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ABSTRACT

Social comparison is an important influence on motivation, capability self-evaluations (self-efficacy), and skillful performance. In addition, social comparative information provides a standard against which students can judge their present performance level. Students may experience an initial sense of self-efficacy in attaining a given standard; this sense may in turn enhance motivation. As students observe their progress, self-efficacy is substantiated, and this substantiation helps to sustain motivation and promote skills. Young children's social comparisons focus on practical concerns, but by the fourth grade, students regularly use social comparative information for self-evaluative purposes. Comparisons with similar others are especially informative of one's own capabilities. Research shows that, although social comparative information indicating average achievement enhances motivation, it exerts only modest effects on self-efficacy. Self-evaluations seem to be more strongly influenced by performance outcomes and educational practices such as teacher evaluations and goal setting. Preservice teachers need to realize that educational practices such as reward structures, modeling, and tutoring also can affect students' social comparisons; these effects should be taken into account when designing instructional activities. (Concluding notes indicate ways social comparison is used in the classroom and suggest effective uses of social comparison.) (Author/RH)

Social Comparison as a Vicarious Source of Self-Efficacy Information

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Abstract

Social comparison is hypothesized to be an important influence on motivation, capability self-evaluations (self-efficacy) and skillful performance. Social comparative information provides a standard against which students can compare their present performance level. Students may experience an initial sense of self-efficacy for attaining the standard, which can enhance motivation. As students observe their progress self-efficacy is substantiated, which helps to sustain motivation and promote skills. Young children's social comparisons focus on practical concerns, but by the fourth grade, students regularly use social comparative information for self-evaluative purposes. Comparisons with similar others are especially informative of one's own capabilities. Research shows that although social comparative information indicating average achievement enhances motivation, it exerts only modest effects on self-efficacy. Self-evaluations seem to be more strongly influenced by performance outcomes and educational practices such as teacher evaluations and goal setting. Preservice teachers need to realize that educational practices--such as reward structures, modeling, and tutoring--also can affect students' social comparisons; these effects should be taken into account when designing instructional activities.

Social Comparison as a Vicarious Source of Self-Efficacy Information

The social comparison process is viewed as an important influence on achievement behaviors by a variety of theoretical approaches (Ames, in press; Bandura, 1981; Ruble, 1983; Schunk, in press-b; Veroff, 1969). Social comparison refers to the process of comparing oneself with others (Festinger, 1954). In achievement contexts, social comparison can enhance task motivation (Schunk, in press-a). These motivational effects are important, because instructional procedures alone cannot fully account for students' diverse achievement patterns (Schunk, in press-b). Social comparison also can convey to students that they are capable of acquiring skills. As students then work at a task and observe their progress, these self-evaluations of capabilities are substantiated and help to sustain motivation. Collectively, enhanced motivation and capability self-evaluations promote skill development and may lead to further social comparisons. In short, the social comparison process is hypothesized to be an important contextual influence on students' task motivation, self-evaluations and learning (Schunk, in press-a).

At the same time, the effects of social comparison on achievement behaviors depend in part on students' developmental status, because students' use of social comparative information changes with development. The influence of social comparison also depends on the characteristics of the situation and of those to whom students compare themselves. For example, the perceived similarity of others can moderate the effects of social comparison.

Understanding the social comparison process can benefit preservice teachers in utilizing social comparison to promote achievement behaviors. In this article I first will review social comparison theory and discuss how students' use of social comparative information changes with development.

Some research is summarized that addresses the effects of social comparison on students' achievement behaviors. I will conclude by noting some typical ways that social comparison is employed in the classroom, and will offer some suggestions on effective uses of social comparison.

Social Comparison: Theory and Development

In everyday life, social comparison is an important source for learning about the appropriateness of many behaviors (Masters, 1971; Veroff, 1969). Where absolute behavioral standards are ambiguous or nonexistent, acceptability of behavior is relative to what is practiced generally. For example, students who converse too loudly with one another in the school library are apt to be told by the teacher to work quietly. To convey acceptable behavior to the students, the teacher could point out others in the library who are talking quietly or whispering.

The social comparison process also can help individuals learn how capable they are at a task. In many human endeavors, one's capabilities are defined relative to the accomplishments of others. Festinger (1954) discussed this role of social comparison as follows: "To the extent that objective, non-social means are not available, people evaluate their opinions and abilities by comparison respectively with the opinions and abilities of others" (p. 118). Thus, a student who wins the school spelling bee is likely to feel quite competent in spelling. In this example, though, the student's spelling excellence is relative to that of other students in the school.

