

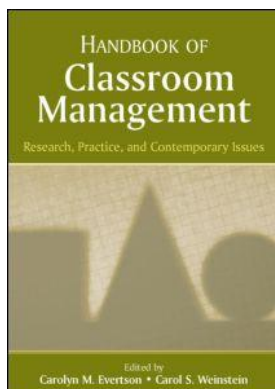
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Extrinsic Rewards and Inner Motivation

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INTRODUCTION

Most children glow with excitement when they see a sticker attached to their latest homework effort. When offered a special privilege, most adolescents perk up with interest. Positive emotion and a spike in students' willingness to participate is what teachers often see when they introduce extrinsic rewards into the learning environment. The conclusion seems to be that extrinsic rewards are effective motivators that can contribute to teachers' efforts to manage classrooms. The present chapter both acknowledges and debates this apparent truism.

Extrinsic rewards enhance students' emotion and on-task behavior, but they do more. They also affect students' inner motivation (Deci, Koestner, & Ryan, 1999; Ryan & Deci, 2000a). As we shall see, extrinsic rewards sometimes support, but other times interfere with, students' inner motivation. This interaction between extrinsic rewards and inner motivation therefore introduces a complex set of circumstances in predicting how effective rewards will be as classroom motivators. Accordingly, a comprehensive analysis of how extrinsic rewards affect emotion and behavior needs to be extended to include an analysis of how extrinsic rewards affect inner motivation. Students possess a repertoire of inner motivational resources that are fully capable of energizing and sustaining their classroom engagement—with or without the support of extrinsic rewards (Reeve, 1996). So, the question to ask is whether teachers need extrinsic rewards to motivate students. With this question in mind, the four-fold purpose of this chapter is to discuss the following issues about the role of extrinsic rewards in classrooms: (a) What are the motivating effects of extrinsic rewards? (b) How do extrinsic rewards affect students' inner motivation? (c) How do both extrinsic rewards and inner motivation affect students' classroom engagement? and (d) What are some recommendations for how educators can effectively motivate and engage students during learning activities?

EXTRINSIC REWARDS

An extrinsic reward is some offering given in return for another person's service or achievement (Craighead, Kazdin, & Mahoney, 1981). Thus, when a teacher promises a prize if her students will participate more or when a teacher smiles to acknowledge their successful performance, she administers a reward (prize, smile). Common classroom rewards include praise, attention, stickers, gold stars, privileges, good grades, tokens, approval, scholarships, candy, food, trophies, check marks and points, good citizen certificates, awards, money, smiles, positive feedback, public recognition, pats on the back, prizes, special materials, free time, incentive plans, and honor rolls.

Because extrinsic rewards are often confused with positive reinforcers, which are defined by their effects on behavior, I will distinguish between the two. A positive reinforcer is any environmental event that, when presented, increases the strength and future probability of a target behavior. The distinction between rewards and positive reinforcers is that all positive reinforcers are rewards, whereas only some rewards function as positive reinforcers (because not all rewards increase behavior). The focus in this chapter is on the broad instructional practice of offering extrinsic rewards to solicit students' service or to acknowledge their achievement, irrespective of whether those rewards actually reinforce behavior. Such a focus allows the discussion to center on teachers' use of extrinsic rewards as *potential* classroom motivators.

Why Rewards Enliven Positive Emotion and Facilitate Behavior

Why do students get so excited about the prospect of an extrinsic reward? Why do rewards enliven positive emotion and facilitate behavior? Like all human beings, students are inherently sensitive to signals of gain and pleasure. The physiological mechanism that makes students inherently sensitive to reward (to gain and pleasure) is the release of brain dopamine (Mirenowicz & Schultz, 1994; Montague, Dayan, & Sejnowski, 1996) and the subsequent activation of the behavioral activation system (BAS; Gray, 1990). Increased neural activity in the BAS is responsible for generating inherently positive feelings, such as hope and interest. It further facilitates behavior, as BAS activation literally and physically encourages students to move toward environmental signals of personal gain. Thus, an extrinsic reward enlivens positive emotion and facilitates behavior because it signals an upcoming opportunity for a personal gain.

In practice, the offering of an extrinsic reward means, to students, that personal gain is imminent and that the classroom script has taken an unexpected turn for the better. For instance, routine (expected) classroom events leave students' BASs unaffected. However, when events take an unexpected turn for the better, then dopamine release and BAS neural activation occur, as the brain inherently latches onto the environmental signal of an unexpected gain. An unexpected sticker and a surprise announcement of a special privilege represent two such examples of teacher-provided signals of students' possible future gain.

Why Rewards Are So Prevalent in Schools

Because school personnel often note students' emotional and behavioral responsiveness to particular rewards, they capitalize on this phenomenon by identifying desired behaviors and engineering contingencies between behaviors and rewards. Extensive research literatures (e.g., behavior modification programs) show practitioners how to administer extrinsic rewards in this way (Alberto & Troutman, 2003; Baldwin & Baldwin, 1986; Walker, Shea, & Bauer, 2004).

Briefly, teachers administer rewards in one of the following three ways: (a) before the target behavior so to elicit a particular way of behaving from the student; (b) during the performance of the target behavior so to maintain its persistence; and (c) as a consequence after an episode of the target behavior has occurred.

Teachers introduce extrinsic rewards into the learning environment for two primary reasons. One reason is to manage students' behavior. When teachers manage students' behavior, they essentially set up conditions (e.g., reward contingencies) that make desired target behaviors more likely. A second reason teachers use rewards is to supply students with motivation that they might otherwise lack. From a motivational (rather than a behavioral) perspective, teachers use rewards to bolster students' otherwise low motivation (Boggiano, Barrett, Weiher, McClelland, & Lusk, 1987). For example, teachers may decide that if the task itself cannot generate enough motivation for students to engage it, then what is needed is an added external gain to provide students with the motivation they otherwise lack. For instance, if a poetry assignment fails to provide students with the motivation they need to complete it, then perhaps the offer of bonus points for doing so will provide the motivation the assignment itself was unable to provide.

This chapter focuses on the use of extrinsic rewards to motivate students' academic learning and behavior. In addition to extrinsic rewards, however, teachers who seek to manage students' behavior have many additional ways to do so. For instance, teachers can offer clear expectations of what students are to do, endorse high standards of achievement, provide step-by-step directions, introduce a schedule, set goals, make plans, offer suggestions, introduce interesting activities, offer choices, provide encouragement, introduce attractive role models, and administer performance feedback (Brophy, 1986; Skinner, 1995). Motivation researchers in the classroom management tradition therefore extend their focus beyond just extrinsic rewards to include the more general construct of classroom structure.

