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The Effect of Rewards and Motivation on Student Achievement

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MOTIVATION ON STUDENT ACHIEVEMENT

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ABSTRACT

A review of research is conducted to examine the effect of rewards on intrinsic motivation and learning for children in general education and special education. Intrinsically motivated students experience school success because they display behaviors such as choosing challenging activities and spending more time on task. The use of rewards undermines intrinsic motivation and results in the slower acquisition of skills and more errors in the learning process. The implications of the research are discussed and a collection of strategies designed to promote intrinsic motivation is presented. One part of the collection presents strategies for all students, and the other part contains strategies for students with learning disabilities. Each part is broken down into topics on classroom climate, behavior management, and lesson planning.

CHAPTER ONE: PROJECT PROPOSAL

Poor student achievement is often attributed to a lack of motivation and rewards are given in an attempt to increase that vital student motivation. Students with learning disabilities are very often unmotivated because school is one failure after another to them. The statement, "If they would only try harder, then they would do better on tests, take more risks, or earn better grades" is often heard regarding these students. When rewards are given, they often have the opposite effect of what was intended. High student achievement comes from students who are motivated from inside. Therefore, instead of giving rewards, teachers need to consistently teach students to become intrinsically motivated.

Student motivation affects every aspect of school life, from attendance, to academic performance, to extra-curricular activities. Promoting the greatest student motivation possible is extremely important for every teacher in grades K-12, especially in today's educational climate, where schools are continuously under pressure to improve test scores, responsibility, and accountability. Students with learning disabilities face even greater challenges every day as they walk into classrooms. Because these students can struggle with the easiest of tasks presented by teachers, students with learning disabilities can seem like the most unmotivated of all, going to extremes not to show their weaknesses. As a result of these pressures, teachers bombard students with the promise of rewards; stickers for good behavior, treats for completing assignments, lunches for turning in homework. Of all the rewards given, grades are the most common reward (Seoane and Smink, 1991). These good intentions, though, are missing the mark. When rewards are given, children don't perceive themselves in control of learning, they approach and complete tasks differently than when rewards are not given, and their work is judged as less creative (Amabile and Gitomer, 1984; Condry, 1977; Ryan and Grolnick, 1986).

Specifically, students do not see the cause/effect link between the actions they take and the things that happen to them. Repeated failures in school cause them to build barriers to protect themselves, and therefore they become uninvolved in school (Long and Bowen, 1995).

Rewards, then, should be replaced with teaching that is focused on the intrinsic motivation of the student. A common goal should be to have the student's interest be at the center of their learning, not a reward. Students who are taught to perceive themselves as causal agents in the classroom engage in more risk-taking behavior, and increase their achievement (DeCharms, 1972). Also, students who perceive themselves as more in control of learning have better self-esteem (Ryan and Grolnick, 1986).

There is a need to train teachers in how to teach students so that they become intrinsically motivated, instead of just propelled along by the vision of the next external reward. The key factors are to create an autonomous classroom environment, and to teach students to perceive themselves as decision makers. Teachers also need to feel that they are in control of the material to be taught, how to teach it, and how to teach the students to be in control of the content. These strategies do not often appear in reading methods texts, or math books, although they are key issues in improving the achievement of all students.

Students have been rewarded for good behavior for many years, even before the development of Skinner's theory of operant conditioning. In the 1800's New York City established a token economy as a means of rewarding correct school work, and punishing school offenses (Condry, 1977). In fact, though, it was the theory of operant conditioning that lead to the widespread use of rewards in the classroom. Basically stated, operant conditioning means that if a reinforcer is delivered after a certain behavior, then the particular behavior will be strengthened. A reinforcer is

anything given that will increase the chance of the behavior happening again. In school, reinforcers usually are things like stickers, praise, treats, and grades.

At the same time that operant conditioning was gaining in popularity, motivation theorists were changing their ideas. Researchers were rejecting the idea that man is motivated by drives and instincts alone, and accepting the idea that man is motivated by sources both inside the body and outside in the world (Festinger and Carlsmith, 1959; White, 1959). In the 1970's, Edward Deci (1971;1972) defined the different kinds of motivation as intrinsic motivation and extrinsic motivation. Intrinsic motivation is the act of completing an activity for the pleasure of doing the activity itself. Extrinsic motivation, on the other hand, is the act of completing an activity in order to receive some type of reward from another source. As a result of these definitions, researchers began to question the effects of the different kinds of motivation, and school became a widely used testing ground.

In research conducted during the last 50 years, it has been found that intrinsic and extrinsic motivation have different effects on education. The presence of intrinsic motivation produces many behaviors that result in school success like sustained interest in tasks, risk taking, and the conquering of new challenges (Adelman and Taylor, 1990; Amabile and Gitomer, 1984; Spaulding, 1992). Children with learning disabilities have even been shown to perform at levels higher than what was expected by psychological tests (Harter, 1983). External rewards, however, tend to have negative effects in school.

Different forms of extrinsic motivation tend to take attention away from the most important aspect of school: a child's learning. Rewards can undermine intrinsic interest in an activity, and even deter a person from returning to an activity later on (Deci, 1971;1972; Festinger and Carlsmith, 1959; Lepper, Greene, and Nisbett, 1973). In addition, rewards have been shown to have detrimental effects on the process of learning. Masters and Mokros (1973) found that rewards resulted in more

errors in learning and Garbarino (1975) saw that rewards affected the behavior of girls in a cross-age tutoring situation in a negative way. In another study by Maehr and Stallings (1972) it was found that students consistently chose easier problems to complete when being graded by the teacher. The types of behaviors described here certainly do not describe the desirable behavior of intrinsically motivated children.

Reward systems usually are targeted for and used the most with children with learning disabilities or mild handicaps, and have been used traditionally in special education classrooms (Schultz and Switzky, 1990). However, the use of these programs has not lead to the effective use of rewards. Most successful studies showing an improvement in the skills of children with learning disabilities have dealt with a very narrowly defined skill, and not the complex tasks that these students will be required to do in the real world (Torgesen, 1986). Although some extrinsic rewards may be necessary to get students started in an education program, the bulk of content should be centered around skills that promote intrinsic motivation and lead to the mastery of generalized skills (Schultz and Switzky, 1990).

