# New Light on Rewards and Intrinsic Motivation: A Survival Kit for Positive Behavior Support Team Leaders

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# New Light on Rewards and Intrinsic Motivation:

## A Survival Kit for Positive Behavior Support Team Leaders

Who is interested in teaching and encouraging the use of new skills, preventing problem behaviors from interfering with worthwhile goals, and replacing irritating or harmful habits with socially acceptable and safe habits? Anyone who is responsible for a child, student, or employee; or who lives, plays, studies, or works with someone whose current skill levels, behaviors, and habits are cause for concern. This includes teachers, parents, child care providers, spouses, siblings, roommates, friends, neighbors, nurses, public health educators, ministers, coaches, environmentalists, parole officers, business managers, and administrators and supervisors in all fields, to name a few. Although interest in influencing another person's behavior is almost universal, educators and others who work with students who have or are at risk for behavior disorders find that addressing this concern is essential. Perhaps even more difficult than directly working with the student is being on a committee or team trying to agree on a plan for positive behavior support, as mandated the Individuals with Disabilities Education Act (IDEA, 1997) for special education students (Drasgow, Yell, Bradley, & Shriner, 1999; Kauffman, 2001) and recommended for any student with behavior problems (Sugai et al., 2000). A discussion of the effect of rewards on intrinsic motivation is likely to divide the team into different camps.

The first camp, which might be called the "Strengthen Intrinsic Motivation" camp, objects to providing rewards and recommends finding ways to develop and strengthen inherent interest in taking personal responsibility for getting along well at school and doing well on academic tasks, and encouraging the "performance of activities for their own sake, in which pleasure is inherent in the activity itself" (Gottfried, Fleming & Gottfried, 2001, p. 3). To

promote neat handwriting, children can be told (given a trait label) that they are "the kind of children who would want 'to write correctly'" (Cialdini, Eisenberg, Green, Rhoads, & Bator, 1998, p. 259). Cialdini et al., reported that giving children trait labels in this way was a protective factor for intrinsic motivation when rewards were used.

The Child Development Project (CDP) (Battistich, Schaps, Watson, Solomon, & Lewis, 2000) is worth describing in some detail because it is a recent example of a large scale effort to develop intrinsic motivation and minimize extrinsic control (both rewards and punishment) in elementary schools. "Honor intrinsic motivation" was a major emphasis in this school reform project, which also emphasized student autonomy, cooperative learning, prosocial values, thinking, and personal relationships. School-wide, classroom, and family involvement components designed to create "caring communities of learners" (p. 77) and to reduce drug use and other problem behaviors (e.g., fighting, skipping school, destroying property, threatening harm, stealing, carrying weapons, name-calling). The project was evaluated in 24 elementary schools located in different parts of the United States, with 12 program schools and 12 comparison schools. Only 5 program schools were rated has having made progress toward implementing the program well after 3 years of staff development efforts, using a "modified training-of-trainers" (p. 85) and site-based school teams approach. Fidelity of implementation was measured by classroom observations and a teacher questionnaire. An example of an item on the "Emphasis on intrinsic motivation" Scale was "teacher talks about inherent interest of academic activities" (Battistich et al., 2000, p. 83). Student outcomes over 4 years were measured by a questionnaire which asked about problem behaviors in terms of being an offender and being a victim. Statistically significant ($p < .05$) beneficial changes for the five schools with

high implementation, in contrast to matched comparison schools, occurred in use of alcohol and marijuana but not in other problem behaviors. However, students' questionnaires also asked about academic and social attitudes, motivation, values, and appropriate behaviors (e.g., reading books, altruistic deeds). "Significant effects favoring program students in the high change schools were found for 52% of the outcome variables examined (ES [effect size] ranged from .09 to .33), and there were no significant effects favoring comparison students" (Battistich et al., 2000, p. 93).