Structure refers to the amount and clarity of information that teachers provide to students regarding what to do, how to do it, and what are the best ways to develop desired skills and achieve valued outcomes (Connell & Wellborn, 1991; Skinner, 1985, 1995; Skinner, Zimmer-Gembeck, & Connell, 1998). Its opposite is confusion. Confused students lack a clear intention to act (e.g., "What should I do?"). Generally speaking, the more teachers provide structure for students' learning experiences, the more students develop intentions to act that enable them to achieve the skills and outcomes they value (Skinner et al., 1998). From a classroom management perspective, the provision of structure prepares students for learning (Martin, 1983). By structuring a learning environment, teachers focus students' attention and make the lesson's framework clear (Perrott, 1982).

Rewards as One Part of Classroom Structure

A glimpse into the history of psychology shows how educators gradually expanded a narrow focus on rewards to a broader focus on structure. When behaviorism dominated psychological thinking, motivation, intentions, and behaviors were seen as a function of environmental events such as incentives, consequences, and rewards (Bolles, 1972; Dember, 1965). Two generations of work showed that students' motivated behavior was further a function of observing models, setting goals, formulating expectations, striving for competence, being mentored and scaffolded, receiving feedback, piquing curiosity, nurturing intrinsic motivation, catching and holding interest, supporting autonomous self-regulation, and so on (Weiner, 1990). Offering rewards became recognized as only one way to motivate students. To add motivational strategies such as modeling, scaffolding, offering challenges, communicating feedback, supporting autonomy, and promoting mastery goals, a more general term was needed to describe the process

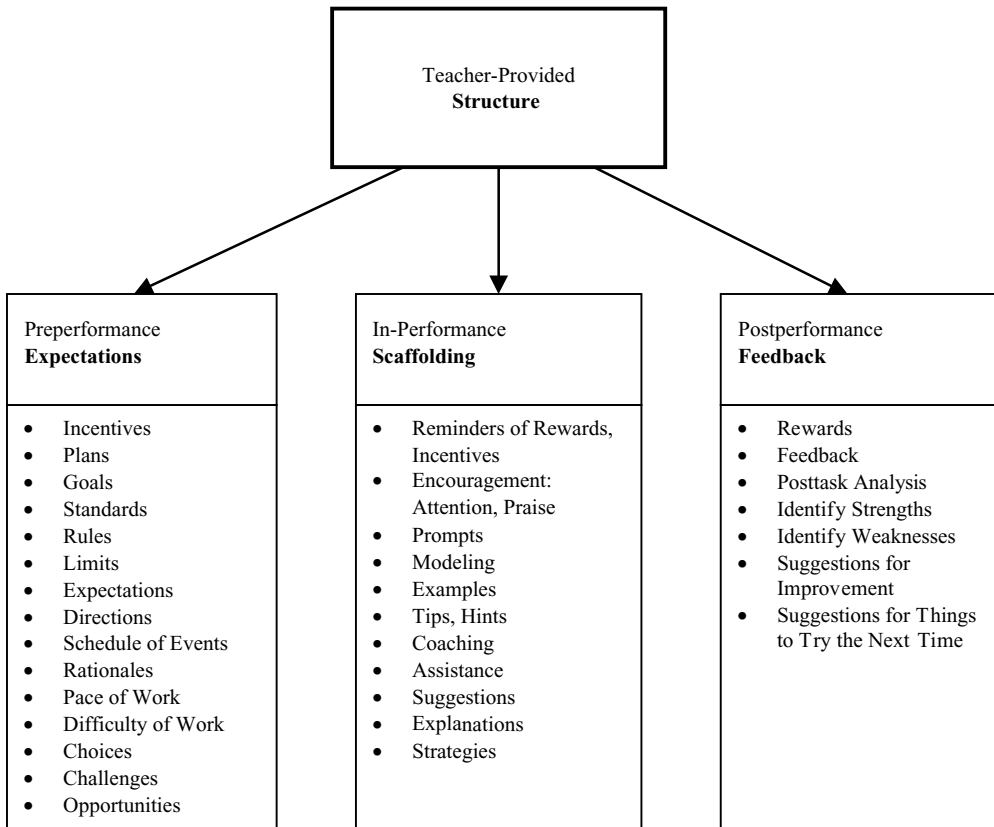


FIGURE 24.1. Elements of teacher-provided classroom structure.

by which teachers help students formulate and maintain intentions to act. As mentioned, that term became known as structure, as in a structured learning environment.

Figure 24.1 provides a framework to illustrate the role of extrinsic rewards within a highly structured learning environment. The figure divides the flow of any learning activity into three phases. First, before asking students to engage themselves in the learning activity, the teacher prepares students for learning by communicating her expectations, standards, and a script for what students will do. What all these aspects of structure have in common is that they help students formulate intentions to act. If rewards are used at this point in the lesson, they are offered as incentives in exchange for students' service. Second, during the learning activity, the teacher monitors and assists students' activity by providing reminders, encouragement, modeling, and scaffolding. What all these aspects of structure have in common is that they help students maintain their intentions to act. If rewards are used at this point in the lesson, they are employed to remind students of the contingencies that are in place or as behavioral supports to maintain students' positive emotion and on-task behavior. Third, upon the completion of the learning activity, the teacher tells students what they learned and prepares them for future learning experiences by offering feedback, analysis, and a reflective commentary as to what students did well, did poorly, and what needs to be done the next time. What all these aspects of structure have in common is that they help students revise their intentions and formulate new and improved intentions for the future. If rewards are used at this point in the lesson, they are given either spontaneously or in exchange for students' achievement.

Are Rewards Effective Motivators?

Do extrinsic rewards work? Are they effective motivators? If so, extrinsic rewards should meet two criteria:

1. If effective, rewards should encourage engagement via a facilitating effect on students' positive emotion and on-task behavior.
2. If safe, rewards should produce this facilitating effect without introducing any troubling "side effects."

Do Rewards Work? The general consensus is that, yes, extrinsic rewards do encourage targeted behaviors, at least when teachers administer them in a sincere and contingent way (Alberto & Troutman, 2003; Walker et al., 2004). If a teacher promises students a pizza party if they achieve 100% attendance for the week, then the promise of a pizza party will generally encourage students' subsequent attendance. Many additional examples of the positive effects that rewards have on students' compliance can be offered, including using rewards to motivate students to complete their homework (Harris & Sherman, 1974; Miller & Kelley, 1994), follow the teacher's "do" and "don't" requests (Neef, Shafer, Egel, Cataldo, & Parrish, 1983), improve their reading fluency (Eckert, Ardoin, Daly, & Martins, 2002), and complete assigned tasks (Martens, Lochner, & Kelly, 1992). One qualification of this conclusion is that, when rewards are no longer offered in exchange for a target behavior, the facilitating effect declines and the once-contingent behavior returns to its prereward baseline level (Baldwin & Baldwin, 1986).