All classrooms, then should be using strategies to foster the development of intrinsic motivation. In order to do this, there first needs to be an autonomous classroom climate. The students need to be given options, the opportunity to make decisions, and to feel that they have some control over the environment and their learning (Adelman, 1989; Amabile and Gitomer, 1984; Kohn, 1993; Ryan and Grolnick, 1986). Students also need to receive instruction in self-reliant behaviors such as goal setting (DeCharms, 1972; Fewell, 1984). Teachers can have an easier time dealing with misbehavior if they try to recognize the motivational basis of misbehavior (Adelman and Taylor, 1990). There are many actions teachers can take in order to improve student motivation.

Students with learning disabilities also benefit from all of the above mentioned strategies, and from some others. The use of learning strategies and mediational

learning experiences may be a helpful way of teaching these students about goal setting behaviors (Fewell, 1984; Schultz and Switzky, 1990). In addition a specific part of every Individualized Education Plan (IEP) should be devoted to addressing the motivational needs of each child referred for special education (Schultz and Switzky, 1990; Adelman, 1989). It could change some decisions about placement.

Finding ways to develop intrinsic motivation in students should be an important part of every teacher's planning on a daily basis. The behaviors associated with intrinsic motivation are crucial to developing life-long learners.

The purpose of this study has been to develop a collection of teaching methods that promote intrinsic motivation in students in elementary and middle school. Specifically, this study examined the role of rewards in student motivation and achievement, examined how intrinsic motivation affects student achievement, presents methods of teaching students to be intrinsically motivated, and addresses the different methods that may be used with students with learning disabilities.

One goal of this project was to show, through an examination of the research, that rewards have a negative effect on student achievement and behavior, and that an alternative is needed. A second goal was to show, also through an examination of the research, that the alternative to rewards is consistent teaching that develops intrinsic motivation in students. A third goal was the development of a collection of methods on teaching for intrinsic motivation across the curriculum. The collection consists of three sections, classroom climate, behavior management, and lesson planning. Each section is then broken down into sub-topics with a rationale presented for each, and a list of techniques and methods is listed. A fourth, and final goal was to address the special needs of the student with learning disabilities, and to present teaching methods designed specifically for these children.

For the purpose of this project, students demonstrating intrinsic motivation are those who complete activities for the pleasure of doing the activities themselves; the

reward being the activity. As a result, these students actively seek out the things needed to bring events to completion.

Students who are motivated by extrinsic factors complete activities in order to receive an external reward. As a result, they do not work out events on their own, but work only to receive a reward. External motivators are things given to the students by others like grades, candy, free time, and other things.

This study is not intended to address students with severe emotional impairments or conduct disorders. It also does not attempt to address every possible situation during the school day when motivation affects student behavior. For the purposes of this study, the word he will be used in situations that could apply to both men and women.

The final product is a collection of strategies. The first section states the evidence against rewards and in support of teaching for intrinsic motivation. The second section presents methods for developing intrinsic motivation divided into the parts: classroom climate, behavior management, and lesson planning. The last section addresses the child with learning disabilities, and presents teaching methods designed especially for these children.

CHAPTER TWO: LITERATURE REVIEW

Many schools have developed mission statements that refer to educating students so that they become life-long learners. The people who continue to learn throughout their lives must actively make decisions and take actions to develop their education; that is, they have no teachers handing out deadlines or grades. It can be said that intrinsic motivation plays a vital part in an individual's choice to take on challenges, and keep working on them until completion. In order to develop adults with these characteristics, teachers need to focus a large part of their teaching on developing this important characteristic. This literature review addresses three areas related to intrinsic motivation. The first area discusses why intrinsic motivation is important and describes the behaviors of intrinsically motivated individuals. The second area examines the development of the use of rewards in schools, and how rewards affect intrinsic motivation and the achievement of students. The third area stresses educational practices that are designed to promote intrinsic motivation. In addition, the differences in the treatment of children with learning disabilities is examined and discussed.

Characteristics of Intrinsic Motivation

Teachers typically describe good students as hardworking, interested, and motivated (Spaulding, 1992). Motivation is a word heard over and over again as crucial to a child's learning, and is often heard as being a major problem in schools today. Two types of motivation, intrinsic and extrinsic motivation, have been identified by Deci (1971; 1972). Deci describes an intrinsically motivated person as one who engages in an activity for the activity itself; the reward being the activity. A child who cleans his room for the purpose of displaying his baseball card collection is said to be intrinsically motivated. Extrinsic motivation occurs when a person completes an activity because it leads to the receipt of an external reward. A child

who is promised a trip to the movies after cleaning his room is said to be extrinsically motivated.

While the majority of rewards given in school can be thought of as extrinsic motivators, children learn the most when guided by intrinsic motivation. Children who are intrinsically motivated display a number of behaviors that allow them to perform accordingly with their academic abilities (Spaulding, 1992). For example, children who are intrinsically motivated become deeply involved in the task at hand and experience a feeling of enjoyment (Amabile and Gitomer, 1984), and seek out challenges with the intention of conquering them (Adelman and Taylor, 1990). According to DeCharms (1972), an intrinsically motivated person feels that he can try to produce a change in the environment, and feels confident that the change will occur. Children seen demonstrating these characteristics in the classroom would be characterized as motivated, good students.

Children with learning disabilities also benefit from intrinsic motivation. These children tend to work longer and harder on tasks than extrinsically motivated children with learning disabilities (Haywood, 1968), and have been shown to establish critical internal systems of self-reward and mastery goals (Harter 1978). Children exhibiting high levels of intrinsic motivation can achieve at levels that are higher than predicted by psychological testing (Harter, 1983). The development of intrinsic motivation is indeed crucial to the learning of children with and without learning disabilities.

The Effect of Rewards on Learning

Intrinsic motivation is important to the development of life-long learners, but is often hard to see in many classrooms. Many teachers, in both general and special education have come to rely on rewards and incentive programs in order to manage behavior and learning. For example, a teacher may give a boy a treat for entering the room quietly with the hope that the reward will increase the chance that the boy will enter the room quietly the next time. The teacher may think that she is promoting a

productive classroom environment, but the boy only learns what behaviors earn a treat. He does not learn about the value of a productive classroom environment. The field of behaviorism has contributed to the common use of rewards in the classroom.