Social comparison is employed regularly by adults in forming capability self-evaluations (Suls & Miller, 1977), but how children utilize social comparative information for self-evaluative purposes is less well understood. Developmental evidence suggests that the ability to process comparative information effectively depends on higher levels of cognitive develop-

ment and experience in making comparative evaluations (Veroff, 1969). Children younger than Ages 5-6 are characterized by what Piaget termed centration, or the tendency not to relate two or more elements in thought, and egocentrism, which refers to the "self" dominating one's cognitive focus and judgments (Flavell, 1963; Higgins, 1981). These cognitive characteristics do not mean that very young children cannot evaluate themselves relative to others, but only that they do not automatically do so. Children show increasing interest in comparative information in the early elementary school years, and by the fourth grade utilize such information to help form self-evaluations of performance capabilities (Ruble, Boggiano, Feldman, & Loebl, 1980; Ruble, Feldman, & Boggiano, 1976). Other research shows that by the fourth grade students' performances on both motor and learning tasks are influenced by the performances of peers, but that the behaviors of younger children are affected more by direct adult social evaluation, such as praise (e.g., "You're doing well") and criticism ("You could do better") (Spear & Armstrong, 1978).

Research suggests that although very young children engage in social comparison, the meaning and function of comparative information change with development and especially as a result of entering school. Preschool children actively compare at an overt physical level; for example, they frequently compare the rewards they receive with those of others (Masters, 1971; Ruble et al., 1980). Mosatche and Bragonier (1981) found that preschoolers' social comparisons with peers primarily involved instances of (a) establishing how one was similar to and different from others (e.g., "I'm 4 1/2, you're 4; we both had a birthday"), and (b) competition that seemed to be based on or desire to be better than others but that did not involve self-evaluation ("I'm the general; that's higher than the captain"). Much less frequently,

children engaged in comparative behaviors for the purpose of evaluating their own qualifications ("I can do it, too").

Ruble and her colleagues (Ruble, 1983; Ruble, Feldman, & Boggiano, 1976) discuss the development of social comparison in young children as a multistep process. The earliest comparisons primarily involve similarities and differences, but then shift to a concern with how to do something. For example, Feldman and Ruble (1977) found that first graders engaged in much peer comparison during an achievement task but primarily to obtain correct answers. Providing comparative information to preschoolers and children in primary grades may increase their motivation more for practical reasons (e.g., to obtain correct answers) than for acquiring information about personal capabilities (Ruble, Feldman, & Boggiano, 1976). It is important for teachers to realize that young children do not necessarily become more motivated by being aware that others are performing better. At the same time, telling young children who fail at a task that most other children also do poorly may not alleviate the negative impact of failure (Ruble, Parsons, & Ross, 1976). After first grade, interest increases in determining how well peers are doing, and comparative information begins to be used more often to help form self-evaluations of performance capabilities.

Social Comparison and Achievement Behaviors

A useful framework for relating social comparison to achievement behaviors is Bandura's social learning theory (Bandura, 1977b). According to this theory, behavioral change occurs in part due to the influence of perceived self-efficacy. Self-efficacy refers to personal judgments of performance capabilities in specific situations that may contain novel, unpredictable, and possibly stressful elements (Bandura, 1977a, 1981, 1982).

Self-efficacy is hypothesized to influence choice of activities (Bandura, 1977a). Students who hold a low sense of efficacy for accomplishig a task may attempt to avoid it, whereas those who feel more capable should participate more eagerly (Schunk, in press-b). Self-efficacy also is hypothesized to affect task motivation (Bandura, 1977a; Schunk, in press-b). Especially when facing obstacles, students who hold a higher sense of efficacy should expend greater effort and persist longer than those who doubt their capabilities (Bandura & Schunk, 1981; Schunk, in press-b). Individuals learn about their capabilities through self-performances, socially comparative vicarious (observational) means, forms of persuasion and physiological indexes.

In this conception, social comparison of one's performance with the performances of others constitutes a vicarious source of self-efficacy information (Bandura, 1981). There is evidence that similar others, rather than those much higher or lower in ability, offer the best information for judging one's own performance capabilities (Bandura, 1981; Suls & Miller, 1977). Once students begin to engage in social comparison for self-evaluation, perceived similarity is based more on actual performances than on underlying constructs such as ability, because it is not until around Age 9 that children begin to form a distinct conception of ability (Nicholls, 1978; Suls & Sanders, 1982). Telling children that similar others can perform a task (e.g., "See how well Shawn is doing") can promote a sense of efficacy for succeeding, because children are likely to believe that if other similar children perform at a certain level they can as well. In contrast, comparing oneself with those performing either much better or much worse offers less information about what one can do. Teachers need to realize, however, that as students become older they increasing relate perceived similarity in performance to underlying constructs such as ability (Davidson & Smith, 1982).

