Harmon, & Maslin-Cole 1990, 319). Key components of this definition include (1) attempts to master a task independent of adult direction; (2) persistence in mastering a task even when difficulties arise; and (3) selection of a task that is neither extremely easy nor extremely difficult. Researchers have stressed the importance of individually determined moderate challenge as children persist less with tasks that they find too easy or too difficult (Redding, Morgan, & Harmon 1988). Thus, by identifying the kinds of tasks individual children engage in and persist with, teachers can provide opportunities that will offer optimal challenges.

Regardless of their theoretical background, intelligent, sensitive adults who closely observe children discover the same things—because that’s the way children are—there are a number of “universals.”

How does mastery motivation change during early childhood?

Most developmental psychologists contend that children begin life as motivated beings. Children strive to understand the world and to affect it. Developmentally, children progress through several shifts in motivation, so the motivated child behaves differently at different phases of life. The motivated infant, younger than six months of age, explores objects through reaching, mouthing, and visual exploration. Around nine months infants begin to understand simple notions of cause-and-effect, and the motivated infant of this age begins to engage in goal-directed activity with unfamiliar tasks (Jennings 1993). Another transition occurs around 18 months of age when children begin to be able to compare their behavior with that of a standard (Jennings 1993). The motivated toddler attempts to approximate the standard. During the preschool years motivated children begin to self-select challenging tasks and prefer tasks that “make them think” to those that are easy for them to accomplish (Stipek 1996).

How does motivation relate to cognition?

Motivation and cognition are conceptually different, but researchers have found that the two constructs are intertwined during infancy (Yarrow et al. 1982; Yarrow et al. 1983). Infant mastery motivation measures have been found to be better predictors of preschool measures of cognition than are standardized infant developmental quotients (Messer et al. 1986). Measures of mastery motivation may be good indicators of the way in which children approach learning about objects. Infants and toddlers who appear more motivated may take full advantage of a range of spontaneous learning opportunities and ultimately demonstrate more advanced cognitive performance.

During the preschool period, correlations between measures of motivation and those of intelligence are only modestly related (Morgan, MacTurk, & Hrcir 1995). While the motivated preschooler is one who persists at
difficult tasks, and thus creates and engages in cognition enriching activities, cognitively advanced preschoolers are not necessarily highly motivated. The low correlation between intelligence and motivation indicates that aspects of children’s lives other than cognition, such as the actions of important adults, may explain differences in mastery motivation.

How do caregivers affect mastery motivation?

Motivation is often assumed to be intrinsic, but it also appears to be affected by the transactions between children and their parents and other caregivers. The role played by caregivers, however, varies with the age of the child (Busch-Rossnagel, Knauf-Jensen, & DesRosiers 1995). For example, Yarrow and his colleagues (Yarrow et al. 1984) reported that parents who provided more sensory stimulation for their young infants had infants who were more persistent in their exploration of objects. After children begin engaging in cause-and-effect actions with objects, during the latter part of the first year of life, caregivers’ role in providing stimulation becomes more complex. Parents who interfere in children’s attempts to engage in autonomous activity diminish children’s motivated behavior (Frodi, Bridges, & Grolnick 1985; Wachs 1987; Hauser-Cram 1993). Researchers (e.g., Morgan et al. 1991) contend that parents who are highly directive may encourage children to be efficient responders but not effective initiators. In contrast, parents who provide a range of challenges and support children’s autonomy have children who display high levels of mastery motivation.

What do we know about motivation in children with developmental or physical disabilities?

Although less research has been conducted on motivation in children with disabilities, a picture of motivated behavior has begun to emerge. Researchers studying children with physical disabilities and mental retardation (MacTurk et al. 1985; Hauser-Cram 1996) have reported that levels of persistence on challenging tasks are similar for children with and without disabilities during the infant and toddler years. Discrepancies in mastery motivation of children with and without disabilities begin to emerge during the preschool and early school-age years (Harter & Zigler 1974; Jennings, Connors, & Stegman 1988).