The field of behaviorism produced a theory in the 1950's that heavily influenced the use of rewards in schools. The theory of operant conditioning, developed by B.F. Skinner, works on the premise that if a reinforcer is delivered after a certain behavior is performed, then the strength of the behavior is increased (Cosgrove, 1982). A reinforcer is any stimulus given after a behavior that increases the chance of the behavior recurring. Past and present teachers are using the principles of operant conditioning when they give out stickers, treats, and praise. The powerful idea of operant conditioning is subject to cautionary statements. MacMillan (1973) states that many reinforcement techniques are targeted for use in populations with mild handicaps, and that care should be used when choosing reinforcement with a particular group. Even with the cautions, the principles of operant conditioning have seen a widespread implementation in education.

The field of study on motivation was also going through some changes beginning in the 1950's. Motivation researchers and dissonance theorists began to reject Freud's idea that man is motivated only by drives and instincts (Festinger and Carlsmith, 1959; White, 1959). White went on to explain that motivation is man's attempt to change his environment, and then feel satisfied when the desired change occurs. These ideas, along with Deci's identification of intrinsic and extrinsic motivation led to the completion of many research studies on the effects of motivation on behavior. As a result, the idea began to emerge that extrinsic motivators may have a negative effect on a person's internal motivation. Since many of the rewards given in school are extrinsic motivators, school became the setting for a large body of research.

During the last 50 years researchers have thoroughly investigated the effects of rewards on all aspects of school. Festinger and Carlsmith (1959) found that the

payment of money to college students to lie about enjoying a dull learning task did little to change the student's opinion of the task. Similarly, Deci (1971; 1972) discovered that money as a reward has detrimental effects on motivation. Intrinsically motivated college students became less motivated when paid money as a reward. On the other hand, when intrinsically motivated students were given praise as a reward, their motivation was enhanced. In addition, in 1972 Deci found that when a person perceives a reward to be more that what is warranted for a given situation, the person puts forth more effort in an activity. The type and amount of a reward have an effect on motivation and performance.

The timing of a reward also affects motivation. In a study done at a nursery school, Lepper, Greene, and Nisbett (1973) assigned 51 children with a high interest in drawing to one of three experimental conditions. One group of students agreed to complete a drawing activity for a reward of a certificate and star, one group completed the drawing activity and then received a surprise reward, and the third group completed the activity but received no reward. The authors then studied the amount of time subjects spent with the drawing supplies during free choice time. Lepper et al. found that the subjects who received no award or an unexpected reward spent significantly more time drawing than subjects in the expected award condition. Rewards contracted for before an activity begins appear to undermine interest in that activity later on, since students in the unexpected reward condition still spent considerable time drawing during free time. In addition to the type, amount, and timing of a reward, researchers also studied the effect of rewards on the process of learning.

Rewards have been shown to interfere with the quality of learning taking place. A study by Masters and Mokros in 1973 showed that a reward of food distracted the subjects from the learning task, and resulted in less learning. The subjects, nursery school students, were given pieces of candy for correct answers in learning tasks

dealing with building blocks, while a control group was not given anything for correct answers. The group receiving candy proved to be slower in acquisition of the new skill, and tended to make more errors than the control group. This study supports the idea that the learning task just becomes a way to receive reward, like the boy entering the room quietly in order to get a piece of candy. Rewards in this case have no place in the classroom because they cause students to make more errors and become distracted.

Using the learning task just to receive the reward has been seen in other aspects of learning also. Garbarino (1975) studied the effects of rewards on the behavior of tutors in a cross-age tutoring situation. Fifth and sixth grade girls tutored first and second grade girls on how to play a new game. Half of the tutors were told before hand that if the younger girl learned the lesson very well, then the tutor would receive a reward in the form of movie passes. The other half of girls were told nothing, and served as a control group. Garbarino analyzed the language interactions and the emotional tone of the session, and tested the young girls on their knowledge of the new game. He found that the young girls in the reward condition made more errors and demonstrated less learning than the girls in the no-reward condition. Tutors in the reward condition tended to make more negative responses during the sessions, with the younger girls showing higher levels of frustration. The emotional tone of the no-reward condition was seen as much more positive, with the tutors being more concerned about the learning of the younger student.

External rewards also interfere with the choices children make about their own learning. To make the most of educational potential, a child must continually challenge himself to new and more difficult tasks. An intrinsically motivated child takes risks and chooses more difficult tasks, therefore increasing his learning. Maehr and Stallings (1972) examined the way students challenged themselves when graded by a teacher, and when evaluated by themselves. Eighth grade students were given

two tests of both easy and hard math problems. Students could choose a number of problems to work on, and were told that one test would receive a grade from the teacher, and that the other test was to be completed independently with the student evaluating himself. The authors found that students consistently chose easier problems when the teacher would be grading the problems, but chose the harder problems when evaluating themselves. What seems to be more important is a decent grade, and students will follow the easiest route in order to earn a good grade, even though when working on their own, students did prefer to challenge themselves. In order to make the most of the child's interest in challenging himself, the classroom environment must make him feel safe and comfortable in doing so. The results of this study indicate that the giving of grades does not promote such an environment, but takes child's attention away from the task of learning and to the task of getting the reward.

The research has shown that rewards affect the learning process, and can undermine a student's intrinsic motivation. At this point, though, the effect of rewards and students with mild handicaps or learning disabilities has not been mentioned. After all, many reward or token systems are aimed specifically at these populations of students, and have been traditionally used in special education classrooms (Schultz and Switzky, 1990). Many behavior oriented programs have been shown to produce an increase in academic performance of children with learning disabilities (Torgesen, 1986), but the problem with these approaches, Torgesen explains, is that the studies have focused on very narrowly defined skills, and there is no evidence of the long term effects of these approaches. Similarly, Schultz and Switzky (1990) state that in order to sustain long-term academic growth,

> ...instructional approaches need to be tied to a broader teaching strategy or model that ultimately focuses on the internalization and the development of a intrinsic orientation toward learning. If teachers of children with learning

problems are going to sustain this level and generalize the effect of their instruction, this long-term goal must be the ultimate objective of each child's Individual Education Program. (p. 15)

Including strategies to foster the development of intrinsic motivation should be a part of every special child's educational plan.