Do Rewards Produce Troubling "Side Effects?" The general consensus is, again, yes, extrinsic rewards sometimes produce troubling side effects. Collectively, these side effects have been termed the "hidden costs of reward," because our society and American education in general typically view extrinsic rewards as positive contributors to students' motivation and behavior (Lepper & Greene, 1978). Three such hidden costs include (a) decreased intrinsic motivation toward the activity; (b) interference with the process and quality of academic learning; and (c) undermining of students' capacity for autonomous self-regulation.

The first side effect is that extrinsic rewards often undermine intrinsic motivation (Deci et al., 1999; Ryan & Deci, 2000a). The research on how extrinsic rewards affect intrinsic motivation began with this question: "If a person is involved in an intrinsically interesting activity and begins to receive an extrinsic reward for doing it, what happens to his or her intrinsic motivation for that activity?" (Deci & Ryan, 1985, p. 43). Extrinsic rewards generally do not add to intrinsic motivation, and extrinsic motivation and intrinsic motivation do not necessarily combine into "super motivation." Instead, the introduction of an extrinsic reward typically conflicts with and eventually undermines intrinsic motivation (Condry, 1977; Deci et al., 1999; Lepper & Greene, 1978; Ryan & Deci, 2000a).

Teachers are often surprised to learn that extrinsic rewards can undermine intrinsic motivation (Hom, 1994), so the undermining effect needs to be explained. Extrinsic rewards undermine intrinsic motivation when "play becomes work" (Lepper & Greene, 1975) and when rewards conflict with students' psychological need for autonomy (Deci, 1975; Deci et al., 1999). When rewards are at stake, students who have an initial intrinsic motivation toward reading, for instance, begin to read less and less out of endogenous interest, autonomy, and intrinsic motivation, and more and more for the exogenous gain of extrinsic reward. Basically, bribing students to engage in a task, even when doing so with rewards that are unquestionably attractive, instigates a shift in students' understanding of why they engage in that activity away from a reason of autonomy, intrinsic motivation, and "play" to one of reward, extrinsic motivation, and "work." Students who have participated in the popular *Book It!* reading program,

or any student who has been induced to read a book for a \$2 prize, can attest to this experience of turning play into work (Donahue, 1996).

However, extrinsic rewards do not always undermine intrinsic motivation. Some types of extrinsic rewards do undermine intrinsic motivation, but other types leave intrinsic motivation unaffected or even increase it. Expected, tangible, and task-contingent rewards (“If you do X, then you get some candy.”) typically undermine intrinsic motivation. Unlike expected rewards, unexpected rewards do not undermine intrinsic motivation (Deci et al., 1999; Lepper, Greene, & Nisbett, 1973; Pallak, Castomiris, Sroka, & Pittman, 1982; Tang & Hall, 1995). Unlike tangible rewards such as tokens and food prizes that undermine intrinsic motivation (Wiersma, 1992), verbal rewards and positive feedback do not (Anderson, Manoogian, & Reznick, 1976; Blank, Reis, & Jackson, 1984; Deci et al., 1999; Henderlong & Lepper, 2002). In the same spirit, task-noncontingent rewards (those given with no strings attached) do not undermine intrinsic motivation the way task-contingent rewards do (Ryan, Mims, & Koestner, 1983; Tang & Hall, 1995). Thus, the undermining of intrinsic motivation seems to occur when extrinsic rewards are offered in the following way, “If you turn in your homework, you get a candy bar.” or “If you want a sticker, you have to come to class on time.”

The second side effect is that expected tangible, and task-contingent rewards generally interfere with both the *process* and the *quality* of learning. These types of extrinsic rewards interfere with the learner’s on-task attention and challenge seeking, as learners shift their attention away from the learning material toward the extrinsic reward (Harter, 1978; Pittman, Boggiano, & Ruble, 1983) and prefer easy success over optimal challenge (Shapira, 1976). These types of rewards also tend to orient learners toward passivity, convergent thinking, quickly getting the right answer, and a search for factual knowledge, but away from creativity, divergent thinking, the search for an optimal solution, and the desire to conceptually understand the lesson (Amabile, 1985; Benware & Deci, 1984; Boggiano, Flink, Shields, Seelbach, & Barrett, 1993; Grolnick & Ryan, 1987; McGraw & McCullers, 1979).

The third side effect is that extrinsic rewards interfere with students’ developmental capacity for autonomous self-regulation (Cannella, 1986; Lepper, 1983; Kohn, 1993; Ryan, 1993). From a motivational perspective, autonomous self-regulation is the capacity to initiate and persist in environmental transactions in ways that involve and satisfy one’s inner motivational resources, such as interests and preferences. When these types of rewards are not at stake, students generally engage themselves in academic activities in ways that reflect the rise and fall of their inner motivation (Joussemet, Koestner, Leke, & Houliort, 2004). In contrast, the offering of an attractive extrinsic contingency essentially asks students to neglect or at least put aside their inner motivation and instead engage themselves in relatively uninteresting and nonpreferred activities. Over time, controlling external contingencies desensitize students to their basic needs, disrupt their self-awareness, and interfere with their sense of choice and autonomous self-regulation.

INNER MOTIVATION

Students are sensitive and responsive to environmental signals of reward, and this sensitivity endows them with a capacity for extrinsic motivation. In addition, however, students further possess an array of inner motivational resources (Reeve, 1996; Reeve, Deci, & Ryan, 2004). Among students’ inner resources are their psychological needs and intrinsic motivation.

Psychological Needs

A psychological need is an inherent process that underlies a student’s desire to seek out interactions with the environment for experiences that are essential and necessary for vitality,

psychological growth, and well-being (Reeve, 2004). The three psychological needs studied extensively in the empirical exploration of intrinsic and extrinsic motivation are autonomy, competence, and relatedness (Ryan & Deci, 2000b, 2002). Unlike the motivation associated with extrinsic rewards, which is reactive and environmentally generated, the motivation associated with psychological needs is proactive and personally generated. Collectively, these psychological needs provide students with a natural motivation for learning, growing, and developing. Whether students actually experience such learning, growing, and developing, however, depends on the quality of the social environment and the extent to which it supports and nurtures versus neglects and frustrates these needs.

Autonomy is the inner endorsement of one's actions, and it reflects the desire to have one's interests and preferences (rather than reward contingencies) determine one's actions (Deci & Ryan, 1985). The experiential qualities that constitute its subjective experience include an internal perceived locus of causality, high volition (feeling free), and perceived choice over one's actions (Reeve, Nix, & Hamm, 2003). Behavior is autonomous when a student's interests and personal preferences (i.e., inner motivational resources) guide the decision-making process of whether to engage in a particular activity.