Although the cause of the decline in motivated behavior of children with disabilities has not been determined, home and classroom factors may provide a clue. Studies of parent-child interaction in the home indicate that many parents of children with developmental disabilities and delays are highly directive in their play (Mahoney, Fors, & Wood 1990). Preschool classroom observation studies indicate that teachers, too, often highly direct children with disabilities (Hauser-Cram, Bronson, & Upshur 1993; Bronson, Hauser-Cram, & Warfield 1997). In both settings children with disabilities may have little opportunity for executing autonomy and independence in attempts to master tasks.

Can parents and teachers accurately assess mastery motivation?

Although the preponderance of studies on mastery motivation have been based on behavioral assessments, an increasing number are incorporating parents’ or teachers’ ratings of children’s motivated behavior. Ratings are quicker and easier to gather, and they have been found to correlate significantly with behavioral assessments (Morgan et al. 1993). Furthermore, ratings can take advantage of parents’ and teachers’ knowledge of children in multiple settings and with a wide range of tasks.

The Dimensions of Mastery Questionnaire (DMQ) has been found to be a reliable and valid source of ratings of children’s persistence on object-oriented tasks, social-symbolic activities, and gross-motor play (Morgan et al. 1993). In studies in which parents and teachers have been asked to use the DMQ to rate the same child’s mastery motivation, parents usually provide more positive ratings.

This trend was reported in a recent study of three-year-old children with developmental disabilities (Hauser-Cram et al. 1997). Results of this study also indicated that parents’ ratings of mastery motivation were more predictive of children’s later performance than were teachers’ ratings. Therefore, parents’ perceptions of children’s motivated behavior offer unique and valuable information to teachers.

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Parents and teachers who interfere in children's attempts to engage in autonomous activity diminish children's motivated behavior. Researchers contend that parents and teachers who are highly directive may encourage children to be efficient responders but not effective initiators. In contrast, parents and teachers who provide a range of challenges and support children's autonomy have children who display high levels of mastery motivation.

What can teachers do to encourage mastery motivation?

Research on mastery motivation does not have a long history, but much of the research has been undertaken with a view toward application and intervention. Several important suggestions emerge from the studies conducted so far.

1. Provide a moderate choice of activities. Choosing activities promotes autonomy and offers children some control over their own learning. Research indicates that a modest number of choices, rather than no choice or a large number of choices, is optimal in enhancing intrinsic motivation (Stipek 1996).

2. Provide children with activities that offer opportunities to learn rather than opportunities only to be correct or incorrect. For example, provide problem-posing tasks, games, or other activities in which there are several possible ways to solve the problems posed.

3. Support children's activities in ways that do not interfere with autonomy. Sometimes this requires adults to wait rather than anticipate a child's needs when she encounters difficulty with a task. If the child is getting very frustrated, a well-timed suggestion (e.g., "Maybe if you turn that piece around . . .") rather than a direct command (e.g., "That piece fits here") may support her attempts to persist.

4. Ask parents about their perspectives on their child's motivation. Parents know what children enjoy doing and what challenges provide them with pride in accomplishment.

What future research is needed on children's mastery motivation?

Current work on mastery motivation is somewhat limited by a focus on the individual child's independent activities, yet preschool classrooms are social organizations where children play and learn together. Future work on mastery motivation will benefit by considering the influence of the social context in which children learn. To what extent do peers challenge each other as they persist together on a joint enterprise? To what extent do the social dynamics of a classroom offer a range of challenges appropriate for each child? To what extent do children develop a sense of shared agency in making a difference in their preschool classroom? Many questions will undoubtedly emerge as we extend the construct of mastery motivation to include the collective intricacies of the social settings in which children engage in learning. Adults, siblings, and peers are all potential partners in children's motivation, and future research can help us understand these partnerships and the ways in which all can contribute to optimizing mastery-oriented behavior in young children.

References


Editor's note: As Penny Hauser-Cram tells us, developmental psychologists have focused mainly on mastery motivation in individual children and are now beginning to consider the influence of the social context in which children learn.

The latter is one of the areas of expertise of excellent early childhood educators. They have learned much through their work, which is with groups, about the group dynamics, interpersonal relations, cooperative behaviors, and peer example that power or impede children as they strive to create a project, conquer a difficulty, or solve a problem they've encountered.

We will all benefit when specialists in these two related areas—developmental psychology and early childhood education—pool their knowledge and move on to learn more.

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