Contrary to events taking place in most classrooms today, the use of rewards has a detrimental effect on the intrinsic motivation of students, and consequently affects student achievement in a negative way. It cannot be said, though, that extrinsic motivators have no place in school. With the many objectives that children are expected to achieve, it is unrealistic to expect children to be one hundred percent motivated all of the time (Stipek, 1993). Extrinsic motivators should be used sparingly, and so that they do not undermine intrinsic motivation. Intrinsic motivation has been shown as a very important quality to have in order to be successful in school. The challenge is for teachers to arrange the classroom environment in a way that allows intrinsic motivation to develop.

Teaching for Intrinsic Motivation

A common theme in the research regarding intrinsic motivation is the development of an autonomous classroom climate. When children feel in control of their environment, they are not only internally motivated to work, but also experience positive feelings of self-worth (Ryan and Grolnick, 1986). It is also important to note that even though a teacher may feel that the environment is autonomous, the child may perceive it in a different way. A child's perception of the environment should be taken into consideration when developing an education plan (Adelman, 1989).

Creating an environment where kids see themselves as having control is one where they have some choices. Giving children choices in their learning can be a very powerful tool in developing intrinsic motivation. Amabile and Gitomer (1984) studied young children making collages in a day care center. One group of children

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was given a choice of materials to use in a collage, and another group was given certain materials to use. The authors found that the collages of the children given a choice of materials were judged as significantly more creative, and that the same children spent more time with the collage materials during free choice time. The fact that the children spent time with the materials on their own time has important implications for the classroom. As children grow older and more demands are made on them in school, the students need to choose time to work on their studies. Students given more choices in their learning may choose more time at home and in school to work.

Alfie Kohn (1993) has suggested many ways to give children choices in the classroom. With respect to academic learning, children can make choices in what they learn simply by choosing what trade book to read. Students choose how to learn by deciding on what types of groups to work in, or where they will work in the classroom. Students can make choices in how well they learn by helping to determine the criteria by which their material will be graded. Finally, students need to engage in discussions about why they learn certain things in school. Kohn also points to the importance of including children in discussions about social and behavioral issues in the classroom, such as rules and procedures. Children given a choice in these issues will be much more likely to take them seriously, and with intrinsic motivation.

In addition to Kohn, other researchers have stated the importance of involving students in the decision making process going on in the classroom. Amabile and Gitomer (1984) saw that giving small children a choice of materials for an art project produced better art projects. Also, giving students learning options, helping them to sample the options, and then decide on an particular option deeply involves students in their own learning process (Adelman, 1989). Not only have students made decisions about their learning, but they have also practiced monitoring and evaluation

skills. Student decision making not only helps in the delivery of content information, but can also be an integral part of a behavioral management program (Adelman and Taylor, 1990).

In addition to the classroom climate, children need to receive instruction covering areas relevant to intrinsic motivation. As a result of receiving personal causation training, both teachers and students in grades 5,6, and 7 felt like they had some control in their environment, and students saw increases in academic achievement (DeCharms, 1972). After receiving training, teachers designed classroom exercises in self-concept, achievement motivation, realistic goal setting, and the origin-pawn concept. Specific goals for the students were to be able to determine goals for self, identify strengths and weaknesses, determine the action to take toward goals, and to tell if the action is leading toward a goal.

Teaching goal setting behavior requires individualized practice, with each student practicing setting his own goals. This type of lesson would also require the teacher to provide individual conference time with each student participating. As a result, many teachers shy away from this set up because most of the class is working independently for long periods of time while the teacher holds conferences. Stipek (1993) recommends the use of learning centers in the classroom to accommodate for the need for classroom conferences, individualization of work, and the chance for students to have choices. Even though learning centers have traditionally been used with younger children, they can be used effectively with students of all ages.

Another way to structure the classroom to promote intrinsic motivation is through the use of interactive journals (Rambusch, 1992). These journals, one per subject area, are used to complete lessons or learning centers, where students take as much time and space as necessary to respond to lessons. The teacher then periodically collects the journals, and writes comments in them. The journals, then become a

dialogue between the child and teacher, and become a running record of the child's work during the year.

Behavior management is another important part of the classroom, and motivation plays a large part in how children act. Adelman and Taylor (1990) state that it is important to identify misbehavior from a motivation standpoint before determining action on the part of the teacher. Misbehavior can be thought of as proactive or reactive. Proactive behavior is an action that a student engages in so that he can feel in control of the environment. Reactive behavior occurs when a student feels that his environment is threatened, and takes actions to avoid the unpleasant feelings. Preventing and responding to misbehavior, according to Adelman and Taylor, involves designing the classroom to better match the range of abilities represented, and using logical consequences that the students understand and accept as meaningful. It is also important to empower kids by giving them options, the opportunity to make decisions, and giving them continuous feedback on their progress.

Students with learning disabilities can benefit from all the ideas presented above in order to promote intrinsic motivation. It is important, though, to address the special needs of these children and motivation. The Individualized Education Plan (IEP) is the written plan of action for children in special education, and these plans rarely refer to or have objectives about the motivational characteristics of the child (Adelman, 1989; Schultz and Switsky, 1990). Adelman continues to say that objectives regarding the motivation of the individual should be a part of every IEP. The difficult part of including such objectives in the IEP is that goals regarding motivation are difficult to measure objectively, but that should not stop educators from including such important information in the plan. Adelman and Taylor (1990) suggest some questions to be used in the assessment of individuals with behavior problems who are being considered for special education:

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1. Is the misbehavior intentional or unintentional?

2. If it is intentional, is it reactive or proactive?

3. If the misbehavior is reactive, is it a reaction to threats to self-determination, competence, or relatedness?

4. If it is proactive, are there other interests that might successfully compete with the satisfaction derived from deviant behavior? (p. 545)

Considering questions such as these may help in correctly identifying children's learning problems.

Children with learning disabilities also benefit from direct instruction aimed at their specific needs. Schultz and Switzky (1990) advocate the use of mediational learning experiences (MLE) in order to promote intrinsic motivation. A MLE is used as a teaching strategy that is characterized by an objective that can be generalized, an explicit explanation of meaning and purpose, the promotion of self-regulated student behavior, and the sharing of responsibility by teacher and student to find an answer to the quest. The MLE is used with other methods, such as reciprocal teaching, that promote the active participation of the student in the activity.