Competence is the psychological need to be effective in interactions with the environment, and it reflects the desire to exercise one's capacities and skills, and in doing so, to seek out and master optimal challenges (Deci & Ryan, 1985). The experiential qualities that constitute its subjective experience include feeling capable, effective, flow, and a sense that one is making progress. Behavior reflects the need for competence when the student proactively seeks out and invests high effort in finding optimal challenges, concentrates and becomes fully absorbed during those challenges, and uses the task engagement as an opportunity to develop and stretch valued skills.

Relatedness is the psychological need to establish close emotional bonds and attachments with others, and it reflects the desire to be emotionally connected to and interpersonally involved in warm relationships (Baumeister & Leary, 1995; Furrer & Skinner, 2003; Ryan, 1991). The experiential qualities that constitute its subjective experience are acceptance, belongingness, and sense of being genuinely cared for. Behavior reflects the need for relatedness when the student gravitates toward people perceived to be trustworthy and to be looking out for one's well-being.

Intrinsic Motivation

Intrinsic motivation is the inherent propensity to engage one's interests and to exercise and develop one's capacities (Deci & Ryan, 1985). It emerges spontaneously from the psychological needs for autonomy, competence, and relatedness (Ryan & Deci, 2000b), and its emergence requires no instrumental reason associated with extrinsic reward. Instead, intrinsic motivation arises when an activity successfully involves and nurtures one or more of the psychological needs. When intrinsically motivated, however, students do not typically say, "I feel competent" or "I feel autonomous." Instead, they say, "that is interesting," "that is fun," or "I enjoy doing it." For instance, when students say that math or art is fun, the experience that allows the activity to be deemed as fun is theoretically one of autonomy, competence, or relatedness satisfaction. Though intrinsically motivated individuals feel interest and enjoyment, the underlying source of their intrinsic motivation is nonetheless the involvement and nurturance of their psychological needs (Deci, 1987, 1992; Ryan & Deci, 2000b).

Intrinsic motivation yields numerous educational benefits for students. When intrinsically motivated, students are more likely to be creative (Amabile, 1985), active during information processing (Benware & Deci, 1984), learn in ways that are conceptual (Boggiano, Fink, Shields, Seelbach, & Barrett, 1993; Grolnick & Ryan, 1987), experience greater positive emotion and subjective well-being (Ryan & Deci, 2000b), and come to school rather than drop out

(Hardre & Reeve, 2003). Though intrinsic motivation arises from students' psychological needs, educators can nevertheless use extrinsic rewards to support and satisfy these psychological needs. Hence, whereas some types of extrinsic rewards produce troubling side effects, other types can support intrinsic motivation, learning, and autonomous self-regulation, as will be illustrated in the next section on cognitive evaluation theory.

COGNITIVE EVALUATION THEORY

Sometimes, educators offer students extrinsic rewards to increase their desired behaviors. In using rewards in this way, the teacher's purpose is to shape, guide, or control students' behavior. Other times, educators offer extrinsic rewards to communicate a message of a job well done. In using rewards in this way, the teacher's purpose is to enhance students' sense of competence. Extrinsic rewards therefore serve two purposes: to elicit a desired behavior (control behavior) and to affirm achievement (inform competence). According to cognitive evaluation theory, this first purpose is referred to as the "controlling aspect" of a reward, whereas the second purpose is referred to as its "informational aspect" (Deci & Ryan, 1985). The theory goes further, however, and states that *all* extrinsic rewards have *both* a controlling aspect and an informational aspect. That is, all rewards both control behavior and inform competence, and the important distinction is whether the teacher's primary purpose in administering the reward is to control behavior or to inform competence.

Figure 24.2 graphically represents the elements in cognitive evaluation theory. As shown on the left-hand side of the figure, any extrinsic reward—or any aspect of classroom structure for that matter—is used both to control behavior and to inform competence. The more the extrinsic reward is used to control students' behavior, the more it will increase extrinsic motivation, frustrate autonomy, and undermine intrinsic motivation. If the extrinsic reward is not used in a controlling way, however, it may leave these motivational outcomes (extrinsic motivation, need for autonomy, intrinsic motivation) unaffected. The more an extrinsic reward is used to inform students' competence, the more it will satisfy the need for competence and enhance intrinsic motivation. If the extrinsic reward is not used in an informational way, however, it may leave these motivational outcomes (need for competence, intrinsic motivation) unaffected.

Tests of cognitive evaluation theory have consistently supported the theory (Rummel & Feinberg, 1988; Tang & Hall, 1995; Wiersma, 1992), and the theory explains students' motivational reactions to extrinsic rewards across a range of student-related factors, though some age effects have occurred. Children's autonomy and intrinsic motivation, for instance, are often more impaired by controlling extrinsic rewards than are adults' autonomy and intrinsic motivation (Deci et al., 1999).

What makes the theory unique in the classroom management literature is that it emphasizes students' inner motivation, specifically the psychological needs for autonomy and competence. The controlling aspect of an extrinsic reward affects students' need for autonomy, whereas its informational aspect affects students' need for competence. Extrinsic rewards affect the psychological need for autonomy mostly through their controlling aspect, as expected, tangible, and task-contingent (i.e., controlling) rewards frustrate and thwart students' need for autonomy. Extrinsic rewards affect the psychological need for competence mostly through their informational aspect, as unexpected, verbal, and performance-contingent rewards nurture and satisfy students' need for competence. From this point of view, cognitive evaluation theory allows the chapter to address one of its key purposes—namely, to explain how extrinsic rewards affect students' inner motivation.

