

Introduction to the Special Section on Motivation and Efficacy

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Abstract:

This special section comprises nine articles addressing the operation of motivation and efficacy in educational contexts. In this article, I will use *motivation* to refer to the process whereby goal-directed behavior is instigated and sustained, and *efficacy* to denote individuals' beliefs in their capabilities to exert control over aspects of their lives.

The articles that follow differ in many ways, but they share the theme that educational achievement is a complex phenomenon involving interactions of social, instructional, and learner factors (Pintrich, Cross, Kozma, & McKeachie, 1986). Students can actively seek and process information through their attention, organization, rehearsal, and encoding. Their overt responses, in turn, can alter social and instructional factors within their environments.

Article:

Viewing motivation and efficacy as interacting mechanisms within this framework has important theoretical and practical implications. Models of achievement increasingly are including this interaction as an integral component. A sense of efficacy for performing well in school may lead students to expend effort and persist at tasks, which promotes learning. As students perceive their learning progress, their initial sense of efficacy is substantiated, which sustains motivation. Even when students have encountered prior difficulties, the belief that they are capable of succeeding can override negative effects of prior performances and produce motivated behaviors (Bandura, 1986; Rosenthal & Zimmerman, 1978; Schunk, 1989).

From a practical standpoint, teachers need to consider how instructional practices affect not only students' skill acquisition but also their motivation and efficacy for learning. As Graham and Barker (1990) make clear, some instructional practices designed to enhance skill development can convey that students lack ability, which reduces motivation. Important educational goals are for students to be motivated to learn, to value learning for its own sake, and to engage in tasks to master the content (Brophy, 1983; Corno & Mandinach, 1983).

The remainder of this article presents highlights of each article. To facilitate this discussion, I grouped articles under four themes or areas of research emphasis: attributions, learning strategies, learner characteristics, and teacher efficacy. These categories are not mutually exclusive; some articles cut across areas. I conclude with suggestions for research.

Summary of Research

Attributions

Attributions, or perceived causes of outcomes, are hypothesized to influence achievement behaviors, expectancies, and affects (Frieze, Francis, & Hanusa, 1983; Weiner, 1985). Students often attribute successes and failures to such factors as ability, effort, task difficulty, and luck. Students who attribute prior successes to relatively stable factors (e.g., high ability or an easy task) should hold higher achievement expectations than students who stress unstable factors (e.g., high effort or good luck).

Factors associated with learning contexts influence students' attributions (Nicholls, 1983; Weiner, Graham, Taylor, & Meyer, 1983). Graham and Barker found that unsolicited teacher assistance signaled low-ability to children. Compared with a nonhelped peer, a student receiving teacher assistance was judged less smart, less proud of successes, more grateful, less likely to be successful in the future, and less preferable as a workmate. This cue function was not present in children ages 4 and 5, so presumably it emerges after entering school. Though teachers help students to ensure learning, Graham and Barker call attention to the potential harm to ability perceptions. They did not assess behavioral outcomes, but research shows that low-ability perceptions are related to low motivation and achievement (Licht & Kistner, 1986).

Much has been written about how students desire to maintain the perception of high ability in themselves and others. When that perception becomes threatened (i.e., when poor performance is likely), one means of preserving it is to reduce the level of effort. This guarantees low performance, but the appropriate attribution is low effort rather than low ability. Jagacinski and Nicholls (1990) found that college students thought this strategy was viable for other students but not for themselves. These authors suggest the likelihood of using this strategy may depend on accepting one's incompetence at a task. Motivation depends in part on believing you are competent, and the way you show competence is to try to succeed rather than give up.

Unlike many causes of success, effort is under one's control and amenable to change. Effort attributions are common among young children; with development, ability attributions become increasingly important (Harari & Covington, 1981). The importance of effort among children in Grades 3 through 6 was demonstrated by Skinner, Wellborn, and Connell (1990), who explored relations between beliefs (control, strategy, and capacity), task engagement, and achievement. Students felt that effort was the easiest cause to enact and the most effective strategy for good school performance. Students' capacity beliefs for effort—a measure analogous to efficacy that refers to expectations of being able to exert sufficient effort to perform well—was positively related to teachers' ratings of students' in-class task engagement (participation and emotional tone).

Summary

Almost 20 years ago, Weiner et al. (1971) presented an attributional model for achievement-related events, and since then a tremendous amount of research has been conducted. The articles in this section are a reminder that this research tradition is still much in vogue. The present results confirm prior findings and offer some surprises. First, a presumably desirable classroom practice (unsolicited teacher assistance) has a negative impact on ability perceptions. Second, children believe that reducing effort to preserve ability perceptions is fine for others but not for them. Third, children's efficacy for expending effort predicts their subsequent work. Collectively, these results highlight the idea that the relations between attributional beliefs, motivation, and perceptions of efficacy often are complex.