In order to promote intrinsic motivation and learn how to identify goals such as in personal causation training (DeCharms, 1972), students with learning disabilities may need different instruction. Fewell (1984) suggests a learning strategy that systematically teaches these students how to write and evaluate goals using a mnemonic strategy called TARGETS. Each letter reminds the student of an action to take in writing goals for himself. This type of teaching strategy can be very beneficial to giving students with learning disabilities a place to start in promoting self-determining behavior.

This literature review has covered three areas dealing with the effect of rewards on student motivation. First, intrinsic motivation as a desirable trait in people that leads to behaviors linked to school success. Second, the use of rewards in school, which is

so common, has been shown to have a negative effect on learning and undermines the intrinsic motivation in children. Third, suggestions have been made concerning what actions to take in the classroom in order to foster the development of intrinsic motivation. In addition, students with learning disabilities have been considered in relationship to rewards. What techniques should be used in order to allow these individuals to develop to their fullest? In summary, activities in every classroom should revolve around the development of intrinsic motivation, using extrinsic motivation only when necessary, in order to develop responsible students with the characteristics of life-long learners.

CHAPTER THREE: PROJECT REPORT

All human beings are born with the natural intrinsic motivation to learn and grow (Brandt, 1992). In school, however, this intrinsic motivation is undermined through the use of rewards such as stars and stickers. As a result, a common problem found in schools is a lack of motivation on the part of the students, and a helpless feeling on the part of the teachers (Spaulding, 1992).

The lack of motivation demonstrated by students is a problem, because the presence of intrinsic motivation in students produces school success. Intrinsically motivated students perform activities simply for the enjoyment and satisfaction that comes from completing the activity (Deci, 1971). In school, these students engage in behaviors such as working for a sustained period of time, taking more risks, and working out creative solutions to problems (Adelman and Taylor, 1990; Amabile and Gitomer, 1984; Spaulding, 1992). It is easy to see why intrinsically motivated students do well in school.

These intrinsically motivated students are often hard to find, because motivation is often undermined by the heavy use of external motivators in school. A person who is extrinsically motivated performs a task in order to receive a reward of some kind. The research has shown that rewards given in school like treats and stickers negatively affect the process of learning (Deci, 1971; 1972; Festinger and Carlsmith, 1959; Lepper, Greene, and Nisbett, 1973). The use of rewards leads to less learning, more errors, less creative work, and little desire to return to a project that was once highly motivating (Garbarino, 1975; Masters and Mokros, 1973). Students in special education also derive negative effects from the use of rewards, even though rewards have been traditionally used in special education classrooms (Schultz and Switzky, 1990).

The solution to the problem, a lack of motivation, is to design classrooms and follow practices that foster the development of intrinsic motivation. All school

personnel need to reduce the use of external rewards while using programs and practices that allow students to fully develop their own intrinsic motivation in school activities (Adelman, 1989; Amabile and Gitomer, 1984; Kohn, 1993; Ryan and Grolnick, 1986).

The purpose of this chapter is to present a collection of strategies and practices that are designed to promote intrinsic motivation in students. The strategies have been divided into two parts: practices for all children, and practices specific to children with learning disabilities. Within each part, a topic and sub-topic are listed, a rationale and purpose for the topic are listed, and a list of strategies is provided. Appendix A presents a sample goal sheet, and Appendix B presents a list of sources from the collection of strategies.

PRACTICES FOR ALL STUDENTS

TOPIC: Classroom Climate

Sub-topic: Choices and decision-making in the classroom

RATIONALE: Alfie Kohn (1993) states that the choices given to children in the classroom lead to more learning instead of just remembering. There is a wealth of research demonstrating that when choices are a regular part of school structure, children work harder and longer on tasks, and will seek out more creative solutions to problems (Adelman, 1989; Amabile and Gitomer, 1984; Kohn, 1993; Maehr and Stallings, 1972). Classroom teachers should continually seek out the situations in which they can give the children choices.

PURPOSE: To give students choices and allow them to make decisions about what, how, how well, and why they learn.

PRACTICES:

<u>What they learn</u>

1. The students choose the next trade book the class will read out of five choices.

2. After brainstorming, the class chooses which area of a topic to study further.

3. Within a required unit, the class picks one other related topic or problem to study.

4. Begin units by letting children talk about their knowledge of a topic, using their comments to structure lessons.

5. Have students help design classroom tasks and learning centers.

<u>How they learn</u>

1. Let students choose groupings: alone, partners, groups, whole class.

2. Let students decide where they will work: desk, table, computer, floor.

3. Students decide how to present work: reading aloud, written format.

4. Include a block of time during the day when students choose how to spend time: homework, reading a library book, art project, computer.

5. Let students choose how to respond to a lesson: poem, essay, collage, painting.

6. Give students some control over choosing the difficulty of a task.

How well they learn

1. Give students a choice in which questions to answer on a test.

2. Let students help choose the criteria by which work will be judged: what makes a story interesting, what makes an argument convincing, what makes a paragraph complete. Design a rubric together.

3. Evaluate work two times: once by the teacher, and once by the student.

4. Students help decide what should be covered on a test, or when a test should be given. This allows the students to judge curriculum for importance.

Why students learn

1. Demonstrate why the skills covered are important. Discuss, brainstorm, list, read, and write about the purpose of school.

2. Use graphic organizers to show students the connection between sub-skills and larger concepts, and to the real world.

3. Use arguments for what is and is not important to learn in school as a basis for working on speaking skills, writing skills, and listening skills.

4. Invite people representing different professions to speak to students about the skills they need on the job.

PRACTICES FOR ALL STUDENTS

TOPIC: Classroom Climate

Sub-topic: Creating an autonomous environment

RATIONALE: An autonomous classroom environment is one where each child feels that he has control of the events occurring, and takes on an active, responsible role (Ryan and Grolnick, 1986). The classroom is not controlled strictly by the teacher, but is a place where students can work at their own level, have a role in decision making, and actively participate in class because they are intrinsically motivated. It is important to note that creating autonomy does not mean creating a permissive environment. The challenge is to give kids an active responsible role in the classroom within structured limits.