The second camp, the "Provide Rewards" camp, favors providing rewards or incentives to improve performance. Typical recommendations for rewards have included verbal praise, positive feedback, or tangible items such as money, candy, or gold stars. A teacher might give students certificates of accomplishment for completing a project. Not everything offered as a reward will in fact achieve that goal because teachers' ideas of what might be reinforcing for students may miss the mark. Up-to-date members of this camp will call for functional behavioral assessments to identify effective reinforcers, which may or may not include traditional rewards (Horner & Carr, 1999; Scott & Nelson, 1999; Tobin & Martin, 2001; Tobin & von Ravensberg, 2001; Witt, Daly, & Noell, 2000). Study after study has shown that positive reinforcement can be used in ways that benefit individual students; brief descriptions of a few examples of such studies are presented in Table 1. On a larger scale, the approach to school-wide behavior support known as Effective Behavior Support (Lewis & Sugai, 1999; Lewis, Sugai, & Colvin, 1998; Sugai, 1996; Sugai & Horner, 1999, in press; Taylor-Green et al., 1997; Tobin, Lewis-Palmer, & Sugai, in press) demonstrates the value of teaching and providing rewards and recognition for appropriate behavior in a systematic way for all students in the school.

< Insert Table 1 about here. >

Seldom brought into the argument, but ever present in reality, is a third camp, the "Shape Up or Ship Out" camp. Members of this camp may feel that it is the parents' or guardians' responsibility to shape the child's character and that school staff have neither resources nor obligation to provide rewards or to develop intrinsic motivation if it is not already present as a trait in the child's personality. Standard interventions recommended are warnings, reprimands or redirections, loss of recess, detentions, contacting parents, office discipline referrals, and suspensions. If there is no improvement, students may be expelled or, if in special education and an alternative educational settings is not considered a viable option, given a homebound placements (Bear, 1998; Hallahan, & Kauffman, 1997; Morrison & D'Incau, 2000; Tobin & Sugai, 1999). Because this negative camp will take action when the other camps fail, it is important to understand how the more positive methods of providing rewards and/or developing intrinsic motivation can be effective.

Although the debate on the effect of rewards on intrinsic motivation in not new, around the turn of the century a number of reviews and commentaries were published indicating movement toward precision in recommendations and, in some cases, reconciliation. **The purpose of this paper is to shed new light on the use of rewards and intrinsic motivation, particularly as it applies to effective, positive methods of behavior change that could be used by teachers and others who work with children and youth who have or are at risk for behavioral disorders.**

## Background

A huge volume of material about intrinsic motivation and the use of rewards exists, both

popular (e.g., Kohn, 1993) and academic (e.g., Deci, 1971), including what seemed (at the time of publication) to be fairly complete reviews and commentaries on both sides of the debate (Deci, Kiestner, & Ryan, 1999; Eisenberger & Cameron, 1996) and explanations of reasons for misunderstandings contributing to the controversy (e.g., Reitman, 1998). In spite of all this material, the issue was not resolved. However, in recent years, new material has come to light that may, at least for the open-minded person, make it possible to move on to more practical concerns. We will be discussing the new material, including a longitudinal empirical study (Flora & Flora, 1999) and an extremely thorough new mega-meta-analysis (Cameron, Banko, & Pierce, 2001) shortly. First, an explanation of our reasons for preparing additional material about this already widely discussed topic, and some information on the development of the debate, historically, will be presented.

Reasons for Preparing Additional Material

We are concerned about the education of students with disabilities, especially those who have, or are at risk for, behavior disorders. Efforts to enable these students to be educated in inclusive schools have spurred our interest in effective methods of teaching appropriate social behaviors (e.g., Gresham, Sugai, & Horner, 2001), including the use of functional assessment in developing positive and individualized behavioral interventions (Sugai et al., 2000). Rather than producing yet another literature review or opinion paper on the old debate about the use of rewards, our goal became to condense material into a “survival kit” of useful information for members of positive behavior support teams in schools who may need to defend the use of rewards.

Keeping in mind the importance of presenting information that is relevant to practical

applications, information was organized into five sections: (a) key concepts explained and terms defined, (b) findings from the most recent comprehensive review, (c) themes, (d) single subject research, (e) responses to concerns about the use of rewards, and (f) concerns about NOT using rewards.

## Key Concepts Explained and Terms Defined

### Rewards and Positive Reinforcement

Sometimes rewards are confused with positive reinforcement. The difference is that positive reinforcement is a consequence that is associated with a future increase of the frequency of the behavior it followed but a reward is simply something that is given to someone for doing something. The giver arbitrarily decides what will be offered as a reward. Best practice in current behavior support planning would use functional assessment to select reinforcers on the basis of individual student's behavior patterns. However, in the debate and research about intrinsic motivation, "rewards" were never based on functional assessments nor required to meet the definition of positive reinforcement.