Social comparison is hypothesized to exert diverse effects in achievement contexts (Schunk, in press-a). When students perceive a negative discrepancy between their present performances and those of similar others, they are apt to believe that they can perform as well and become motivated to attain the comparative level (Masters, 1971). As students work at the task, motivation and self-evaluation exert reciprocal effects. Motivation leads to progress toward the comparative level. When students observe that they are making progress, their initial capability self-evaluations are likely to be substantiated (Schunk, in press-b). Enhanced self-evaluations help to sustain motivation. Collectively, these two processes result in a higher level of skill development, which can serve as the basis for further social comparisons.

As an example of this process, it is not unusual for elementary school children to experience some anxiety and to doubt their capabilities to execute gymnastic movements such as cartwheels or somersaults. Such children may benefit from observing peers perform these exercises. Observation of peers may motivate children to try the exercises themselves and convey that children can learn the exercises. Then as children actually perform cartwheels and somersaults, they ought to notice that they are improving and not injuring themselves, which helps to sustain motivation. With skill improvement, children are apt to engage in further social comparison to determine how smooth their movements are compared with those of others.

Motivational Effects

Research supports the idea that social comparative information can exert strong motivational effects on students' performances by the fourth grade (Schunk, 1983a; Spear & Armstrong, 1978). Feldman and Ruble (1977) also found an enhanced level of motivation among second graders compared with younger

children. Within this context, certain contextual factors influence the likelihood and effects of social comparison.

One theoretically relevant factor is an objective standard for evaluation (Festinger, 1954); that is, there ought to be greater interest in social comparison in the absence of an objective criterion against which to evaluate one's performance. Among third graders, Pepitone (1972) found that the presence of a correct finished product (a jigsaw puzzle) reduced tendencies toward social comparison; however, among first and fourth graders, Feldman and Ruble (1977) obtained only a very weak effect on interest in social comparison due to the absence of an objective performance criterion (a time standard for the best performance). One possibility is that even when an objective performance criterion is present, students still may be interested in social comparison to assess their performance capabilities against those of others.

A second important factor is the presence of competition: Social comparison theoretically should become more prevalent in a competitive setting. Although there are some exceptions, research studies generally have found increased comparative behaviors in more competitive as opposed to less-competitive or noncompetitive settings (Ames, 1981; Feldman & Ruble, 1977; Mithaug, 1973; Pepitone, 1972; Ruble, Feldman, & Boggiano, 1976). For example, Feldman and Ruble (1977) found increased interest in social comparison when children knew that only the first child to finish puzzles would win a prize. In short, competition appears to increase students' motivation to compare themselves with others.

The effects of sex differences also have been explored. Ruble, Feldman, and Boggiano (1976) obtained evidence that among children in kindergarten through second grade, boys showed greater interest in comparative information than girls. Spear and Armstrong (1978) found that comparative information

exerted motivational effects on boys' performances on easier tasks, but not on difficult ones; no differences due to type of task were obtained for girls. Ruble, Feldman, and Boggiano (1976) suggest that there may be more external (societal) pressure placed on boys than on girls to evaluate themselves relative to others.

Informational Effects

To the extent that students adopt comparative information as a standard of performance, we might expect that they would form higher evaluations of their capabilities from working at the task and observing their progress toward the standard. Although research supports this proposition, the effects of comparative information on capability self-evaluations are not particularly strong. For example, Schunk (1983a) provided comparative information to fourth graders on the typical progress of other similar children during a long division competency-development program. The comparative information enhanced task motivation in that children demonstrated a high rate of problem solving during the training program, but the effect on self-efficacy for solving division problems was only modest. Ruble, Parsons, and Ross (1976) worked with children ranging in age from 4 to 11 on a matching familiar figures task (Zelniker, Jeffrey, Ault, & Parsons, 1972). Children's affective reactions toward the task and self-evaluations of ability were influenced more by task outcome (i.e., success or failure) than by comparative information indicating the difficulty of the task (easy or hard). Schunk (1983b) found that directly telling fourth graders that they could work a given number of problems during a division training program (e.g., "You can work 25 problems") enhanced children's sense of self-efficacy more than providing comparative information indicating that other similar children could work that many problems.

