

1996

## Motivation in Education: Current Emphases and Future Trends

Dale H. Schunk  
*Purdue University*

Follow this and additional works at: <https://scholarworks.bgsu.edu/mwer>

[How does access to this work benefit you? Let us know!](#)

---

### Recommended Citation

Schunk, Dale H. (1996) "Motivation in Education: Current Emphases and Future Trends," *Mid-Western Educational Researcher*. Vol. 9: Iss. 2, Article 3.

Available at: <https://scholarworks.bgsu.edu/mwer/vol9/iss2/3>

This Featured Article is brought to you for free and open access by the Journals at ScholarWorks@BGSU. It has been accepted for inclusion in Mid-Western Educational Researcher by an authorized editor of ScholarWorks@BGSU.

---

# *Motivation in Education: Current Emphases and Future Trends*

Dale H. Schunk, Purdue University

## *Abstract*

*This article discusses motivational processes as they apply to educational contexts. Motivation is defined and compared to other constructs. A brief historical account of motivation theory and research is provided, to include important trends and areas in motivation research. The article concludes by suggesting four areas that future research might address: constructivism and learning, long-term motivation, teacher retention, motivation in the community.*

**M**otivation has assumed a highly prominent position in education as theories have moved from behavioristic accounts to those incorporating cognitive and affective concepts. This shift in emphasis has expanded the focus of motivation research, which increasingly shows that motivation is central to teaching and learning (Pintrich & Schunk, 1996). Motivated students display interest in activities, feel self-efficacious, expend effort to succeed, persist at tasks, and use effective learning strategies. Motivated teachers believe they can help students learn, spend extra time on planning, and work with students to ensure they master content. When motivation declines other outcomes suffer. Teachers must not only impart knowledge and skills but also establish a motivating environment for learning.

Despite this breakthrough there exists much confusion about such issues as the nature of motivation, what variables affect motivation, and how motivation influences learning and performance. The field is at a critical point that requires clear understanding of motivational processes and a vision for the future of motivation in education.

### **Motivation Defined**

There are many definitions of motivation. From a cognitive perspective, motivation can be defined in the following way (Pintrich & Schunk, 1996): **Motivation** is the process whereby goal-directed activity is instigated and sustained. It is clear that motivation has some overlap with other psychological constructs.

To illustrate, *learning* involves an enduring change in behavior or in the capacity to behave in a given fashion resulting from practice or other forms of experience. Motivation and learning are related but not synonymous.

Another similar construct is *self-regulation*, or the process whereby one activates and sustains behaviors, cognitions, and affects, which are systematically oriented toward the attainment of goals. Self-regulation differs from motivation in that self-regulation involves some degree of learner choice of outcomes, methods, settings, social and environ-

mental resources (Zimmerman, 1994). Choice need not be a central feature of motivation, since people can be motivated to perform well even when they have no choice of activities.

*Volition* is often compared with motivation. William James (1890) viewed volition as the act of using the will. More recently, volition has been conceptualized as part of a larger self-regulatory system that includes motivation and other cognitive processes (Corno, 1993). Volition presumably mediates the relation between goals and actions to accomplish them (Heckhausen, 1991; Kuhl, 1984). Whereas motivation is the force behind establishing goals, volition is responsible for attaining them; for example, by keeping persons focused on the task and perseverant. Although not all investigators accept this division of functions but rather apply the term "motivation" to goal setting and goal-directed activities (Schunk, 1991), most researchers do not view motivation and volition as synonymous (Pintrich & Schunk, 1996).

*Interest* (or *intrinsic motivation*) refers to engaging in a task for its own sake; that is, for no obvious reward except for the activity itself (Pintrich & Schunk, 1996). Interest is a form of motivation but almost certainly includes such other processes as attention and metacognition (performance monitoring). Further, motivation is not confined to inherently interesting activities. *Extrinsic motivation* refers to the process of engaging in a task as a means to an end.

### **Historical Overview**

At the start of the twentieth century, motivation was not a separate topic of study as it is today (Weiner, 1990). Rather, it was addressed in the realm of psychology—itsself a new field of study. Wilhelm Wundt, who studied volition through the method of *introspection*, helped to establish psychology as a science independent of philosophy with the first psychological laboratory in Germany in 1879. Some early writers on motivation were Ach, Freud, James, and McDougall (Heckhausen, 1991; Heidebreder, 1933; Pintrich & Schunk, 1996; Weiner, 1992).