### Intrinsic Motivation

The term, "motivation" refers to a person's reasons for doing something. Use of the term implies that a cognitive process gives impetus to a behavior. This is in contrast to a behavioral explanation of the function of a behavior in terms of environmental consequences such as obtaining or avoiding something. According to Webster's dictionary, "intrinsic" means "inherent; essential; belonging to the thing itself; not extrinsic or accidental."

As the concept of intrinsic motivation has developed, it includes one or both of two elements: (a) an inherently interesting activity and/or (b) a perception of having chosen to engage in an

activity of one's own accord (Deci, 1974; Deci & Ryan, 1985). Intrinsic motivation is understood in contrast to "extrinsic motivation" which would be involve (a) an activity that is not interesting for which one may earn a reward, such as praise, money, or a prize, and/or (b) another person who will provide the reward. Some authors have questioned the validity of the intrinsic/extrinsic dichotomy because when given a list of rewards and asked to classify them as either intrinsic or extrinsic, respondents often will disagree (Dyer & Parker, 1975; Rabindra, Kanungo, & Hartwick, 1987). In the studying the effect of rewards on intrinsic motivation, frequently used measures of intrinsic motivation to engage in an activity fall into two main categories: (a) self-reported interest and (b) amount of free time allocated to the activity when no reward for doing so is offered.

Another way of understanding intrinsic motivation is thorough "flow theory" (Csikszentmihalyi, 1997), especially as it has been adapted to instructional design by Chan and Ahern (1999):

> During flow, people become so intensely involved in an activity that nothing else seems to matter. The experience is so enjoyable that they will do it for its own sake. . . . wide ranging participants, activities, cultures, modernizing stages, social class, age, or gender commonly share certain feelings during a flow experience . . . They are critical in defining the constructs of flow theory, and provide observable effects that form the empirical basis for the scientific investigation of the flow phenomenon. . . . 1) sensing that one's skills are balanced challenge, 2) engaging in a goal-directed activity, 3) receiving clear feedback, 4) feeling in control, 5) intensifying concentration, with a sense of 6) merging action and awareness, 7) disappearing of self-consciousness, and 8)

> distorting sense of time, and 9) experiencing great gratification that the activity is intrinsically rewarding. (Chan & Ahern, 1999, pp. 152-153)

Ideally, instructional activities would "flow" in this sense whenever possible.

## Cognitive Evaluation Theory

Deci (1975) is credited with the development of Cognitive Evaluation Theory as an means of explaining how extrinsic rewards can decrease intrinsic motivation. The theory holds that rewards "posit a reevaluation mechanism in which a person's locus of control shifts from an attribution of 'I'm doing this because I want to," to one of 'I'm doing this because someone is paying me" (Wiersma, 1991, p. 872). This shift is assumed to cause a person to no longer want to engage in the activity if not paid.

## Over-Justification

The over-justification argument against the use of rewards is that if a reward is offered for some activity previously voluntarily chosen, that activity might now be considered "work" instead of "play." For example, studies in the field of social psychology have focused on how rewards offered for playing with puzzles reduced free choice of puzzle playing, usually with students in general education, sometimes with gifted children or college students – not with students identified as having serious emotional or behavioral problems (Deci, 1971; Deci, Betley, Kahle, Abrams, & Porac, 1981; Iyengar & Lepper, 1999; Ryan, 1982). The popular saying, "If it ain't broke, don't fix it," comes to mind. That is, if the appropriate activity is already "justified" or of interest naturally, why intervene? However, the over-justification concept has been extended, in theory, or some would say, in myths, to a broad rejection of the use of rewards. According to Eisenberger and Cameron (1996), "Claimed negative effects of

reward on task interest and creativity have attained the status of myth, taken for granted despite considerable evidence that the conditions producing these effects are limited and easily remedied" (p. 1154).

### Myth

"A myth is distinguished from reality by its over-generalization, distortion, or misapplication of fact" (Kauffman & Pullen, 1996, p. 1)" (cited in Kauffman, 1999, p. 462). One of the myths associated with over-justification is the story of the grumpy old man who did not like to hear youths playing football by his house (Mawhinney, 1990). To make them stop, he tricked them by first offering them money for every game and then later discontinuing the reward. When the reward was discontinued, the youth stopped playing football, or so the story goes. (It was not a research study so there was no follow up.) This myth illustrates a situation where an adult deliberately used rewards temporarily and then withdrew them to decrease an activity assumed to be intrinsically motivating to youth. Although used as a warning that rewards intended to increase a worthwhile activity may backfire, it has not been taken seriously as a model for decreasing problem behaviors.