Ruble, Parsons, and Ross (1976) suggest that providing students with comparative information leads to high interest in self-evaluation. Results of the Schunk (1983a, 1983b) studies suggest that in the absence of comparative information students may focus on how their present performance attainments surpass their prior accomplishments, which seems to enhance self-efficacy more than comparisons with others.

What social comparative information conveys to students about their level of competence depends on the characteristics of the comparasion students. When people compare themselves to similar others on ability-related attributes, they expect to perform at an equivalent level (Goethals & Darley, 1977). If their performance matches the comparative standard, they may not feel overly efficacious if they realize that their performance was only average (Schunk, 1983a). For most students, "similar others" are peers of average ability. Comparative information indicating average achievement motivates students to reach the standard, but may not promote a strong sense of personal competence.

At the same time, comparative information indicating average accomplishments conveys the clearest information to most students about their own capabilities. Information indicating an easy task (e.g., all students can do this) conveys ambiguous information about one's capabilities (Goethals & Darley, 1977), because students who match the standard might nonetheless wonder how good they are. Conversely, comparative information indicating a difficult task (few students can do this) could stifle motivation because many students will be reluctant to attempt the impossible, and if their subsequent performances were worse than the comparative level, it would be unclear how capable they really were. Of course, should students attain a high compara-

tive standard they likely would feel highly capable, although for average students such a performance is unlikely.

As an illustration, suppose that students are assigned 20 spelling words on Monday, study each day, and are tested on Thursday. Those who score 100% receive free time during Friday's spelling period, whereas others are retested on Friday. Students would learn little about their spelling capabilities if nearly everyone scored 100% on the Thursday tests, because they likely will believe that the words were easy. On the other hand, few students would be motivated to put forth extra effort on studying during the week if hardly anyone scored 100% on the Thursday tests. Students could derive the clearest information about their own capabilities if about half of the class demonstrated mastery on Thursdays, because they readily could determine their relative standing (i.e., top or bottom half).

In short, comparative information indicating average performance is motivating for most students but may not constitute the most effective means of enhancing capability self-evaluations. Again, directly informing students about their capabilities ("You can do this") may motivate them equally well but better enhance self-efficacy (Schunk, 1983a). Once students work at a task, their actual successes and failures become more important influences on self-evaluations than peer comparisons (Ruble, Parsons, & Ross, 1976).

It should be emphasized that how information about similar others affects self-evaluations may depend on the student's ability level. It would seem that providing high achievers with performance information about other high achievers could promote a high sense of self-efficacy if students attained the comparative level.

Social Comparison in the Classroom

Social comparisons can be initiated in classrooms by students or teachers. Students engage in much social comparison on their own. Although student-initiated social comparisons may exert motivational effects and convey some information about capabilities, a problem is that students may compare themselves to inappropriate others (i.e., those much higher or lower in competence). Students who compare themselves to superior others are apt to become demoralized when their attainments consistently fall short of the comparative levels, whereas students who compare themselves to those much lower in competence may overestimate what they can do and attempt tasks beyond their means.

Teachers frequently provide students with social comparative information (e.g., "Shawn, see how well Kevin is working"). Teachers who fail to select comparative others judiciously run the risk of students not perceiving the comparative others as similar to themselves. Thus, if Shawn believes that Kevin always works much better than he does, this type of comparative information is not likely to improve Shawn's working habits.

Even if teachers carefully select comparative others and students perceive the comparative others as similar to themselves, it is necessary that students' subsequent performances at least approximate the comparative level if enhanced motivation and self-efficacy are to be sustained. Students who perform well below the comparative level suggested by the teacher may believe that they are not particularly skillful and that further efforts will not lead to improvement.

As suggested earlier, an alternative to conveying social comparative information is to provide students with direct attainment information, such as, "I know you can do this" (Schunk, in press-a). Direct attainment informa-

tion motivates students to work at a task (Schunk, 1983b), and in the absence of comparative information students ought to focus on how their present performance accomplishments surpass their prior attainments, which builds self-efficacy (Schunk, in press-a). Once students work at a task, their actual successes and failures become important influences on self-evaluations (Ruble, Parsons, & Ross, 1976).

A related alternative for teachers is to suggest short-term goals to students (e.g., "Try to finish 3 pages by the end of the period"). Suggesting a goal to students conveys that they possess the necessary capabilities to attain it, which enhances motivation (Schunk, in press-b). Because progress toward a short-term goal is easy to gauge, students' initial sense of self-efficacy for goal attainment is validated as they work at the task and observe their progress (Schunk, in press-a). In turn, a higher sense of self-efficacy helps to sustain task motivation and leads to further skill improvement. As students become more familiar with the task demands, they can set their own performance goals with teacher assistance as necessary.