The rise of behaviorism in psychology helped to establish the scientific method as the framework for experimentation. Watson (1924) contended that if psychology was to become an objective and experimental science it had to concern itself with observable and scientific phenomena as the physical sciences did. Behavior was observable, whereas introspection, which dealt with subjective states that may have no basis in reality (e.g., perceptions), was not observable and thus not scientific.

#### *Cognitive Explanations of Motivation*

Prominent behavioral theories were formulated by Thorndike, Hull, Spence, Pavlov, Watson, Guthrie, and Skinner. In Skinner's (1953) operant conditioning theory, for example, a stimulus sets the occasion for the occurrence of a response, which is followed by a consequence. The probability of behavior occurring in the future is a function of the consequences of prior behavior. Reinforcing consequences strengthen behavior and make it more likely to occur; punishing consequences weaken behavior and lower its likelihood of future occurrence. Operant conditioning defines motivation (motivated behavior) as an increased level of responding or continued high level of responding brought about by effective reinforcement contingencies (Skinner, 1968).

The history of motivation research reveals a shift from explanations in behavioral terms to the use of cognitive mechanisms. In contrast to behavioral views, cognitive theories stress mental structures and the processing of information and beliefs. Cognitive theories became more prevalent in psychology as behavioral explanations were found to be wanting for much behavior and especially for complex phenomena (e.g., problem solving). The dominant contemporary learning and motivation theories are cognitive. Although cognitive theorists disagree about which internal factors are important (e.g., attributions, perceived competence, values, goals, social comparisons, affects), they all view motivation as a process and do not equate it with observable behavior (Pintrich & Schunk, 1996).

#### *Field Studies*

Laboratory studies are conducted in controlled settings; field studies are conducted where participants live, work, and go to school. Early motivation research was conducted in psychological laboratories. Laboratories have the advantage of controlling extraneous factors that can influence research results, such as people talking, windows to look out of, phones ringing, and hallway noise.

Despite these advantages, researchers increasingly are conducting studies in field settings to maximize generalizability of results to other similar settings. In contrast, generalization of laboratory results to the field is done with less confidence. Field studies can capture the complexity of factors that affect motivation and thus are able to provide a clearer picture of its operation.

#### *Human Participants in Research*

Researchers increasingly are using human participants in research. Much older psychological research used infrahuman species such as dogs, cats, and rats. Behavioral psychologists felt that behavior could be explained by referring to environmental conditions and that these factors operated across species. Since greater experimental control can be exercised over animals, they are preferable to humans as research subjects.

It is true that many processes operate across animals and humans; for example, both respond to the effects of rewards and punishments. A major difference, however, is that a wider variety of processes can be studied in people because they are capable of complex thought. Such processes as expectations, values, and goals, are important cognitive motivators (Pintrich & Schunk, 1996). In addition, humans allow for the study of motivation using complex tasks and situations.

#### *Focus on Process*

The focus of behaviorism was on behavior. Motivation was defined in terms of changes in the intensity, frequency, form, or persistence of behavior. *Products (outcomes)* were the chief variables of study and were affected by environmental conditions and prior reinforcements in the individual's life.

With the shift to cognitive psychology came a reconceptualization of motivation as a *process* internal to the individual that was influenced by personal and environmental factors. To study process required new ways of assessment. Researchers had to devise instruments to assess such internal variables as goals, attitudes, expectations, and values. There are potential problems with such assessments; measuring expectations, for example, requires asking persons to make judgments about mental states, which may not always be clear. There also is the possibility that people will deliberately distort self-reports to make themselves appear more desirable. Although self-reports have problems, available evidence shows they are valid and reliable indicators of mental processes, at least beginning in children by age 9 (Assor & Connell, 1992).

#### *Educationally Relevant Content*

Early motivation research often was conducted in non-educational settings and used tasks that had little relevance to school learning. Despite much of it being high quality, its low educational relevance precluded generalization of results to human learning and performance settings. Many studies used tasks that did not involve learning but rather performance of previously-learned actions (e.g., ring-toss games). While motivation is important for performance, it also can influence learning (Schunk, 1991). Researchers increasingly are conducting studies in schools using academic content (e.g., mathematics, writing, reading) (Schunk &

Hanson, 1985; Schunk & Rice, 1993; Schunk & Swartz, 1993).