### Expectancy Valence Theory

Expectancy valence theory holds that "the effect of an extrinsic reward on intrinsic motivation depends on the prevailing cultural norm of whether the reward is justified for the activity in question" (Wiersma, 1991, p. 873).

## Findings from the Most Recent Comprehensive Review

In what may well be the climax to the debate on the effects of rewards on intrinsic motivation, Cameron, Banko, & Pierce (2001) conducted a comprehensive meta-analysis that

addressed shortcomings and differences among three previous meta-analyses (Cameron & Pierce, 1994; Eisenberger & Cameron, 1996; Deci, Koestner, & Ryan, 1999). Cameron et al. (2001) found "no evidence for detrimental effects of reward on measures of intrinsic motivation" (p. 21) when overall effects were analyzed across all conditions. However, using a hierarchical procedure, variations among the studies were examined. We will discuss this review in some detail because their findings show, not only that rewards generally can be used without harm, but clarify specifically the circumstances when rewards are most and least likely to affect performance on tasks of high and low initial interest. Whenever an analysis had mixed or heterogeneous results, another analysis was conducted using moderator variables that might explain the differences. In this way, an understanding of the precise conditions for effective use of rewards emerged.

Effect sizes for each dependent variable were reported. Effect size measured the difference between means of experimental and a control groups divided by the "pooled standard deviation of this difference" (p. 5). If there is little difference, the effect size will be about zero. A small difference is indicated by an effect size of about 0.20, which could be either positive or negative (Cohen, 1988). Moderate differences have effect sizes of about 0.50 (+ or –) and large differences have effect sizes of greater than 0.80 (+ or -). The symbol "*d*+" stands for the overall mean effect size and in the discussion below, will be given when statistically significant ($p < .05$) differences were found. A negative sign indicates that the rewarded group's intrinsic motivation decreased.

Cameron et al. (2001) provided detailed explanations of their procedures and clear explanations of the results. They examined moderating conditions to explain mixed results,

including (a) high and low initial interest in tasks, (b) types of rewards, (c) expectations, and (d) types of contingencies. Intrinsic motivation was operationally defined by two dependent variables: (a) "free choice (time spent on the task following their removal of reward or performance on the task during the free-choice period)" (p. 11) and (b) "self-reported measures of task interest (task liking, enjoyment, satisfaction, or task preference" (p. 11).

Situations Where Rewards Increased Intrinsic Motivation

- For tasks of low initial interest, rewards increased free choice *(d+* of 0.28). "This finding indicates that rewards can be used to enhance time and performance on tasks that initially hold little enjoyment . . . rewards can be used to increase performance on low-interest academic activities" (p. 21).
- For tasks of high initial interest, both free choice (*d+* of 0.31) and task interest *(d+* of 0.32) were increased by verbal rewards. "When praise and other forms of positive feedback are given and later removed, our findings indicate that interest and performance increase" (pp. 21-22).
- For tasks of high initial interest, free choice increased when tangible rewards were expected and given for exceeding others (*d+* of 0.18).
- For tasks of high initial interest, self-reported task interest increased when tangible rewards were expected and given for finishing the task (*d+* of 0.32), surpassing a score *(d+* of 0.24), for each unit solved (*d+* of 0.15), or exceeding others (*d+* of 0.14).

Situations Where Rewards Decreased Intrinsic Motivation

- For tasks of high initial interest, free choice decreased when tangible rewards were expected in advance and the contingency was doing the task (*d+* of - 0.31), doing it well

($d$+ of - 0.30), or for each unit solved ($d$+ of - 0.16). The last contingency was further analyzed by moderator variable of obtaining the maximum reward or less than the maximum possible reward and indicated that "the negative effect on free choice occurs when participants obtain less than the full reward" (p. 23). In other words, participants were under time pressure and received "failure feedback, not reward" (p.23).

- For tasks of high initial interest, self-reported task interest decreased when tangible rewards were expected in advance and the contingency was doing the task ($d$+ of - 0.13).