Learning Strategies

Learning strategies are systematic plans that help the learner encode information and perform a task (Weinstein, Goetz, & Alexander, 1988). Strategies improve immediate performance and can generalize beyond the learning context. The belief that one can apply a strategy to improve learning may instill a sense of efficacy for influencing achievement outcomes. This sense of efficacy is substantiated when students perceive that successful performances result from strategy application, which can motivate students to continue to apply the strategy to improve their skills.

The link between efficacy and strategy use was addressed by Pintrich and De Groot (1990). Seventh graders judged efficacy (perceived competence and confidence in performing class work) and their use of cognitive strategies (e.g., rehearsal and elaboration), self-regulatory strategies (planning and comprehension monitoring), and effort management strategies (persistence and working diligently). Efficacy was positively related to reported use of cognitive and self-regulatory strategies and to student performance (exams and grades); however, efficacy did not predict subsequent performance when strategies were included in a regression analysis. Pintrich and De Groot suggest that efficacy may indirectly influence performance through its effect on strategy use.

Pokay and Blumenfeld (1990) explored high school students' motivation, reported use of learning strategies, and achievement. Early in the semester, use of task-specific and effort management strategies related to grades; later in the semester, only the latter strategies were related. These findings suggest that students achieve early successes by using strategies specific to the task, but as skills become established, motivational strategies become more important. Efficacy measures (expectations for success) were significant predictors of grades and also related positively to the use of strategies for effort management.

Self-efficacy (perceived capabilities) and reported use of learning strategies were examined by Zimmerman and Martinez-Pons (1990) among gifted and regular students in Grades 5, 8, and 11. This study was concerned with *self-regulated learning*, or learning that occurs from students' self-generated behaviors that are systematically oriented toward the attainment of learning goals. Students judged their use of such strategies as organizing, evaluating, planning, goal setting, and monitoring, and judged their efficacy for performing mathematical and verbal tasks. Efficacy was positively related to strategy use across domains. Efficacy judgments became higher with grade level, and this finding conflicts with much evidence showing a general decline in self-perceived competence from elementary to high school. Another interesting finding was that boys' judgment of their verbal efficacy was higher than girls' judgment of theirs, but there was no sex difference in perceptions of mathematical efficacy. The latter finding is contrary to much research showing that boys typically hold higher expectations in mathematics than girls (Meece, Eccles, Kaczala, Goff, & Futterman, 1982). The authors discuss these findings to include their implications for education.

Summary

Learning strategy research has a well-established empirical base (Weinstein et al., 1988), but only recently have researchers begun to explore strategies from a motivational perspective. This application seems valuable, given the postulated positive relations among motivation, efficacy, and strategy use. The preceding studies support these relations but add elements of complexity. For example, which strategies affect performance may vary as a function of students' skill levels. Though efficacy bears a positive relation to strategy use and performance, it may affect performance indirectly through its influence on strategy use. Future research undoubtedly will help clarify these relations.

Learner Characteristics

Studies of how learner characteristics interact with motivation and efficacy in achievement contexts enhance our understanding of which characteristics have important implications for classroom teaching and learning. The two studies discussed in this section were designed to systematically explore the effects of learner characteristics.

Meece, Wigfield, and Eccles (1990) tested an achievement model comprising efficacy beliefs (perceived ability and performance expectations), mathematics anxiety, perceived importance of the subject, and course performance and enrollment intentions, among students in Grades 7 to 9. Ability perceptions predicted expectations, and expectations related positively to grades. The latter effect was stronger than the effect due to prior grades, which suggests that expectations mediate effects of prior work. Perceived importance predicted intention to continue taking math courses. Anxiety bore a negative link with expectancies. Though sex differences were obtained with some variables, the underlying structure of the relations between variables in the model was similar for male and female students.

Newman addresses children's intentions to seek teacher help when having difficulty. Among children in Grades 3, 5, and 7, perceived competence related positively to indexes of independent mastery and preference for challenge. Children with higher perceived competence displayed a less negative attitude toward seeking help. At Grades 3 and 5, help-seeking intentions were explained by preference for challenge and independent mastery and by positive attitudes toward seeking help. At Grade 7, attitudes were the strongest influences on help-seeking intentions. Regardless of grade, perceived competence influenced help-seeking intentions indirectly through attitudes.