A related trend is to study motivation over time with *longitudinal studies*. Much academic learning takes time as skills develop slowly. Longitudinal studies determine how motivational processes change and which influences are more important at various stages of learning. Research shows, for example, that feedback linking success with effort is important in the early stages of learning but that feedback stressing high ability has greater motivational effects as skills become established (Schunk, 1983).

#### *Group Motivation*

Motivation research traditionally has studied behaviors of *individuals*. Researchers aggregate data across persons to arrive at conclusions. In contrast, less research has studied motivation in groups. The group literature within social psychology (Asch, 1955; Deutsch, 1949) primarily is oriented toward group dynamics and interaction patterns rather than motivational processes.

Although studies of individuals continue to be prevalent, research increasingly is focusing on groups. Researchers have begun to determine whether individual and group processes operate in similar fashion and how they relate to one another. For example, research on cooperative and competitive groups shows that group outcomes affect individuals' perceptions of their capabilities and that these, in turn, relate to subsequent group motivation (Slavin, 1995).

#### *Context Specificity*

The field of motivation has moved from an emphasis on broad, global theories, which explained behaviors across diverse situations, to theories that are more context specific. As research showed that behavior was complex and capable of being influenced by multiple factors, theorists turned their attention to explaining motivation in specific situations. With respect to the construct of achievement motivation, for example, research shows that a general achievement motive is not strongly linked with achievement behaviors in different situations (Weiner, 1992). In contrast, motivation for learning and performing well in a general domain (e.g., mathematics) is context specific and more predictive of actual behavior (Bandura, 1986).

This is not to suggest that there are no behavioral generalities. As Bruner (1985) said:

You do not quite need a different model of a learner to talk about learning how to play chess, learning how to play the flute, learning mathematics, and learning to read the sprung rhymes in the verse of Gerard Manley Hopkins . . . All of them will involve attention and memory and courage and . . . maintaining frustration tolerance. The issue . . . is that learning is indeed context sensitive, but that human beings, given their peculiarly human com-

petence, are capable of adapting their approach to the demands of different contexts. (pp. 5-6)

Although we have moved toward greater context specificity, we know that such processes as goal setting, positive expectations, and valuing learning, operate across domains to impact motivation. Researchers today attempt to specify how such general processes are affected by situational conditions.

#### *Constructed Meanings*

Behaviorism dismissed cognitions from explanations of behavior. The *meanings* of situations and events were viewed as less important than the reinforcement contingencies that accompanied those situations and events. Cognitive perspectives on motivation are more phenomenological because they postulate that people act based on their perceptions (Pintrich & Schunk, 1996).

*Constructivism*, which represents an important new perspective in education and psychology, contends that behavior occurs in contexts and that people form or construct much of what they learn and understand as a function of their experiences in situations (Geary, 1995). As discussed later, the impact of constructivism on motivation is likely to increase.

#### **Current Areas of Research Emphasis**

##### *Goals and Goal Orientations*

Goal theory postulates that important relations exist between goals, expectations, attributions (perceived causes of outcomes), conceptions of ability and motivational orientations, social and self comparisons, and achievement behaviors (Ames, 1992a, 1992b; Blumenfeld, 1992; Weiner, 1990).

A central construct in goal theory is *goal (motivational) orientation*, or the purpose and focus of one's engagement in achievement activities. One distinction is between *learning* and *performance goals*. A learning goal refers to what knowledge, behavior, skill, or strategy, students are to acquire; a performance goal denotes what task students are to complete. Other types of goals mentioned in the literature that are conceptually similar to learning (performance) goals include *mastery*, *task-involved*, and *task-focused (ego-involved, ability-focused)* (Ames & Archer, 1988; Butler, 1992; Meece, 1991; Nicholls, 1984).

The importance of these goals for motivation stems from the effects they can have on cognition and action. Learning goals presumably focus students' attention on processes and strategies that help them improve their skills (Ames, 1992a). Students who pursue a learning goal are apt to experience a sense of self-efficacy (perceived capability) for attaining it and be motivated to engage in task-appropriate activities (e.g., persist, expend effort) (Bandura, 1986; Schunk, 1991).

In contrast, performance goals are hypothesized to focus students' attention on completing tasks. Such goals may not highlight the importance of processes and strategies underlying task success or raise efficacy for acquiring skills. Students may not compare their present and past performances to determine progress; rather, they may socially compare their work with that of others. Social comparisons result in low perceptions of ability and low motivation among students who experience difficulties (Schunk, 1989).