Situations Where No Significant Effect Was Found

- For tasks of low initial interest, rewards in general do not change self-reported interest.
- For tasks of high initial interest, "no significant effects were detected for unexpected tangible rewards" (p. 16, emphasis added).
- When rewards were expected, for tasks of high initial interest and measures of free choice, "no significant effects were detected when the rewards were task noncontingent, were offered for finishing or completing a task, or were offered for attaining or surpassing a score" (p. 17).
- When rewards were expected, for tasks of high initial interest and measures of self-reported interest, no significant effects were detected when the rewards were task noncontingent or were offered for doing well.

## Themes

The Myth Will Live On

A common theme in recent literature is that philosophical beliefs will keep the myth that rewards harm intrinsic motivation going, regardless of evidence (Cameron et al., 2001; Maag,

2001). David Reitman (1998), explains why the reviews by Judy Cameron and her associates were met with "protests and accusations" (Cameron & Pierce, 1996, p. 39):

> Some critics of behaviorism may go beyond the empirical data and admonish behaviorists on the grounds that is wrong to 'control' and that efforts to reward thus constitute a 'bribe' . . . Strong philosophical differences between social-cognitive and behavioral researchers may lie at the heart of the debate (Bernstein, 1990; Flora, 1990; Schwartz and Lacey, 1982). Consequently, while attempts to counter the 'bribery' criticism have often been clever (e.g., bribes are delivered before rather than after the behavior is performed; rewards, in contrast to bribes, are provided for behaviors which are consistent with rather than contrary to societal values; see Kazdin, 1989) they seem unlikely to alter the views of persons with strong negative biases toward behaviorism" (Reitman, 1998 p. 108).

Use Both Intrinsic and Extrinsic Motivators

Combining intrinsic and extrinsic methods of motivation is a reoccurring theme. Covington (2000) recommends providing opportunities for students to talk about why the things they are learning are important to them personally, in addition to providing extrinsic rewards.

> Far from being incompatible, intrinsic and extrinsic reasons for learning are both encouraged by tangible rewards, but by different kinds . . . This proposition sheds an entirely new light on the concerns raised by many experts about the overjustification effect (Covington, 2000, p. 25).

Wiersma (1991), noting that most research had studied only situations where a reward was provided for a short period of time and then withdrawn, asked what happens when the reward continues to be available. He studied the percent of college students who returned for a

second task using a 2 x 2 factorial design with 44 students working on a task with high intrinsic value (a video game) and 46 students working on a task with low intrinsic value (transcribing numerical information with no apparent meaning from a card to a sheet of paper). Each intrinsic condition was subdivided into high (earn 2 college credits for participation) and low (earn 1 credit) extrinsic reward conditions. The percent of students who returned was as follows: (a) low intrinsic, low extrinsic, 22%; (b) low intrinsic, high extrinsic, 44%; (c) high intrinsic, low extrinsic, 33%; (d) high intrinsic, high extrinsic, 74%. Wiersma concluded "That intrinsic and extrinsic rewards are additive in their effect on motivation is consistent with . . . expectancy valence theory (e.g., Porter & Lawler, 1968; House, Shapiro, & Wahba, 1974; Staw, 1976) . . . [and] do not support cognitive evaluation theory [Deci, 1975]" (Wiersma, 1991, p.880).

Hidi and Harackiewicz (2000), experts in the effect of different types of goals on intrinsic motivation, now favor using both intrinsic and extrinsic motivation: "We argue that the polarization of situational and individual interests, extrinsic and intrinsic motivation, and performance and mastery goals must be reconsidered. . . . We urge educators and researchers to recognize the potential additional benefits of externally triggered situational interests, extrinsic motivation, and performance goals" (p. 151).

## Single Subject Research

Almost all of the research on the effect of rewards on intrinsic motivation has used a group design. Cameron et al. (2001) list five single subject studies in which intrinsic motivation was measured by time on task (Davidson & Bucher, 1978; Feingold & Mahoney, 1975; Mawhinney, Dickinson, & Taylor, 1989; Skaggs, Dickinson, & O'Connor, 1992; Vasta, Andrews, McLaughlin, Stirpe & Comfort, 1978). In each of these studies, the amount of time

spent on a task was measured over a series of sessions divided into three phases: (a) first, for a baseline phase, no reward was offered, (b) second, for a treatment phase, rewards for doing the task were offered, and (c) third, during a follow-up phase, the reward was discontinued. All of these studies indicated that the reward did not decrease intrinsic motivation because the participants spent as much or more time on the task in the follow-up phase as they did in the baseline phase.