PURPOSE: To design the classroom in a way that gives students a feeling of autonomy.

PRACTICES:

1. Measure each child's perception of the environment, and take those perceptions into account when planning. Two scales to use are the Origin Climate Questionnaire (DeCharms, 1976) and The Multidimensional Measure of Children's Perceptions of Control (Connell, 1985).

2. Make curricular materials available for the children to use. Numbering materials in a sequential path allows students to progress on their own at their own pace.

3. Use learning centers in the classroom. Learning centers allows students to make choices about their learning while the teacher can focus in on small groups or individual conferences.

4. Use interactive journals. Each student is responsible for his journal, which he uses to respond to lessons and assignments. The teacher collects them periodically and responds to the work. At the end of the year, the journal represents the work for the year.

5. Present new concepts in terms of a real-world context.

6. Allow students to choose materials related to their interests as much as possible.

7. Give students some flexibility in determining when they complete assignments.

8. Let students score written work and hold student conferences to discuss student progress.

9. Reduce dependence on the teacher by encouraging group members to give feedback to each other.

10. Have students help design classroom tasks, such as choosing vocabulary words.

11. Use a program designed to promote responsibility and autonomy such as the Adaptive Learning Environment model (Wang, 1976).

12. Create a "Multidimensional" classroom. This is one where students work on different activities at different levels, thus making the social comparison of performance difficult.

13. Inform students of daily, weekly, and monthly schedules. Post clearly in classroom.

PRACTICES FOR ALL STUDENTS

TOPIC: Behavior Management

Sub-topic: Preventing misbehavior through individualization

RATIONALE: Students who continually fail in school or are not challenged by the work presented often resort to forms of misbehavior (Adelman and Taylor, 1990). The struggling student misbehaves to avoid doing an assignment. The gifted student misbehaves because he has already finished the assignment. These children are motivated to act in this way because their individual needs are not being met. Individualizing the classroom environment as much as possible will lead to the prevention of many behavior problems, while promoting intrinsic interest on the part of the students.

PURPOSE: To design classroom instruction that matches the range of abilities present.

PRACTICES:

1. Give students many learning options for a topic, help them to sample the options, and decide which option to pursue.

2. Have students evaluate their choices for effectiveness and to help them make decisions in the future.

3. Use peer tutoring. Have older students come in to help students with specific skills, or have students tutor younger students in order to practice specific skills.

4. Continuously change the mode of presentation and type of representation of lessons.

5. Encourage different solution strategies, and discuss each with the whole class.

6. Concentrate on incorrect responses instead of turning to another student. Ask that students explain or justify their answers. Use the minidialogue as a way to uncover the misconceptions of a class.

7. On assignments and tests, include both very easy and very difficult items. Each student completes the test expecting to solve some but not all problems. This challenges fast learners, but does not discourage slow learners.

8. Give instructions in more than one format: auditory, on the chalkboard, on paper.

9. Use learning centers where students can choose their responses to an activity.

PRACTICES FOR ALL STUDENTS

TOPIC: Behavior Management

Sub-topic: Dealing with misbehavior

RATIONALE: The consequences that are often applied after misbehavior tend to be negative in nature and affect a student's integrity and autonomy (Adelman and Taylor, 1990). These actions also do nothing to promote a student's intrinsic motivation. In effect, then, the consequences do nothing to prevent future misbehavior. Instead, when misbehavior occurs, teachers need to consistently apply a set of consequences that the students perceive as acceptable and minimize negative reactions afterward.

PURPOSE: To establish and use an accepted set of consequences that take the learner's perceptions into account.

PRACTICES:

1. Involve students in deciding what the reasonable consequences should be. When students have a voice in such decisions, they will more likely be committed to accepting the consequences.

2. Hold class discussions about why consequences are necessary and important. Explain that the application of the consequences are not displays of power by the teacher, but ways of maintaining a productive classroom environment.

3. Provide direct instruction and modeling of expected behavior and consequences. Involve students in role-playing examples of the consequences.

4. Administer consequences firmly and consistently, in ways that allow students to maintain dignity.

5. Empower the students. Involve the students in deciding how to rectify the situation and avoid future misbehavior.

PRACTICES FOR ALL STUDENTS

TOPIC: Behavior Management

Sub-topic: Making changes after misbehavior

RATIONALE: When students have exhibited patterns of misbehavior for extended periods of time, it is important to address the motivational underpinnings of the student's misbehavior (Adelman and Taylor, 1990). First, the behavior should be identified as intentional or unintentional. Second, the behavior should be identified as proactive or reactive. Students engaging in proactive behaviors act in a way that results in feelings of control, competence, and connectedness. Students who are reactive attempt to deal with threats that interfere with those feelings of control, competence, and connectedness. It is important to take these factors into consideration when considering a school intervention.

PURPOSE: To identify motivational reasons for misbehavior and begin to identify solutions.

PRACTICES:

1. Involve parents, teachers, administrators, school social workers, school psychologists, and outside clinical workers in the assessment of the child. All perspectives will be helpful in designing a program for the student.

2. For unintentional misbehavior, programs should deal with reducing stress for the individual, and building up basic skills.

3. For intentional misbehavior, programs should deal with eliminating the situations that cause the behavior, and providing behavioral alternatives to the situations that cannot be changed. Behavior should be redirected toward the student's prosocial interests.

4. For reactive misbehavior, programs should work to reduce the situations that cause reactions, and enhance positive motivation for participating in an intervention.

5. For proactive misbehavior, which may be the most difficult type of behavior to deal with, programs should work to identify and follow through on positive alternatives to the deviant activity.

6. To the extent necessary, the student should be involved in counseling both in and out of school.

PRACTICES FOR ALL STUDENTS

TOPIC: Lesson Planning

Sub-topic: Setting goals

RATIONALE: In order to be intrinsically motivated, an individual must believe that his actions produce a change in the environment, and that he is responsible for his own behavior (DeCharms, 1972). Setting and achieving goals is one way of taking responsibility for behavior, and are things that students can have difficulty in doing. Therefore, instruction in setting goals, working on goals, and evaluating goals should be a part of every school program (Stipek, 1993).

PURPOSE: To provide students with instruction in setting and evaluating realistic goals.