Meece, Blumenfeld, and Hoyle (1988) assessed children's goal orientations, perceived competence, intrinsic motivation, and cognitive engagement, during science lessons. Orientations assessed were task mastery (goal is to understand material and learn as much as possible), ego/social (goal is to please others), and work avoidant (goal is to minimize effort and do as little as possible). Active cognitive engagement referred to activities involved in self-regulation (e.g., review material not understood, relate current to prior material); superficial engagement activities were designed to complete work with minimal effort (copy answers, skip hard material). Students who held task-mastery goals reported more active cognitive engagement characterized by self-regulatory activities. Children reporting greater intrinsic motivation to learn placed greater emphasis on goals stressing learning and understanding.

#### *Social/Contextual Influences*

A related motivation research area explores the roles of social and other contextual factors. According to social cognitive theory (Bandura, 1986, 1991), motivation is a function of personal cognitions (expectations, goals) and self-evaluative processes. As people work toward goals, they evaluate their progress. The perception of progress enhances self-efficacy and sustains motivation. A perceived negative discrepancy between one's goal and present performance creates an inducement for change.

Social and contextual factors affect motivation through their influence on expectations, goals, and self-evaluations of progress (Schunk, 1989). Important factors include social comparisons, goals, rewards, models, classroom structures, and forms of feedback. Perceived similarity to models in important attributes can raise observers' self-efficacy and motivate them to try the task. One way to increase model-observer similarity and self-efficacy may be with peer models.

Schunk and Hanson (1985) compared the effects of videotaped peer mastery and coping models with those of teacher models and no models. Peer models increase self-efficacy and subtraction achievement better than teacher models and no models; teacher-model children outperformed no-model students.

#### *Self-Regulation*

*Self-regulation* refers to processes that students use to activate and sustain cognitions, behaviors, and affects, which

are oriented toward the attainment of goals (Zimmerman, 1989, 1990). Researchers are investigating how students self-regulate key academic behaviors (e.g., planning and managing time, using social resources, establishing a productive work environment). Models of self-regulation often incorporate such motivational processes as goals, expectations, values, and personal satisfaction (Zimmerman, 1994).

Bandura (1986) hypothesizes there are three major phases of self-regulation: *Self-observation* refers to deliberate attention to specific aspects of one's behavior; *self-judgment* refers to comparing present performance with a standard; *self-reaction* involves making evaluative responses to judgments of one's performance. Positive evaluations sustain motivation; negative evaluations do not necessarily diminish it if students believe they can improve through such means as using better strategies or expending more effort.

Zimmerman and Kitsantas (in press) worked with high school girls learning to throw darts. Girls given a process goal surpassed girls given a product goal in dart throwing skill, self-efficacy beliefs, self-reactions (rated satisfaction), and intrinsic interest in dart throwing relative to other sports.

These results suggest that as strategic performing is being internalized, process goals enhance learning better than product goals, perhaps because students attempt to self-regulate performance aspects that contribute to higher scores. Once internalized self-control is attained, however, product goals may enhance learning better.

#### *Information Processing*

*Information processing* theories view learning as the encoding of information in long-term memory. Learners activate relevant portions of long-term memory and relate new knowledge to existing information in working memory. By organizing and rehearsing information, learners improve access to existing knowledge and the likelihood of remembering. When information is cued, learners recall it from long-term memory into working memory.

A central feature of the information processing system is the existence of *control processes*, which help the learner attend to, process, retain, and recall information. Control processes include self-regulatory and motivational activities, which can assist learning and performance in various ways.

The role of motivation within an information processing framework is illustrated in the *resource allocation model* (Kanfer & Ackerman, 1989; Kanfer & Kanfer, 1991). This model posits that attention is a key cognitive process; through attention, such other factors as abilities, motivation, self-regulation, and perceived task demands, affect performance. Attention is a limited resource and is allocated to activities as a function of motivation and self-regulatory processes. Distal processes refer to task-related goals and limit total resource availability. Proximal processes direct attention to on-task, off-task, or self-regulatory activities. Allocations

are adjusted based on feedback about effectiveness. When task demands are high (e.g., difficult goals), people allocate greater attention to the task; when demands are lower, they may shift some attention away from the task and to other activities. Self-regulation is a key mechanism for producing changes in resource allocation.

These results have implications for instruction. Teachers need to ensure that attentional demands are appropriate for students during learning and that competing conditions are minimized. Since motivational factors also are important, instruction should help build these outcomes as a means for ensuring continued allocation of attention to learning tasks.