Another single subject study recently examined the effect of token awards on intrinsic motivation for completing math problems (McGinnis, Friman, & Carlyon, 1999). Two middle school boys participated. The amount of time spent and the number of problems completed increased for both boys when the reward was offered. For one boy, even when the reward was faded, the amount of time spend on math remained high. For the other boy, when the reward was discontinued, the amount of time spent on math dropped to below baseline levels.

## Responses to Concerns about Using Rewards

### Research on Long Term Effects

Flora and Flora (1999) surveyed 171 college students about the effects of the "Book It" program– where children could earn pizzas or money for reading – on their learning to read when they were young (if they participated), their interest in reading, and the amount they read now. Their results indicated that the rewards actually helped children learn to read, increased their interest in reading, and those who participated as children read just as much or more as college students as those who did not participate (Flora & Flora, 1999).

### Control of One Person by Another

Several responses to this concern should be considered. First, teachers and parents have

moral and legal obligations to control the children for whom they are responsible and to do so in a way that will benefit and protect the children. Second, while accepting their current responsibility for controlling the child, adults should be helping the child to grow into youth who has self-control by teaching social problem solving and self-management skills (Kim, 1994; Todd et al., 1999). Third, the use of rewards or other behavioral (or cognitive) methods does not "remove the ability of the individual to choose alternative responses" (Newman, Reinecke, & Kurtz, 1996). In other words, positive behavior support teaches, encourages, and motivates but it does not force. In fact, when positive support fails and students engage in behaviors that cannot be tolerated at school or in society, police or medical personnel will use stronger methods of control. Fourth, a glaring defect in the arguments presented against the use of "rewards" by most critics is a lack of awareness of competing behavioral contingencies, including reinforcers that exist in the natural environment (Horner & Billingsley, 1988; Horner & Day, 1991; Neef, Bicard, & Endo, 2001; Neef & Lutz, 2001a, 2001b; Neef, Shade, & Miller, 1994; O'Neill et al., 1997). For example, positive reinforcement in the form of attention often is provided by peers and sometimes (inadvertently) by teachers for students' inappropriate behaviors (Beaman & Wheldall, 2000; Maag, 2001; Sugai, Horner, & Sprague, 1999). This attention may well be more compelling than any inherent interest a worksheet or textbook may have. Additional reinforcement from teachers, parents, and prosocial peers for appropriate behavior may be needed to counteract "deviancy training" being delivered by deviant peers (Patterson, Dishion, & Yoerger, 2001).

## Rewards May Be Misused

Any procedure can be misused or abused. Punishment has been misused in schools

(Hyman, Clarke, & Erdlen, 1987; Hyman & Perone, 1998; Taylor & Bailey, 1996). Some activities that are inherently interesting can be used inappropriately. Persuasion can be used inappropriately. The potential for misuse exists for all sorts of things (videos, fire, electricity, the Internet, etc.) and is not a valid argument for eliminating something which also can be used in beneficial ways. Instead, with any procedure, teachers should be trained, supervised, and guided in the correct way to use it. According to Sprick (1996), tips for correct use of rewards include: (a) If a student "is already motivated to engage in a productive activity, do not set up extrinsic rewards" (p. 14); (b) if a student is not doing his or her work, before offering a reward make sure the work is appropriate for the student's ability level, ask the student and parents what might help with completing the work; teach ways of focusing attention and self-monitoring skills; break long assignments into smaller parts; and/or change work location; (c) in giving feedback, keep the focus on the student's accomplishments (e.g., exclaim over the number of assignments completed) rather than on the reward (e.g., exclaim over the points earned).

## Boring Tasks

Another argument that is not convincing is the complaint that teachers might use rewards to engage students in activities the students otherwise would not choose to do, such as, boring tasks, having to sit still, etc. Two lines of reasoning are related to this complaint. First, preparing interesting lessons and including opportunities for choice is highly recommended and fully compatible with a formal reward system. In fact, behaviorally oriented researchers have carefully studied the use of opportunities for choice as a means of improving student's behavior and performance (Blair, Umbreit, & Bos, 1999; Cole, Davenport, & Bambara, 1996; Dunlap et al., 1994; Umbreit & Blair, 1997). Second, a task that a child might not wish to do is not necessarily