Educational practices are important contextual influences on motivation and self-efficacy (Schunk, in press-b). It is important for preservice teachers to realize that educational practices also can affect social comparasion. Some examples of these processes are discussed below.

Reward Structures

How rewards are distributed in classrooms can influence students' social comparisons (Ames, 1981, in press). Under competitive conditions, students' rewards are negatively related, because the opportunity for a student to receive a reward is reduced when others are successful. Competitive reward structures increase social comparisons (Ames, in press). Such comparisons are apt to sustain motivation and lead to a strong sense of self-efficacy among

high-achieving students, because their performances will surpass those of others. The remaining students might become demoralized when they realize that they will not earn a reward, which could stifle motivation and lead to a low sense of self-efficacy for performing well.

In contrast with competitive structures, individualistic structures are characterized by rewards based on self-improvement; students' achievements are independent of one another and the opportunity of receiving a reward is equal across students. Individualistic structures should be more likely to foster motivation and lead to higher self-efficacy among all students to the extent that they perceive their present performances to exceed their prior attainments.

A third type of structure is characterized by cooperation, or positive interdependence among a group of students; that is, group members share in the rewards based on their collective performance. Research shows that successful cooperative groups tend to reduce social comparisons, as well as between-student differences in motivation and self-evaluations (Ames, 1981). The suggestion is that low group performers focus on the collective group success, which enhances their motivation and self-evaluations.

Teachers who utilize individualistic and cooperative reward structures can help to minimize negative social comparisons. It should be noted, however, that motivation and self-efficacy may suffer when students perceive no progress under individualistic conditions, and that between-student differences in motivation and self-evaluations emerge when cooperative groups are unsuccessful. Thus, it becomes important for teachers to plan activities such that students will experience at least modest success under these conditions.

Modeling

Modeling is a form of social comparison (Schunk, in press-a). Observing others can motivate students and enhance self-efficacy because students may believe that if others can succeed they can as well (Bandura, 1981). This sense of efficacy is validated when students subsequently perform the task themselves and experience some success. Modeling is commonly employed by teachers during instruction.

Certain characteristics of models influence their effects on students. Models who are similar to observers offer the best basis for comparison (Rosenthal & Bandura, 1978). Perceived similarity may be based on personal attributes (i.e., sex, age, ethnicity, socioeconomic or educational level), prior experiences or perceived competence (Bandura, 1971; Schunk, in press-a). These considerations question whether teacher modeling really has much effect on students' sense of efficacy, especially among low-achieving students who perceive the teacher as vastly superior in competence.

For this reason, peer models may offer a better basis for comparison and lead to higher motivation and self-efficacy. Further, because initial student learning often is fraught with difficulties, it may be that peer models who demonstrate coping behaviors would be especially effective. In this regard, a distinction can be drawn between mastery and coping models. Mastery models demonstrate faultless performance from the outset, whereas coping models begin by demonstrating the typical errors and fears experienced by observers, but gradually improve their performance and gain self-confidence (Rosenthal & Bandura, 1978). Coping models illustrate how determined effort and positive self-thoughts can overcome difficulties. Research shows that coping models can enhance subsequent performance by observers better than mastery models,

and that modeled self-confidence can promote children's self-efficacy (Meichenbaum, 1971; Zimmerman & Ringle, 1981).

These considerations suggest that teachers might employ student peer models more often and incorporate coping behaviors into their own modeled demonstrations, particularly with students who may encounter difficulties. Although both mastery and coping models convey skills, coping models should promote students' motivation and self-efficacy better if they are perceived as more similar in competence.

Tutoring

Tutoring often is used with remedial students because it provides the opportunity for greater student responding and individual feedback. Although research shows that tutoring is an effective instructional strategy, it may not always promote student achievement better than group instruction (Cloward, 1967; Sindelar, 1982).

Tutors can affect students' social comparisons. Social comparison is apt to be minimized when students are tutored by adults. Under these circumstances, which actually constitute a type of individualistic reward structure, students are apt to focus on their academic progress. This type of focus should promote perceptions of self-efficacy. Social comparisons should occur when peers (cross- or same-age) are utilized as tutors. The present review suggests that students are apt to feel more efficacious when they perceive tutors as somewhat similar to themselves, because students may believe that if tutors could master the skills, they can as well. Although teachers often select high-ability students to tutor low-ability ones, this type of arrangement may not promote students' self-efficacy as well as if they perceive their tutors' abilities more similar to their own.

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