#### *Models of Achievement Processes*

Atkinson (1957) helped to move the field of motivation away from a behavioral perspective by postulating that motivation is a function of the individual's *expectancies for success* and *perceived value* of engaging in the task.

By incorporating the concept of *value*, expectancy-value models made an advance over theories that did not consider the full range of personal perceptions. The *value* of any task depends on three factors: *Attainment value* is the importance of doing well on the task; *intrinsic (interest) value* refers to the inherent, immediate enjoyment one derives from the task; *utility value* relates to perceived importance relative to a future goal (e.g., taking a course to advance one's career) (Eccles, 1983; Wigfield, 1994).

Research by Eccles and her colleagues supports many predictions of her model. Values are positively related to achievement; however, when both expectancy beliefs and values are used to predict achievement, expectancy beliefs are significant predictors and values are not. In sum, values may be important for choice behaviors and student enrollment in courses, but once students are in the course, values are not as important for achievement as are expectancy beliefs.

#### *Instruction*

Historically, teachers were viewed narrowly as motivators who dispensed rewards and punishments. The motivator role of teachers has broadened in light of evidence that many teacher actions have potential motivational impact (Pintrich & Schunk, 1996). Further, effects are reciprocal: Teachers affect student motivation and teachers' motivation for teaching and helping students learn is influenced by how students react to classroom activities.

Ames (1981, 1984) explored the motivational effects of instructional grouping arrangements. Ames (1981) compared competitive and cooperative structures for their effects on children's self-evaluations. Performance outcome was manipulated such that one child in each pair outperformed the other; within the cooperative condition, groups either did or did not attain their goal. In the cooperative groups, group outcomes affected students' perceptions of

their abilities and feelings of satisfaction. Group success alleviated negative self-perceptions resulting from poor individual performances, and group failure lowered positive self-perceptions of students who performed well. This and other research (Ames, 1984) shows that competitive failure has more deleterious effects on self-perceptions than does noncompetitive failure; however, when cooperative groups fail, dissatisfaction can run high regardless of one's individual performance.

#### *Technology*

It often is assumed that because computers are fun to work with they hold great motivational appeal for students and thus should facilitate learning compared with traditional instruction. For example, an important way to promote intrinsic motivation is through activities that involve *fantasy* through simulations and games that present students with situations not actually present (Lepper & Hodell, 1989). Some evidence suggests that fantasy can enhance learning and motivation. Parker and Lepper (1992) conducted two studies with third- and fourth-grade students. In one study, students were taught computer graphics programming where they received instruction both in traditional fashion and embellished with fantasy involving pirates, detectives, or astronauts. Students preferred the fantasy to the traditional context. In a second study, children received computer instruction and were assigned to an individualized-fantasy, assigned-fantasy, or no-fantasy condition. Individualized-fantasy students selected their fantasy context; assigned-fantasy students had their contexts assigned by the experimenter. Students in the fantasy conditions demonstrated greater learning compared with no-fantasy children.

How interest in learning may translate into better learning is not well understood but may involve focusing the learner's attention on relevant features of the learning context and increasing cognitive effort (Lepper & Malone, 1987), which many fantasy elements ought to do. It is imperative, however, that motivational embellishments be relevant to the task (Lepper & Hodell, 1989). Nonrelevant features or those that distract will not enhance students' mental effort. Software with embellishments (e.g., lights, noises) only loosely linked to what learners do quickly lose motivational appeal. Enhancements contingent on learner progress in skill acquisition convey that learners are developing competence, which builds motivation.

#### **Future Directions**

##### *Constructivism and Learning*

Constructivists have been primarily concerned with explaining how students construct knowledge structures in content domains (e.g., science, mathematics). Such research has made an important contribution to a learning literature that has tended to focus more on conditions affecting learners' acquisition of knowledge and strategies than on the role learners played in formulating the knowledge and strategies.

An obvious question is how motivation relates to the construction process (Sivan, 1986). We might ask whether intrinsic motivation to learn leads to more active constructivism. Intuitively it would seem that the more one wants to learn the harder one would strive to make sense of the environment and formulate a strategy that will assist with learning, but this hypothesis needs to be tested.

#### *Long-Term Motivation*

There are few longitudinal studies, and most do not explore the process whereby motivation changes. More research also is needed on such practical concerns as choosing a career and forming interpersonal relationships. These types of studies could explore which variables are most critical for motivation over long periods.