an inappropriate task. Completing boring tasks and struggling to develop skills that do not come naturally should be taken in stride. We do not want children to say, "I only do what I want to do." Self-indulgent people who refuse to engage in tasks and activities that may be boring, difficult, or unpleasant, even when there are valid reasons for doing them, are not likely to be good parents, considerate friends, or valued employees, nor can they expect to be successful in a career. A list of things that responsible adults do, for good reasons but not for fun, would be very long. A few examples include changing a baby's diaper, filling out income tax returns, and controlling feelings of "road rage" in traffic jams. Although teachers should develop interesting learning activities and not rely too heavily on worksheets, realistically, even being able to fill out a form – a worksheet – is a valuable and marketable skill and one many adults have to do often in their line of work. Clarke et al. (1995) reported that, if worksheets are individually designed to include content of interest for a student with behavior disorders, conduct will improve. To the extent that this is practical, it would be desirable. However, it is not realistic to assume that teachers will always be able to provide lessons and assignments that match the interests of the students. According to Rathvon (1999), given that getting an education is likely to involve some assignments a student considers boring, it is reasonable to provide "some form of incentive to promote academic productivity and positive social behavior, such as public recognition . . . opportunities to participate in team competitions; and material and activity rewards" (p. 40).

## Use of Rewards Will Require Effort

"Another frequently encountered teacher concern relative to the use of material reinforcers is the amount of time and effort required to dispense rewards." (Rathvon, 1999, p. 41). Certainly effort is required to monitor student performance and behavior and to provide

feedback and contingent rewards. On the other hand, failure to do this does not necessarily mean that the teacher's job will be easier. Teachers may be required to expend energy on reprimands and punishment procedures, or to use restraints, or forcibly remove students who create serious disruptions from classrooms.

## Delivering Rewards Being Personally Distasteful

Some teachers find that they do not like to deliver rewards to students; it is just something they personally would rather not do. Nevertheless, teachers have a professional responsibility to use effective methods, just as dentists, nurses, clerks, and others who serve the public do. However, if a student needs positive behavior support involving the delivery of rewards and the teacher does not want to do that, one option might be to train a paraprofessional, an educational assistant, to provide positive behavioral support. Legal experts report that schools have an obligation to find a way to provide behavior management when it is needed:

> Students with EBD [Emotional and Behavioral Disorders] may prove to be the most difficult to educate in regular classrooms. Nevertheless, this fact does not relieve schools of their affirmative duty to make good faith efforts to include students with EBD. The courts have been clear regarding the importance of providing supplementary aids and services to fulfill this obligation. When a student presents significant behavior problems, supplementary aids and services may take the form of behavior management plans, consultation by the EBD teacher, training the general education teacher in behavior management strategies, and the use of a behavioral aide. (Yell, 1995, pp.188-189)

Group contingencies may be acceptable to teachers. "Resistance [from teachers] is especially likely if teachers are asked to implement strategies that provide rewards for only one

or a few unproductive or disruptive students while appropriately behaving classmates are unrewarded" (Rathvon, 1999, p. 41). One way to avoid this problem it to use interventions that involve the whole class or peer groups.

## Concerns about NOT Using Rewards

### More Positive Reinforcement for Appropriate School Behaviors Is Needed

Too little natural positive reinforcement is available in schools to students for appropriate behavior. "For many difficult-to-teach children, the usual rewards available in the classroom environment, such as grades and teacher praise, are insufficient to maintain appropriate behavior" (Rathvon, 1999, p. 41). Rewards that are positively reinforcing should be used to a greater extent in educational settings, especially for students with or at risk for behavioral disorders, and should be based on functional assessments and person centered planning (Artesani & Mallar, 1998) and include plans for fading, transfer of training, and generalization (Horner, Dunlap, & Koegel,1988). Many examples of successful use of positive reinforcement to help children learn and use skills that enhanced the quality of their lives are given by Piazza, Fisher, Roane, & Hilker (1999).

### Some Students Need Very Clear, Salient, Formal Reward Systems

Although many students may adapt well to school without any special rewards, finding the natural rewards sufficient, other students may not recognize or be able to access or understand ordinary school rewards.

### Formal Reward Systems Enhance a School's Cultural Competence

Without formal reward systems, schools may fail to create successful outcomes for some students from diverse "minority" ethnic backgrounds. Using a formal system of explicit rewards

would be useful in clarifying expressions, words, and affect from the dominant culture that teachers intend to convey positive messages but which are inadequate in classrooms serving students with diverse backgrounds.