PRACTICES:

1. Model the process of writing goals, and share personal goals with students.

2. Include the following elements in lessons on goal setting:

- how to determine realistic goals

- identifying personal strengths and weaknesses

- determining the action to take toward the completion of a goal

- evaluating work towards the completion of a goal

3. Teach children to use the following criteria when setting goals:

Achievability- How much time is needed to reach the goal? Do I know all the skills needed to achieve this goal?

Believability- Am I confident that I have the ability to reach this goal?

Measurability- How will I measure my progress along the way?

Desirability- Is reaching this goal something that I want to do?

Focusing- How will I keep reminding myself what my goal is?

Motivating- How is the process of working on this goal going to make me feel? Is the work stimulating, competence building, and reinforcing in itself?

Commitment- What formal or informal gesture have I made to pledge my effort and responsibility in working towards this goal?

4.   When beginning to write goals, the teacher may need to provide two or three choices of goals to work on.

5. Goals should involve a moderate risk on the part of the student. These types of goals result in the most learning.

6. Break long term goals into pieces, or proximal goals. Students can see their progress easier and faster when tasks are broken into pieces.

7. Written goals should be challenging and specific. "I will solve ten multiplication problems" is easier to measure than "I will do my best at math."

8. A weekly conference with students is a consistent way to set new goals, measure progress, and provide feedback in relation to specific goals.

9. Have students record goals on a planning sheet. (See Appendix A)

10. Evaluate goals often, making adjustments when necessary. Communicate that adjustments are a very important part of accomplishing goals.

PRACTICES FOR ALL STUDENTS

TOPIC: Lesson planning

Sub-topic: Preparing motivationally sound lessons

RATIONALE: Intrinsically motivated people complete activities for the enjoyment or satisfaction that comes out of the activity (Deci, 1971). Teachers often work to develop cognitive skills and strategies in students that help them accomplish a task (Spaulding, 1992). The students can then use these strategies in the future to gain satisfaction on the completion of other goals. Teachers should design lessons that continually help students finish intrinsically motivated tasks.

PURPOSE: To design lessons that are motivationally sound.

PRACTICES:

1. Use co-operative groups where group members can rely on each other for feedback.

2. Give students the "teacher role" as much as possible.

3. Focus on the process of finding meaning, not the right answer. Accept all explanations and judgments, especially when working on a new concept.

4. Introduce new concepts within the context of a problem or real life connection.

5. Focus direct instruction on the skills, strategies, and procedures that the students will use later on to guide their own learning and problem solving.

6. Let students pick up factual information through the completion of tasks and projects, not through lectures.

7. Provide students with instructional support like modeling, subgoaling, and task sharing while they work on projects.

8. Encourage students to provide each other with support while working in groups or on projects.

9. Encourage students to express their personal interpretations of the content presented in class.

10. Have students take more control over their tasks and projects.

11. Decrease the use of tests and quizzes.

12. Instead of focusing on evaluating factual knowledge, concentrate on the degree to which students can use the skills and strategies used in their activities.

PRACTICES SPECIFIC TO STUDENTS WITH LEARNING DISABILITIES

TOPIC: The Individualized Education Plan (IEP)

RATIONALE: Special education classroom programs have traditionally depended on extrinsic motivators in order to control students behavior, and the result has been little or no long term learning on the part of the student (Torgesen, 1986). Programs that foster the development of intrinsic motivation result in significant long term learning (Brown and Palinscar, 1987). In order to ensure that students receive the instructional programming that will lead to the greatest learning, motivational characteristics should be addressed directly on the IEP (Schultz and Switzky, 1990).

PURPOSE: To write IEP goals concerning the intrinsic motivation of the student with learning disabilities.

PRACTICES:

1. Write at least one goal on every IEP that directly address the student's motivational characteristics.

2. Different scales can be used to measure motivation. Some scales are:

   - The Scale of Intrinsic Versus Extrinsic Orientation in the Classroom (Harter, 1981), for use with nonhandicapped children, grades two through nine

   - Picture Choice Motivation Scale (Kunca and Haywood, 1969), for children with learning problems.

   - The Picture Choice Motivation Scale (Haywood, 1971), for children with mental ages of three years up to adolescence.

PRACTICES SPECIFIC TO STUDENTS WITH LEARNING DISABILITIES

TOPIC: Lesson Planning

Sub-topic: Mediational Learning Experiences

RATIONALE: One goal of special education programming should be to develop intrinsic motivation in students (Schultz and Switzky, 1990). In order to accomplish this, the instructional programs provided should focus on broad teaching strategies designed to be both cognitive and motivational in effect, with an emphasis on communication and shared responsibility between the teacher and student.

PURPOSE: To create lesson plans using one type of framework, the Mediational Learning Experience (MLE).

PRACTICES:

1. Plans for a MLE should contain these elements:

*Intentionality- the interaction is meant to produce a specific cognitive change.

*Transcendence- the cognitive change must be one that can be generalized to new situations.

*Communication of meaning and purpose- the teacher clearly indicates the reason for completing the lesson.

*Mediation of a feeling of competence- the teacher provides feedback by attributing comments to the child's efforts and learning strategies.

*Promote self-regulation of student behavior- student brings own behavior under control in order to focus on lesson. Extrinsic motivators may be needed here at first, and then gradually removed.

*Sharing- the child and teacher share the responsibility of producing the cognitive change. Both have a defined role and function in the quest.

2. The structure and intensity of these lessons should be adjusted according to the child's present level of motivation and cognitive ability.

3. The teacher is not just instructing. This experience is one where teacher and student are mutually responsible for completing the task at hand.

PRACTICES SPECIFIC TO STUDENTS WITH LEARNING DISABILITIES

TOPIC: Lesson Planning

Sub-topic: Setting goals

RATIONALE: Intrinsically motivated students feel that they have control over events, and are willing to take on the challenges necessary to achieve a goal (DeCharms, 1972). Setting goals and meeting them is a vital skill to have to maintain intrinsic motivation. Children with learning disabilities typically have a difficult time setting and achieving goals (Fewell, 1984). Therefore, specific structured strategies need to be employed in order to teach students with learning disabilities how to set goals.

PURPOSE: To teach students with learning disabilities specific goal setting strategies.