#### *Teacher Retention*

At a time when education is under pressure to produce results, many fine educators leave the profession. There are many reasons why teachers leave the profession, but one involves feeling a low sense of control and empowerment in their roles to make positive changes and a real difference in the lives of students (Ashton & Webb, 1986; Bandura, 1986).

Research might address such issues as how can schools be designed to provide productive work environments for teachers and what types of career incentives are needed to help retain teachers. A key motivational component in career choice and retention is teachers' sense of efficacy for performing well in their profession (Hackett & Betz, 1992). We might study what factors in teaching serve to build self-efficacy and which need to be improved.

#### *Motivation in the Community*

Greater research emphasis is needed on motivation in the broader community that includes schools, homes, neighborhoods, and businesses. We need to study motivational processes in- and out-of-school, because motivators do vary somewhat with the context. For example, teacher rewards are more important in school than outside of it, where other rewards (e.g., peer) take on greater significance. The two need not remain exclusive. Schools can invite community residents to come into the schools to assist with programs, and students can work in apprenticeship programs under the direction of community mentors. Such collaboration will provide an integrated perspective on motivation and help to sustain teaching and learning outside of traditional boundaries.

#### **References**

Ames, C. (1981). Competitive versus cooperative reward structures: The influence of individual and group performance factors on achievement attributions and affect. *American Educational Research Journal*, 18, 273-287.

Ames, C. (1984). Competitive, cooperative, and individualistic goal structures: A cognitive-motivational analy-

sis. In R. Ames & C. Ames (Eds.), *Research on motivation in education* (Vol. 1, pp. 177-208). New York: Academic Press.

Ames, C. (1992a). Achievement goals and the classroom motivational climate. In D. H. Schunk & J. L. Meece (Eds.), *Student perceptions in the classroom* (pp. 327-348). Hillsdale, NJ: Lawrence Erlbaum Associates.

Ames, C. (1992b). Classrooms: Goals, structures, and student motivation. *Journal of Educational Psychology*, 84, 261-271.

Ames, C., & Archer, J. (1988). Achievement goals in the classroom: Student learning strategies and motivation processes. *Journal of Educational Psychology*, 80, 260-267.

Asch, S. E. (1955). Opinions and social pressure. *Scientific American*, 193(5), 31-35.

Ashton, P. T., & Webb, R. B. (1986). *Making a difference: Teachers' sense of efficacy and student achievement*. New York: Longman.

Assor, A., & Connell, J. P. (1992). The validity of students' self-reports as measures of performance affecting self-appraisals. In D. H. Schunk & J. L. Meece (Eds.), *Student perceptions in the classroom* (pp. 25-47). Hillsdale, NJ: Lawrence Erlbaum Associates.

Atkinson, J. W. (1957). Motivational determinants of risk-taking behavior. *Psychological Review*, 64, 359-372.

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice Hall.

Bandura, A. (1991). Self-regulation of motivation through anticipatory and self-reactive mechanisms. In R. A. Dienstbier (Ed.), *Nebraska Symposium on Motivation, 1990* (Vol. 38, 69-164). Lincoln, NE: University of Nebraska Press.

Blumenfeld, P. C. (1992). Classroom learning and motivation: Clarifying and expanding goal theory. *Journal of Educational Psychology*, 84, 272-281.

Bruner, J. S. (1985). Models of the learner. *Educational Researcher*, 14(6), 5-8.

Butler, R. (1992). What young people want to know when: Effects of mastery and ability goals on interest in different kinds of social comparisons. *Journal of Personality and Social Psychology*, 62, 934-943.

Corno, L. (1993). The best-laid plans: Modern conceptions of volition and educational research. *Educational Researcher*, 22(2), 14-22.

Deutsch, M. (1949). A theory of cooperation and competition. *Human Relations*, 2, 129-152.