## Formal Reward Systems Help Students Who Have Been Abused or Neglected

Student who comes from a dysfunctional home is likely to bring to school extra needs for clear rewards for appropriate behavior. These children may have learning histories from parent-child interactions (Snyder & Patterson, 1988) at an early age that make it difficult for them to understand subtle words of praise or to benefit from reinforcer barren environments. For example, adults may have promised to give them rewards or to come visit them when they are in out-of-home placements and then failed to keep their promises. These students often have learning histories involving abuse, neglect, or difficulties with perception that prevent them from recognizing subtle reinforcers (e.g., smiles, praise) as signaling positive rather than dangerous events (Burrell, Wood, Pikes, & Holliday, 2001). Rewards need to be clearly explained and made salient for such students.

## Consequences of Punishment and Exclusion Trivialized

An exclusive focus on intrinsic motivation to the exclusion of rewards can trivialize the difference between punishment as a method of control and positive reinforcement. Rejecting the use of nonaversive methods of behavior support is not likely to mean students will be free to engage in “intrinsically motivating” activities. On the contrary, it is likely to result in the use of aversive methods of control (Maag, 2001; Morgan, Loosly, & Striefel, 1997; Repp & Singh,1990; Tobin & Sugai, 1993).

## Use of Reinforcement to Reduce Problem Behaviors

Research on intrinsic motivation has focused on wholesome recreational activities and academic or vocational tasks. Interventions to reduce problem behaviors generally have been ignored by theorists or researchers in the field of intrinsic motivation. Perhaps this is because, in the past, increasing wholesome behaviors was often thought of as distinct from decreasing problem behaviors. Today, positive interventions are designed to decreasing problem behaviors by teaching and/or increasing fluency with appropriate alternative behaviors that can more effectively and efficiently lead to the consequence that used to maintain the problem behavior (Condon & Tobin, 2002; O'Neill et al., 1997; Sugai, Lewis-Palmer, & Hagan, 1998; Tobin & Martin, 2001). The use of rewards and/or positive reinforcement was an important part of multi-component interventions that reduced adolescent substance abuse (Kaminer, 2000) and other serious antisocial behaviors such as extreme verbal abuse and physical aggression (Myaard, Crawford, Jackson, & Alessi, (2000).

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Table 1

Examples of Research on Effective Use of Positive Reinforcement

| Citation | Reinforcer(s) | Participants | Behavior(s) | Comment |
|---|---|---|---|---|
| Armendariz & Umbreit, 1999 | Praise, teacher attention | 3rd grade math class students, bilingual, low SES (N = 22) | Correct, active responding increased; disruptive behavior reduced | Follow-up: 2 months |
| Craft, Alber, & Heward, 1998 | Praise, teacher attention and "an inexpensive prize (e.g., sticker, pencil)" (p. 405) | 4 fourth graders with developmental disabilities in an urban public school | Completing spelling worksheets, being accuracy, and recruiting teacher praise or help in an appropriate way | Generalization programming involved changing from continuous to intermittent reinforcement, and then to naturally occurring reinforcers. |

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|---|---|---|---|---|
| Golly, Stiller, & Walker, 1998 | Points, praise, group activity or reward at school, privilege at home | "kindergartners who show emerging signs of developing antisocial behavior patterns" (p. 244) (N = 20) | Academic Engaged Time (AET) and adaptive behavior increased; aggression decreased (p. 247) and "it had a positive effect on . . . peer relations" (p. 249) | A consultant works with the school staff for 50 to 60 hours over a 3 month period to set up the program. |
| Snyder & Shapiro, 1997 | A schoolwide point system in class and, additionally, for transitions to and from this class "small monetary rewards ($.10/point)" (p. 251) | 3 adolescents in a private school for students with serious emotional disturbance | 100% of workbook assignments completed; for 2 of 3 students, performance improved on specific behaviors being taught. | Eleven sessions.<br><br>Students rated the intervention as very acceptable. |
| Umbreit & Blair, 1997 | "embedding preferred activities within classroom tasks" (p. 79) | 4 year-old boy at risk for expulsion from an all day childcare center; due to being "noncompliant and aggressive" (p. 76) but seemed to be developing normally otherwise | Noncompliance and aggression reduced from "a total of 61 times in a single day" during baseline to near zero (p. 82). Learned to take nap and to transition appropriately. | Study lasted 20 weeks. |