Summary

These articles reflect continuing interest by educational researchers in such individual difference variables as anxiety, gender, and grade level. The contribution of these articles lies in the context in which these variables were explored. The comprehensive achievement model of Meece et al. reflects the complex relations discussed earlier in this article. Rather than downgrading the importance of efficacy, this model highlights its position within the larger domain of achievement variables. Newman's (1990) context of help seeking is a relatively new thrust in motivation research, and his findings emphasize that, although help seeking traditionally has not been included in achievement models, it merits inclusion.

Teacher Efficacy

Motivation and efficacy affect teachers as well as students. Teachers with low efficacy doubt their capabilities to influence students' learning. They avoid planning activities they believe exceed their capabilities. They may not persist in helping students having difficulty, expend additional effort to find materials, or reteach content in ways students might understand better. In contrast, teachers with higher efficacy develop challenging classroom activities and help students succeed on those tasks. They are apt to persist longer with students having trouble learning. These motivational effects should enhance student learning and substantiate teacher efficacy by conveying that teachers can succeed with students (Ashton & Webb, 1986).

Woolfolk and Hoy (1990) had prospective teachers judge efficacy, bureaucratic orientation (e.g., extent of rule conformity and organizational loyalty), pupil control ideology (custodial versus humanistic), and motivational style (i.e., a style that encourages student autonomy and responsibility). Two efficacy dimensions were distinguished. Teaching efficacy assessed whether teachers believed that students' motivation and performance depended mostly on the home environment. Personal efficacy gauged whether teachers felt that with effort they could have an impact on unmotivated students. Though the two efficacy measures were uncorrelated, they related in important ways to pupil control and bureaucratic orientation. The authors did not observe subjects teaching, so it is unknown how these differences influence teacher performance.

Summary

The fact that more research in this special section addresses motivation and efficacy among students than teachers is indicative of motivation research in general and should not downgrade the importance of research with teachers. I expect to see an increasing number of investigations of the type reported by Woolfolk and Hoy. Motivational research among teachers will contribute to our understanding of how efficacy can affect different aspects of teaching (e.g., planning and evaluating), as well as student outcomes.

New Directions

The articles in this special section provide an excellent cross-section of current research on motivation and efficacy in educational contexts. In the following paragraphs, I present a suggested future research agenda. These suggestions derive from the new directions highlighted by these articles and from my personal beliefs about topics that need to be addressed.

Models of Achievement

One recommendation is that researchers integrate constructs and findings from studies to clarify the nature of relations among efficacy, motivation, and other achievement variables. Many of the studies reported in this section tested the viability of models to explain achievement and related outcomes with such procedures as structural modeling and path analysis. Given that achievement is a complex process affected by multiple variables, I believe this is a fruitful line of investigation; however, it seems that we have a generous number of models. It may be a good idea to sort the findings from different studies to determine what they mean for educational theory and practice before additional models are generated and tested.

Student Behaviors

Research is needed on student behaviors. Many of the articles in this section used self-reports of such measures as intentions to engage in activities and use of strategies. These findings are informative, but researchers need to

determine how well self-reports translate into actual behaviors. Nor should investigations be confined to students' classroom behaviors; exploring out-of-school learning would complement school-based research. As shown by Pintrich and De Groot and by Zimmerman and Martinez-Pons, motivation and efficacy are integral aspects of self-regulated learning, which stresses learner responsibility and control. I would expect that students' efficacy for controlling their learning would enhance their motivation to improve skills outside of school, but empirical data are needed.

Teaching Processes

As Woolfolk and Hoy make clear, there is an urgent need for research on motivation and efficacy among preservice and classroom teachers. Such research should address how teachers' beliefs about their capabilities to help students learn affect teachers' classroom behaviors, and, in turn, students' beliefs and achievements. This type of investigation may have additional benefits by providing insight into how school conditions can affect teachers' efficacy and by suggesting ways to provide teachers with the support they need to alter dysfunctional aspects of their environments.

Conclusion

Collectively, the articles that follow enhance our understanding of the operation of efficacy beliefs and motivational processes in educational settings. As noted at the outset of this article, the studies differ in many ways, but they are united in their emphasis on motivation and efficacy as central constructs in explanations of achievement behaviors. The themes of attributions, learning strategies, learner characteristics, and teacher efficacy, along with the new directions in research, should help to establish an initial research agenda for the final decade of the 20th century. Judging by the articles in this section, it should be an exciting decade for research.