- Eccles, J. S. (1983). Expectancies, values, and academic behaviors. In J. T. Spence (Ed.), *Achievement and achievement motivation* (pp. 75-146). San Francisco: Freeman.
- Geary, D. C. (1995). Reflections of evolution and culture in children's cognition: Implications for mathematical development and instruction. *American Psychologist*, *50*, 24-37.
- Hackett, G., & Betz, N. E. (1992). Self-efficacy perceptions and the career-related choices of college students. In D. H. Schunk & J. L. Meece (Eds.), *Student perceptions in the classroom* (pp. 229-246). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Heckhausen, H. (1991). *Motivation and action*. Berlin: Springer-Verlag.
- Heidbreder, E. (1933). *Seven psychologies*. New York: Appleton-Century-Crofts.
- James, W. (1890). *The principles of psychology* (Vols. I & II). New York: Henry Holt.
- Kanfer, R., & Ackerman, P. L. (1989). Motivation and cognitive abilities: An integrative/aptitude-treatment interaction approach to skill acquisition. *Journal of Applied Psychology*, *74*, 657-690.
- Kanfer, R., & Kanfer, F. H. (1991). Goals and self-regulation: Applications of theory to work settings. In M. L. Maehr & P. R. Pintrich (Eds.), *Advances in motivation and achievement* (Vol. 7, pp. 287-326). Greenwich, CT: JAI Press.
- Kuhl, J. (1984). Volitional aspects of achievement motivation and learned helplessness: Toward a comprehensive theory of action control. In B. A. Maher (Ed.), *Progress in experimental personality research* (Vol. 13, pp. 99-171). New York: Academic Press.
- Lepper, M. R., & Hodell, M. (1989). Intrinsic motivation in the classroom. In C. Ames & R. Ames (Eds.), *Research on motivation in education* (Vol. 3, pp. 73-105). San Diego: Academic Press.
- Lepper, M. R., & Malone, T. W. (1987). Intrinsic motivation and instructional effectiveness in computer-based education. In R. E. Snow & M. J. Farr (Eds.), *Aptitude, learning, and instruction: Cognitive and affective process analysis* (Vol. 3, pp. 255-286). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Meece, J. L. (1991). The classroom context and students' motivational goals. In M. L. Maehr & P. R. Pintrich (Eds.), *Advances in motivation and achievement* (Vol. 7, pp. 261-285). Greenwich, CT: JAI Press.
- Meece, J. L., Blumenfeld, P. C., & Hoyle, R. H. (1988). Students' goal orientations and cognitive engagement in classroom activities. *Journal of Educational Psychology*, *80*, 514-523.
- Nicholls, J. G. (1984). Achievement motivation: Conceptions of ability, subjective experience, task choice, and performance. *Psychological Review*, *91*, 328-346.
- Parker, L. E., & Lepper, M. R. (1992). Effects of fantasy contexts on children's learning and motivation: Making learning more fun. *Journal of Personality and Social Psychology*, *62*, 625-633.
- Pintrich, P. R., & Schunk, D. H. (1996). *Motivation in education: Theory, research, and applications*. Englewood Cliffs, NJ: Merrill.
- Schunk, D. H. (1983). Ability versus effort attributional feedback: Differential effects on self-efficacy and achievement. *Journal of Educational Psychology*, *75*, 848-856.
- Schunk, D. H. (1989). Self-efficacy and cognitive skill learning. In C. Ames & R. Ames (Eds.), *Research on motivation in education. Vol. 3: Goals and cognitions* (pp. 13-44). San Diego: Academic Press.
- Schunk, D. H. (1991). Self-efficacy and academic motivation. *Educational Psychologist*, *26*, 207-231.
- Schunk, D. H., & Hanson, A. R. (1985). Peer models: Influence on children's self-efficacy and achievement. *Journal of Educational Psychology*, *77*, 313-322.
- Schunk, D. H., & Rice, J. M. (1993). Strategy fading and progress feedback: Effects on self-efficacy and comprehension among students receiving remedial reading services. *Journal of Special Education*, *27*, 257-276.
- Schunk, D. H., & Swartz, C. W. (1993). Goals and progress feedback: Effects on self-efficacy and writing achievement. *Contemporary Educational Psychology*, *18*, 337-354.
- Sivan, E. (1986). Motivation in social constructivist theory. *Educational Psychologist*, *21*, 209-233.
- Skinner, B. F. (1953). *Science and human behavior*. New York: Free Press.
- Skinner, B. F. (1968). *The technology of teaching*. New York: Appleton-Century-Crofts.
- Slavin, R. E. (1995). *Cooperative learning: Theory, research, and practice* (2nd ed.). Boston: Allyn and Bacon.
- Watson, J. B. (1924). *Behaviorism*. New York: Norton.
- Weiner, B. (1990). History of motivational research in education. *Journal of Educational Psychology*, *82*, 616-622.
- Weiner, B. (1992). *Human motivation: Metaphors, theories, and research*. Newbury Park, CA: SAGE Publications.

continued on page 36

program may have found it easy to criticize. Furthermore, not being involved in program development may make it more difficult to recognize advantages a new program might offer.