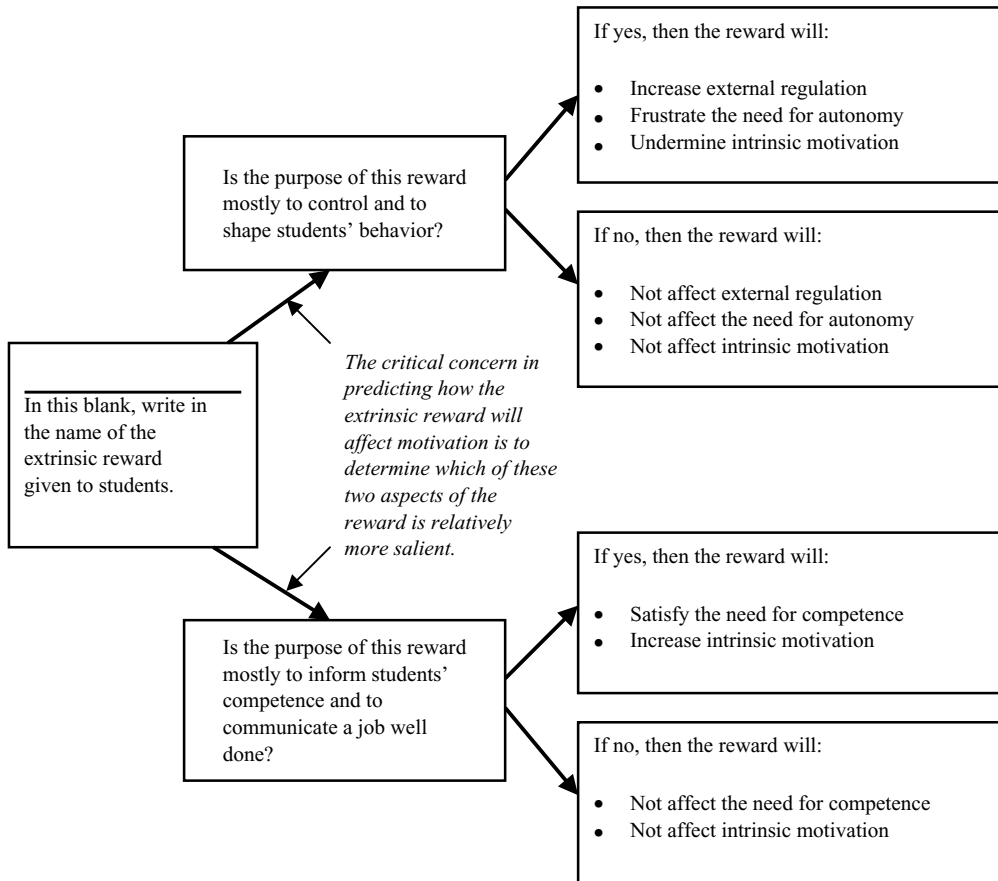


FIGURE 24.2. Graphical representation of cognitive evaluation theory.

Cognitive evaluation theory argues that *why* teachers give rewards is at least as important as *which* rewards they give (Ryan et al., 1983). To illustrate this point, consider two examples. The first is a prototypical case in which extrinsic rewards take on the functional significance of behavioral control. The teacher offers students an expected, tangible, and task-contingent reward—such as a conditional privilege—saying, in effect, “If you do X, you’ll get Y.” Here, the purpose—the functional significance—of why the teacher gives the reward is to control students’ behavior so that students will be more likely to perform the targeted behavior. The second is a prototypical case in which extrinsic rewards take on a functional significance of competence affirmation. The teacher offers students a verbal, unexpected, and task-noncontingent reward—such as positive feedback—saying, in effect, “Your writing has improved since the last time.” Here, the purpose or functional significance of why the teacher gives the reward is to inform students of a job well done.

Reward Administration

Because rewards can be presented to students in relatively controlling or in relatively informational ways, there exists an art to administering extrinsic rewards. Table 24.1 summarizes the five most common types of reward administrations and provides a definition and example for

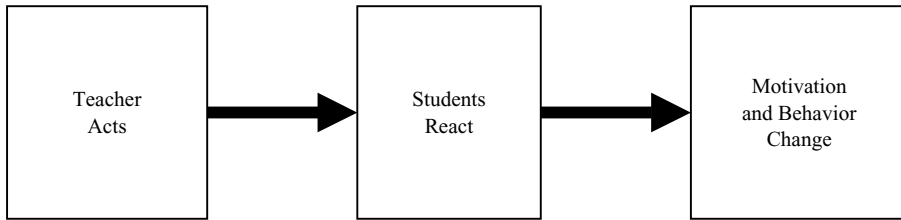
TABLE 24.1
Types of Extrinsic Rewards

<i>Type of Reward</i>	<i>Definition and Example</i>
Expected (vs. unexpected)	Reward given on a prearranged and contingent basis, such as “If you turn in your homework, then you can expect two bonus points.” An unexpected reward is given without a preannounced contingency.
Tangible (vs. verbal)	Reward that one can touch, smell, see, or taste, such as food or a prize. A verbal reward is one of symbolic value, such as praise or positive feedback.
Task contingent (vs. noncontingent)	Reward given in exchange for carrying out a requested behavior or task. For instance, teacher gives students a reward for completing a worksheet assignment. A noncontingent reward is given irrespective of whether the student actually completes the task. For instance, teacher gives students a reward merely for coming to class (rather than for completing an assignment).
Engagement contingent	Reward given in exchange for participating in, or working on, but not necessarily completing, a requested task. For instance, teacher gives students a reward for trying hard.
Performance contingent	Reward given in exchange for performing well, such as surpassing a specified performance level. For instance, teacher gives a gold star to all those students who score 80% or higher on a quiz.

each. *Expected rewards* are typically experienced as highly controlling, because they are given on a contractual “do this, get that” basis. Unexpected rewards, however, are typically experienced as noncontrolling and their informational aspect therefore can affirm the student’s sense of competence. *Tangible rewards* are typically experienced as controlling, because they may attract so much of the student’s attention that focus shifts from the task to the reward. Verbal rewards like praise and positive feedback, however, have symbolic value and are therefore much more likely to be experienced as informational events. *Task-contingent rewards* are typically experienced as highly controlling and not at all informational, because they are simply given in exchange for doing what is asked. Noncontingent rewards are less likely to be experienced as controlling because no behavior → reward contingency is contracted. *Engagement-contingent rewards* are rewards given for merely engaging in a requested activity (irrespective of the student’s behavior or performance) and are frequently experienced by students as controlling and noninformational. *Performance-contingent rewards* are the most complex types of extrinsic rewards, because students experience them as controlling and informational at the same time. Performance-contingent rewards are given for the quality of a student’s performance (e.g., getting an A on a test, earning a perfect attendance certificate). The more the student feels that there is a “string attached” to the reward, the more he or she will experience it as a controlling event; the less salient the attached string is in the mind of the student, the more he or she will be able to attend to the competence message with the performance-contingent reward (Reeve & Deci, 1996).

What this review of cognitive evaluation theory and the different types of reward administration makes clear is this: Why—for what purpose—teachers give students rewards is crucial. When teachers use rewards as part of their classroom management strategy, they need to administer rewards in ways that are not controlling (“no strings attached”) and, at the same time, informational and competence affirming (“You’re making rapid progress”).

A traditional approach in which teachers motivate students directly.



A dialectical approach in which teachers affect students and students affect teachers.