PRACTICES:

1. Use different activities to discuss school problems, and talk about the importance of finding different ways to solve problems. Brainstorm the following on the board:

Problems in school	Ways to solve problems	Differences it will make	Benefits

2. Use the TARGETS strategy. An overview is presented here:

TARGETS is a mnemonic strategy designed to help students with learning disabilities plan and write goals.

> T: Task specified with a question
>
> Ask yourself, what do I have to do?

A: Answer question with an "I need to" statement

Write down what you need to do by writing a statement that begins

with "I need to _____."

R: Review past performance

Think about what you did in the past that will help you accomplish this

goal. Jotting down notes may be helpful.

G: Goal writing

Consider long and short term goals

Consider quality and quantity goals

When writing goals, consider what action will be taken, the difficulty

of the task, the amount of time needed to complete goal, and the

number of goals written. Write the goal down.

E: Enter planned behaviors (on goal sheet)

List the activities necessary to reach goal, review importance of each

activity and eliminate where possible, and put activities in sequential

order.

T: Try planned behaviors

Remember that goals mean taking action

S: Steps evaluated

Evaluate progress and determine if activities need to be added or

taken away from plan. Evaluate progress daily.

PRACTICES SPECIFIC TO STUDENTS WITH LEARNING DISABILITIES

TOPIC: Lesson Planning

Sub-topic: Programs promoting intrinsic motivation

RATIONALE: Schultz and Switzky (1990) state that the traditional operant programs used in special education classrooms do not produce long-term effects on the learning of children with learning disabilities. In order to maintain long-term generalized learning, the programs used in special education classrooms must attend to the motivational characteristics of the of the learner, and promote the development of intrinsic motivation.

PURPOSE: To use programs known to promote intrinsic motivation in the learner.

PROGRAMS:

1. Reciprocal teaching (Brown and Palinscar, 1987)

2. Learning Strategies Curriculum

   The Paragraph Writing Strategy (Schumaker and Lyerla, 1993)

   The Sentence Writing Strategy (Schumaker and Sheldon, 1985)

   The Word Identification Strategy (Lenz, Schumaker, Deshler, and Beals, 1993)

   The Visual Imagery Strategy (Schumaker, Deshler, Zemitzsch, and Warner, 1993)

   The Paraphrasing Strategy (Schumaker, Denton, and Deshler, 1984)

3. Mnemonic strategies (Torgesen, 1986)

4. Mediational Learning Experiences (Schultz and Switzky, 1990)

5. The Adaptive Learning Environment Model (Wang, 1976)

6. Personal Causation Training (DeCharms, 1972)

Several conclusions can be drawn from the information presented in the proceeding pages. First, intrinsic motivation is an essential quality for students to possess in order to learn to their fullest potential. Second, the use of extrinsic motivators and rewards in school undermine a student's developing intrinsic motivation, and have a negative effect on learning for all students including those with learning disabilities. However, the extrinsic rewards should not be thrown out entirely. They should be used sparingly, and with a specific purpose in mind. The use of extrinsic rewards should be gradually decreased as student motivation and learning increases. Fourth, the development of intrinsic motivation in students involves planning for every aspect of the classroom and school environment. Planning for motivation should be a part of every lesson and activity. Also, promoting intrinsic motivation in students is an ongoing activity, and one that never stops. Attention to motivational characteristics should take place during the entire year, not in just one unit. Last, when assembling the collection of strategies, the same words came up over and over again as essential to promoting intrinsic motivation. The words choice, decision-making, individualized instruction, and setting goals should become permanent parts of a teacher's vocabulary and lesson planning.

The information and practices presented here can be used in many ways. It is recommended that teachers first evaluate the intrinsic motivation of students by giving an assessment listed. It would also be valuable to take a look at the extrinsic motivators used in the classroom, and evaluate their usefulness. A next step could be to examine the lists of practices presented and choose one or two areas to focus on and plan for in the classroom. Evaluating the usefulness of the strategies and practices should be done by assessing the intrinsic motivation of the children periodically during the year, and by evaluating the quality of work completed by children during the year.

Personally, I plan to use this information daily in the classroom. I will begin by following the recommendations above, and will evaluate the performance of students both in the special education classroom, and in the general education classroom during team teaching time. I also plan to present the finding to colleagues at the school where I will teach during the coming school year. Last, I would like to pursue further the issue of teaching children with learning disabilities using strategies like the MLE that promote intrinsic motivation in order to study the long-term effects of such teaching strategies.

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APPENDIX A
Sample Goals Worksheet

GOALS WORKSHEET

Name: _____ Date: _____

A. I need to:

   1. _____

   2. _____

   3. _____

B. My goals are:

   1. _____

   2. _____

   3. _____

C. Planned behaviors:

For Goal #1: _____

_____

_____

For Goal #2: _____

_____

_____

For Goal #3: _____

_____

_____

Note evaluation checks and where adjustments were made:

APPENDIX B
List of sources contained in the strategies collection

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GRAND VALLEY STATE UNIVERSITY

ED 695 DATA FORM

NAME: _Lori Baronek_

MAJOR: (Choose only 1)

____ Ed Tech	____ Ed Leadership	____ Sec/Adult
X Elem Ed ~~Elem Ed~~	____ G/T Ed	____ Early Child
X Elem LD	____ Sec LD	____ SpEd PPI
	____ Read/Lang Arts	

TITLE: _The Effect of Rewards and Motivation on Student Achievement_

PAPER TYPE: (Choose only 1)   SEM/YR COMPLETED: _Summer 96_

    X Project
    ____ Thesis

SUPERVISOR'S SIGNATURE OF APPROVAL _____

Aug 15, 1996

Using the ERIC thesaurus, choose as many descriptors (5 - 7 minimum) to describe the contents of your paper.

1. student motivation   6. rewards
2. learning disabilities   7.
3. elementary education   8.
4. student participation   9.
5. classroom environment   10.

ABSTRACT: Two to three sentences that describe the contents of your paper

Through an examination of the research, intrinsic motivation is shown to be an important part of school success. Rewards are shown to undermine intrinsic motivation and negatively affect learning. A collection of strategies that promote intrinsic motivation is presented for general education and special education students.

** Note This page must be included as the last page in your master's paper.

rev 5/94

9 - 11/04/94