An unresolved but critical concern is whether or not the M.Ed. program is attracting better qualified students and preparing higher quality teachers. This question will be the subject of ongoing research involving longitudinal studies comparing the success in teaching and career paths of graduates from the traditional program with M.Ed. graduates

Many other possibilities for continuing evaluation of the M.Ed. program exist. Will M.Ed. students continue to have a high placement rate into teaching positions? 1995 data from the Ohio Department of Education indicate that only 16% of graduates attaining elementary certification from Ohio institutions during the 1994-95 academic year found teaching positions in Ohio. The M.Ed. rate has been considerably higher than this figure. Even more important than teacher placement is the question of teacher quality. How successful will the M.Ed. teachers be? What paths will their careers take? Will they remain in the education field? Will they be more likely to engage in action research? To take continuing education course-work? These and other questions will need to be answered.

Further investigations can be conducted comparing the two different academic backgrounds of students that now will comprise each M.Ed. cohort. Beginning with the 1995-96 academic year, approximately one half of the forty-six students entering the M.Ed. program matriculated from the pre-certification program, while the remaining half hold degrees in fields other than education and therefore were not enrolled in the pre-certification program. These two groups can be compared both while enrolled in the M.Ed. program and after they have completed it and enter the teaching field.

#### References

- Andrew, D. (1991). Differences between graduates of 4-year and 5-year teacher preparation programs. *Journal of Teacher Education*, 41 (2), 45-51.
- Darling-Hammond, L. & Goodwin, A. (1993). Progress toward professionalism in teaching. In G. Cawelti (Ed.) *Challenges and Achievements in American Education, The 1993 ASCD Yearbook*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Holmes Group (1986). *Tomorrow's Teachers: A report of the Holmes Group*. East Lansing, MI: Michigan State University. Loadman, W. & Gustafson, G. (1990). Master's post-degree certification program: Follow-up of 1987-89 graduates. Unpublished paper, College of Education, The Ohio State University.
- MacDonald, R., Manning, M., & Gable, R. (1994). An alternative certification program: Career transition. *Action in Teacher Education*, 16 (2), 19-27.
- Marso, R. & Pigge, F. (1995). Characteristics associated with teacher attrition: Pre-and post-preparation teaching concerns of candidates teaching or not teaching five years after graduation. Paper presented at the Mid-Western Educational Research Association Annual Conference, Chicago.
- McDermott, P., Gormely, K., Rothenberg, J. & Hammer, J. (1995). The influence of classroom practica experiences on student teachers' thoughts about teaching. *Journal of Teacher Education*, 46 (3), 184-191.
- Sandlin, R.A., Young, B.L., & Karge, B.D. (1993). Regularly and alternatively credentialed and beginning teachers: Comparison and contrast of their development. *Action in Teacher Education*, 14 (4), 16-23.
- Shannon, I.L. (1990). ASEP - An alternative certification program for career switchers that works. *Action in Teacher Education*, 12 (2), 38-42.
- Schmidt, J.S., Johnson, S., & Schultz, J. (1993). Entering teaching through the back door: Two alternative route teachers speak. *Action in Teacher Education*, 15 (3), 12-17.
- Tierney, D.S., & McKibbin, M. (1993). Strengths and weaknesses in California teacher education programs: A four-year review. *Action in Teacher Education*, 15 (3), 61-70.
- Young, I.P., & Jury, J. (1994). Marketability of Holmes teachers in traditional teacher labor markets. Paper presented at The American Educational Research Association Annual Meeting, April, 1994.

---

## Motivation in Education

*continued from page 11*

- Wigfield, A. (1994). Expectancy-value theory of achievement motivation: A developmental perspective. *Educational Psychology Review*, 6, 49-78.
- Zimmerman, B. J. (1989). A social cognitive view of self-regulated academic learning. *Journal of Educational Psychology*, 81, 329-339.
- Zimmerman, B. J. (1990). Self-regulating academic learning and achievement: The emergence of a social cognitive perspective. *Educational Psychology Review*, 2, 173-201.
- Zimmerman, B. J. (1994). Dimensions of academic self-regulation: A conceptual framework for education. In D. H. Schunk & B. J. Zimmerman (Eds.), *Self-regulation of learning and performance: Issues and educational applications* (pp. 3-21). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Zimmerman, B. J., & Kitsantas, A. (in press). Self-regulated learning of a performance skill: The role of goal setting and self-monitoring. *Journal of Applied Sport Psychology*.