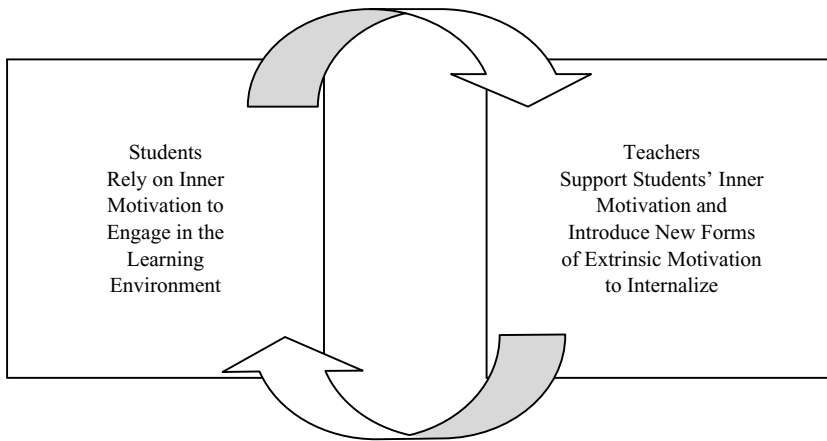


FIGURE 24.3. Two approaches to motivating students.

TWO CONTRASTING APPROACHES TO MOTIVATING STUDENTS

When they use extrinsic rewards to motivate students, teachers often take one of two different approaches. The first is a traditional approach in which they attempt to increase a specific target behavior. A graphical depiction of this approach appears in the upper half of Fig. 24.3. In this traditional approach, students' motivation and on-task behavior rise and fall in response to what the teacher does or does not offer. When teachers offer attractive rewards students show positive emotion and on-task behavior, but when teachers do not offer these inducements students' positive emotion and on-task behavior remain dormant. Teachers often find this approach attractive, because it rather directly answers the pressing question of "What can I do to motivate my students?" The answer: Offer an attractive extrinsic reward.

The second is a dialectical approach in which teachers affect students' motivation and engagement, which in turn, affect teachers' motivating styles. A dialectical approach begins with the assumption that students possess inner motivation of their own, and students' motivation and engagement unfolds in the classroom as they proactively express their inner motivation and as teachers support their proactivity. For instance, a student might express an interest in a topic and the teacher would adapt the lesson so to integrate the student's interest into the day's lesson plan. A graphical depiction of this approach appears in the lower half of Fig. 24.3. In this approach, students' motivation and on-task behavior rise and fall in response to how well versus how poorly teachers support students' inner motivation and also how well or poorly teachers are able to provide new and extrinsic forms of motivation for students to internalize

and accept as their own. This approach essentially reframes the basic question from “What can I do to motivate my students?” to “How can I provide the conditions under which students can motivate themselves?” Once reframed, many answers are possible, as discussed in the next section.

Supporting Autonomy

Autonomy-supportive environments are those that involve and nurture students’ inner motivational resources (Reeve, 1996; Reeve, Deci, & Ryan, 2004; Ryan & Deci, 2000b, 2002). The opposite of an autonomy-supportive environment is a controlling one, which is defined as an environment that frustrates or thwarts students’ inner motivation, typically because it prioritizes a prescribed target behavior over expressions of students’ inner motivation. The instructional effort to nurture students’ inner resources is a worthwhile endeavor because students in autonomy-supportive classrooms, compared to those in controlling classrooms, experience an impressive range of positive educational outcomes, including greater mastery motivation, more conceptual understanding, higher creativity, more engagement in learning activities, higher academic performance, greater school persistence, and positive well-being (Black & Deci, 2000; Deci & Ryan, 1985, 1987; Deci, Schwartz, Sheinman, & Ryan, 1981; Deci, Vallerand, Pelletier, & Ryan, 1991; Reeve, 2002; Reeve, Jang, Carrell, Barch, & Jeon, 2004; Vallerand, Fortier, & Guay, 1997). Recognizing these benefits, researchers have worked to identify what teachers say and do during instruction to support students’ autonomy (Deci, Spiegel, Ryan, Koestner, & Kauffman, 1982; Deci, Eghrari, Patrick, & Leone, 1994; Flink, Boggiano, & Barrett, 1990; Reeve, Bolt, & Cai, 1999; Reeve & Jang, in press).

Nurture Inner Motivational Resources. When teachers nurture students’ inner motivation they find ways to align instructional activities with students’ interests, preferences, and choice making, rather than relying on external regulators such as incentives and directives. This first aspect of an autonomy-supportive environment represents teachers’ efforts to nurture students’ interests, values, needs, and intrinsic motivation, rather than trying to extrinsically engineer expected, tangible, and task-contingent motivators. Nurturing inner motivational resources is especially important when teachers seek ways to initiate students’ classroom activity. For instance, instead of offering a reward to solicit students’ participation in a lesson, an autonomy-supportive teacher adapts the lesson so that it becomes a more interesting or enjoyable experience. A planned assignment to read a play that students think is boring could be restructured into an opportunity to take a part and read the play aloud in class as a cast of characters.

Rely on Informational, Noncontrolling Language. When teachers rely on informational, noncontrolling language they communicate classroom requirements and performance feedback through messages that are informational, flexible, and sensitive to students’ inner motivational resources, not through messages that are controlling, rigid, and pressuring. In this second aspect of an autonomy-supportive environment, teachers communicate with students to help them integrate their inner motivation and autonomous self-regulation with their moment-to-moment classroom activity. Informational, noncontrolling language is especially important when teachers respond to students’ behavioral problems and poor performance. For instance, instead of responding to students’ behavior problems with pressure and controlling language such as “You should work harder,” informational and noncontrolling language can be used such as “I’ve noticed you work has slipped lately; would you like to talk about it?”

Communicate Value In Uninteresting Activities and Rationales for Requested Behaviors. In an autonomy-supportive environment, teachers pair elements of classroom structure—rewards, rules, expectations, and so on—with an explanation of why that classroom feature is valuable, useful, or personally important to the students’ learning and well-being. When imposing a limit on students’ behavior, for instance, the teacher might provide a rationale to clarify not only why the limit is being imposed but also why it is a positive (i.e., personally useful) addition to the learning environment. This third aspect of an autonomy-supportive environment acknowledges that teachers sometimes ask students to invest their effort in relatively unappealing undertakings (e.g., worksheets, homework assignments, rule following). A rationale to clean one’s workspace might be, “because cleaning your workspace will allow the students in the next period to have just as clean a space as you had when you began; wasn’t it nice to walk in and see everything so clean and organized?” To the extent that students hear such a rationale and to the extent that they accept and internalize the rationale, they can say to themselves, “Yes, okay, that makes sense; that is something I want to do.”