References

- Ashton, P. T., & Webb, R. B. (1986). *Making a difference: Teacher's sense of efficacy and student achievement*. New York: Longman.
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice-Hall.
- Brophy, J. (1983). Conceptualizing student motivation. *Educational Psychologist, 18*, 200–215.
- Corno, L., & Mandinach, E. B. (1983). The role of cognitive engagement in classroom learning and motivation. *Educational Psychologist, 18*, 88–108.
- Frieze, I. H., Francis, W. D., & Hanusa, B. H. (1983). Defining success in classroom settings. In J. M. Levine & M. C. Wang (Eds.), *Teacher and student perceptions: Implications for learning* (pp. 3–28). Hillsdale, NJ: Erlbaum.
- Graham, S., & Barker, G. P. (1990). The down side of help: An attributional-developmental analysis of helping behavior as a lowability cue. *Journal of Educational Psychology, 82*, 7–14.
- Harari, O., & Covington, M. V. (1981). Reactions to achievement behavior from a teacher and student perspective: A developmental analysis. *American Educational Research Journal, 18*, 15–28.
- Jagacinski, C. M., & Nicholls, J. G. (1990). Reducing effort to protect perceived ability: "They'd do it but I wouldn't." *Journal of Educational Psychology, 82*, 15–21.
- Licht, B. G., & Kistner, J. A. (1986). Motivational problems of learning-disabled children: Individual differences and their implications for treatment. In J. K. Torgesen & B. W. L. Wong (Eds.), *Psychological and educational perspectives on learning disabilities* (pp. 225–255).
- Meece, J. L., Eccles, J., Kaczala, C. M., Goff, S. G., & Futterman, R. (1982). Sex differences in math achievement: Towards a model of academic choice. *Psychological Bulletin, 91*, 324–348.
- Meece, J. L., Wigfield, A., & Eccles, J. S. (1990). Predictors of math anxiety and its influence on young adolescents' course enrollment intentions and performance in mathematics. *Journal of Educational Psychology, 82*, 60–70.
- Newman, R. S. (1990). Children's help-seeking in the classroom: The role of motivational factors and attitudes. *Journal of Educational Psychology, 82*, 71–80.

- Nicholls, J. G. (1983). Conceptions of ability and achievement motivation: A theory and its implications for education. In S. G. Paris, G. M. Olson, & H. W. Stevenson (Eds.), *Learning and motivation in the classroom* (pp. 211–237). Hillsdale, NJ: Erlbaum.
- Pintrich, P. R., Cross, D. R., Kozma, R. B., & McKeachie, W. J. (1986). Instructional psychology. *Annual Review of Psychology*, 37, 611–651.
- Pintrich, P. R., & De Groot, E. V. (1990). Motivational and self-regulated learning components of classroom academic performance. *Journal of Educational Psychology*, 82, 33–40.
- Pokay, P., & Blumenfeld, P. C. (1990). Predicting achievement early and late in the semester: The role of motivation and use of learning strategies. *Journal of Educational Psychology*, 82, 41–50.
- Rosenthal, T. L., & Zimmerman, B. J. (1978). *Social learning and cognition*. New York: Academic Press.
- 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, CA: Academic Press.
- Skinner, E. A., Wellborn, J. G., & Connell, J. P. (1990). What it takes to do well in school and whether I've got it: A process model of perceived control and children's engagement and achievement in school. *Journal of Educational Psychology*, 82, 22–32.
- Weiner, B. (1985). An attributional theory of achievement motivation and emotion. *Psychological Review*, 92, 548–573.
- Weiner, B., Frieze, I., Kukla, A., Reed, L., Rest, S., & Rosenbaum, R. M. (1971). Perceiving the causes of success and failure. In E. E. Jones et al. (eds.), *Attribution: Perceiving the causes of behavior* (pp. 95–120). Morristown, NJ: General Learning Press.
- Weiner, B., Graham, S., Taylor, S. E., & Meyer, W. (1983). Social cognition in the classroom. *Educational Psychologist*, 18, 109–124.
- Weinstein, C. E., Goetz, E. T., & Alexander, P. A. (1988). *Learning and study strategies: issues in assessment, instruction, and evaluation*. San Diego, CA: Academic Press.
- Woolfolk, A. E., & Hoy, W. K. (1990). Prospective teachers' sense of efficacy and beliefs about control. *Journal of Educational Psychology*, 82, 81–91.
- Zimmerman, B. J., & Martinez-Pons, M. (1990). Student differences in self-regulated learning: Relating grade, sex, and giftedness to self-efficacy and strategy use. *Journal of Educational Psychology*, 82, 51–59.
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