Acknowledge and Accept Students’ Expressions of Negative Affect. Because classrooms have rules, requests, and agendas that are sometimes at odds with students’ natural inclinations, students often complain and resist. When teachers acknowledge and accept such negative affect, they communicate an understanding of the students’ perspectives and acknowledge that resistance is understandable. During teacher–student disagreements, a controlling teacher counters students’ resistance with “Shape up; it’s my way or the highway” or “because I said so,” whereas an autonomy-supportive teacher acknowledges students’ points of resistance and solicits students’ input with “Yes, the assigned book is long, isn’t it? 300 pages. Does anybody have a tip or suggestion about how to read 300 pages in a week?” Students’ emotionality therefore becomes helpful information in the classroom management effort to transform a learning task away from “something not worth doing” in students’ eyes to “something worth doing.”

Providing Structure

Autonomy support revolves around being sensitive to students’ inner motivational resources and finding ways to support these inner resources during learning activities. The opposite of autonomy support is *not* the removal of structure (e.g., see Ryan, 1993; Ryan & Stiller, 1991). Rather, autonomy support and structure represent different aspects of teachers’ motivating styles, each of which contributes unique variance to students’ motivation and engagement (Connell & Wellborn, 1991; Reeve, Deci, & Ryan, 2004; Skinner & Belmont, 1993).

Unilaterally imposing high structure on students in a controlling way yields a poor motivational profile, as does a permissive or laissez-faire instructional environment that fails to provide students with the structure they need to learn, internalize new values, and improve their skills (Skinner, 1995). In contrast, when teachers both support autonomy and provide structure (“freedom within limits”; Rogers, 1969), students show a healthy profile in terms of their motivation, engagement, and learning (Koestner, Ryan, Bernieri, & Holt, 1984; Grolnick & Ryan, 1987). Several individual studies show the benefits of teachers’ efforts to provide structure in an autonomy-supportive way, including autonomy-supportive rules (Koestner et al., 1984), autonomy-supportive praise (Ryan et al., 1983), autonomy-supportive rationales (Reeve, Jang, Hardre, & Omura, 2002), autonomy-supportive communications (Schuh, 2004), autonomy-supportive goals (Jang, 2005), and an autonomy-supportive instructional set (Grolnick & Ryan, 1987). In each of these studies, when the element of structure was presented in a controlling way motivation suffered, whereas when it was presented in an autonomy-supportive way motivation thrived.

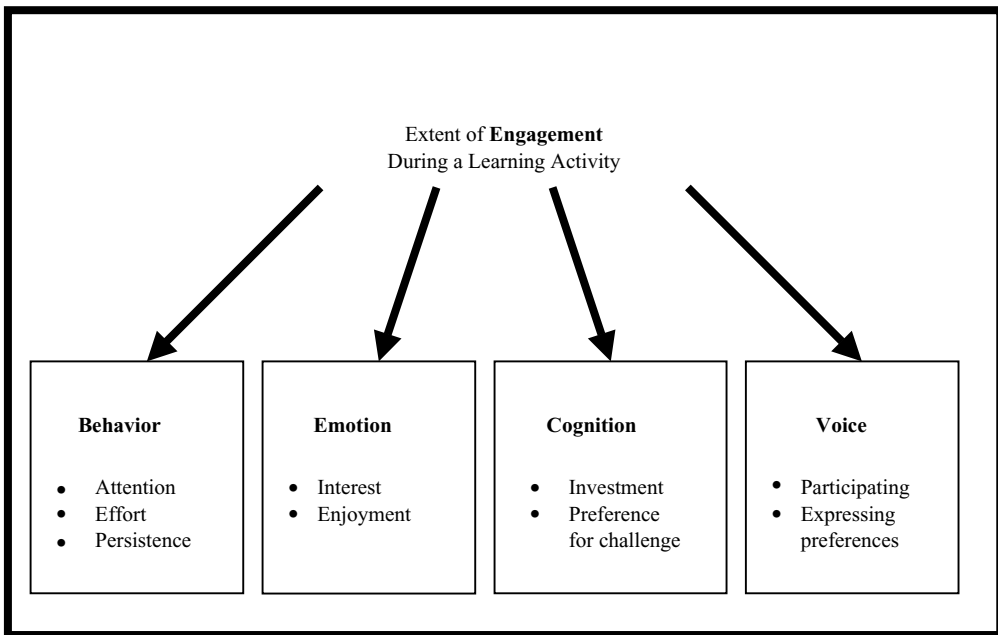


FIGURE 24.4. Engagement as a multifaceted concept.

FROM TARGETING BEHAVIOR TO ENHANCING ENGAGEMENT

Within a behavioral framework, controlling classroom management strategies make sense. A controlling approach represents an ideal way to gain students' compliance and on-task behavior. If the goal of a classroom management strategy is to increase some behaviors (desirable behaviors) and to decrease other behaviors (undesirable behaviors), then using reward contingencies to do so can be a productive course of action. Such a strategy is still, however, likely to prompt the three unintended side effects identified earlier. Recently, however, educators have broadened their attention beyond just targeting behaviors to a concern over outcomes such as learning, self-regulation, and well-being. The more classroom management and motivational strategies focus on learning, autonomous self-regulation, and subjective well-being, the more they find themselves drawn toward the larger concept of engagement.

Engagement refers to the behavioral intensity, emotional quality, and personal investment in a student's involvement during a learning activity (Connell & Wellborn, 1991; Fredricks, Blumenfeld, & Paris, 2004; Furrer & Skinner, 2003; Koenigs, Fiedler, & deCharms, 1977; Wellborn, 1991). Engagement includes on-task behavior, but it further highlights the central role of students' emotion, cognition, and voice, as summarized in Fig. 24.4. When engagement is characterized by the full range of on-task behavior, positive emotion, invested cognition, and personal voice, it functions as the engine for learning and development.

Behavioral engagement expresses itself as students show attention, effort, and persistence. Emotional engagement expresses positive emotion, or an emotional atmosphere of interest, enjoyment, and a sense of "wanting to" during one's investment of attention, effort, and persistence. Cognitive engagement expresses itself as students go beyond the basic requirements of an activity and, instead, commit themselves to being strategic, purposive, and self-regulating (rather than superficial) during the learning activity. Voice represents an expression of the self

during task involvement. Students with voice offer suggestions, recommend activities, express their interests and preferences, participate in class discussions, ask questions about what they are learning, and generally attempt to influence the flow of class in a constructive way. The rich display of multifaceted classroom engagement depicted in Fig. 24.4 emanates more out of students' inner motivation than it does from teachers' extrinsic rewards. Recognizing this, attention has moved away from the practice of using rewards to motivate behavior in a narrow sense and toward the practice of using rewards to support students inner motivation, which enhances and sustains students' engagement in a broader sense.

EDUCATORS' CONCERNS, SOME RECOMMENDATIONS, AND FUTURE RESEARCH

Concerns

When thinking about classroom management strategies, educators generally express three concerns over an autonomy-supportive motivating style, even if they acknowledge the strong relationship between supporting autonomy and students' engagement during learning activities. The first is whether supporting autonomy will yield uneven displays of engagement, because students' engagement will depend on their task interest. Students might wander off-task whenever their interest takes them in a different direction, such as talking with their friends instead of completing an assignment. Concern over enacting the autonomy → engagement relationship dissipates, however, with the realization that autonomy support and structure can complement, rather than interfere with, one another. The argument put forward in this chapter is that engagement flourishes when teachers provide students with a highly autonomy-supportive, highly structured learning environment.

The second concern is whether educators can trust an autonomy-supportive motivating style. They ask, "What if I support students' autonomy and they then act irresponsibly?" One answer is that students actually act more responsibly when teachers support their autonomy rather than control their behavior (Ryan & Deci, 2000b), but another is that teachers have immediate access to the telltale feedback they need to assess how well or how poorly their autonomy-supportive instructional strategies are working. That feedback is students' moment-to-moment engagement (Reeve, Deci, & Ryan, 2004). Any increase or decrease in students' engagement during the flow of a lesson reflects how well teachers' efforts to nurture students' inner motivational resources are going. Surges in engagement during attempts to support students' inner motivational resources provide some of the assurance teachers need to see in order to trust an autonomy-supportive motivating style.

A final concern is whether an autonomy-supportive motivating style is an effective classroom management strategy in all educational contexts and for all types of students. To date, the research literature shows that supporting students' autonomy enhances the motivation and engagement across a wide range of contexts and students including students of different abilities (e.g., special education; Algozzine, Browder, Karovnen, Test, & Wood, 2001), rural students (Hardre & Reeve, 2003), and students of different cultures, including Eastern cultures (Sheldon, Elliot, Kim, & Kasser, 2001) and religiously motivated home school students (Cai, Reeve, & Robinson, 2002). I highlight this universality issue—the claim that everyone benefits from autonomy support—because critics inaccurately conceptualize autonomy support as permissiveness or as a *laissez-faire* style, which would essentially be the removal of structure (Ryan & Stiller, 1991). Students' motivation and engagement do suffer when teachers are permissive, but students respond well to, and benefit from, classroom environments high in both autonomy support and structure.

Recommendations

Extrinsic rewards are ubiquitous in educational settings. They offer many benefits, such as their capacity to structure a learning environment and communicate a message of a job well done. At the same time, however, extrinsic rewards carry potential hidden costs and, hence, liabilities. From this point of view, two recommendations on how to use rewards in a motivationally constructive way can be made. First, the central thesis of cognitive evaluation theory is that any extrinsic reward can be administered in either a controlling or an informational way. When offered in noncontrolling and informational ways, extrinsic rewards support rather than interfere with students' inner motivational resources. Thus, there exists an art to administering rewards, and the efforts teachers make to develop skills in using rewards in noncontrolling and informational ways is an opportunity to support students' motivation and engagement.

Second, teachers can adopt two different motivating styles when using rewards—controlling or autonomy supportive. It is easy to imagine how controlling teachers use rewards, as they follow a traditional behavioral model of how to administer incentives and consequences (see Walker et al., 2004). What is not so readily apparent is how autonomy-supportive teachers use rewards. Therefore, the four autonomy-supportive instructional strategies outlined earlier might help. To use rewards that nurture students' inner motivational resources, teachers can offer unexpected, symbolic rewards (“Good job.”) as a student displays progress or mastery (thereby nurturing the need for competence and protecting the need for autonomy). Teachers can use informational language when offering rewards, especially when they articulate what it is about the student's learning or performing that signals progress, competence or achievement. Teachers can also provide rationales that explain why the student is currently receiving the reward. And teachers can acknowledge and accept students' negative affect instead of using rewards to counter negative affect so to get students to do what does not come naturally, such as working long hours, ignoring their interests, or engaging in nonvalued behaviors.

Future Research

Empirical research on how extrinsic rewards affect students' inner motivational resources, engagement, learning, and development has a long history (see Deci & Ryan, 1985, 1987; Deci et al., 1999; Kohn, 1993; Lepper & Greene, 1978; Ryan & Deci, 2000a). The general conclusion was that extrinsic rewards, when administered in controlling (expected, tangible, and contingent) ways, generally undermined students' autonomy, intrinsic motivation, self-regulation, and engagement. More recently, different types of extrinsic motivation have been identified. Only some types of extrinsic motivation (external regulation, introjected regulation) are associated with low engagement and poor functioning, whereas other types of extrinsic motivation (e.g., identified regulation, integrated regulation) are actually associated with high engagement and optimal functioning (Deci & Ryan, 2000b). The consensus is now that extrinsic rewards are not necessarily bad or counter productive. Instead, extrinsic rewards undermine motivation and engagement only when they are administered in controlling ways and only when they produce external regulation and introjected regulation in students. This same conclusion can be extended to practically any aspect of structure, as any rule, limit, goal, evaluation, or feedback undermines motivation and engagement only when presented in controlling ways that push students into external regulation or into introjected regulation. This conclusion suggests four possible avenues for future research.

The first is to ask how teachers can provide an autonomy-supportive, structured learning environment during uninteresting activities. Currently, the use of rationales to explain why an uninteresting activity is worth the students' effort is one effective autonomy-supportive strategy under these conditions (Reeve et al., 2002). Another strategy is to offer students “interest-enhancing strategies” (Jang, 2003). That said, the problem of how to support students'

autonomy during uninteresting lessons is so pressing that future research to identify additional strategies is highly needed.

The second is to investigate the relationship between structure and engagement. The present chapter has argued for the benefits of high structure, but others argue for a moderate level of structure. They argue that the relationship between structure and engagement is curvilinear with moderate structure engendering greater engagement than either low or high structure (deCharms, 1984). Whether students benefit most from high structure or from moderate structure is an empirical question that is yet to be answered.

A third research question is to continue to investigate how teachers can use extrinsic rewards to support students' autonomy during instruction. Some research exists to identify what autonomy-supportive teachers say and do (Reeve et al., 1999; Reeve & Jang, in press; Reeve, Jang et al., 2004) but, when compared to the extensive literature on classroom management strategies, research on how to support autonomy is still in its infancy.

Finally, a fourth research question is to understand why teachers, students, and so many other participants in the educational system prefer controlling motivational strategies over autonomy-supportive ones, even after being exposed to information that shows them that autonomy-supportive strategies are more effective (Boggiano et al., 1987). The minimax principle of motivation ("the larger the reward, the larger the motivation") appears to be so dear in people's minds, whereas autonomy-supportive strategies appear to be held with some sort of suspicious naiveté. Why this is so needs to be explored and understood. Perhaps, what parents, students, and others are saying is that they would like an educational climate rich in both structure and autonomy support. If so, the present chapter suggests that their intuition is right on track.

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