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MOTIVATION AMONG STUDENTS  
WITH LEARNING DISABILITIES

by  
April H. Conti

A Thesis

Submitted in partial fulfillment of the requirements of the  
Master of Arts Degree  
of  
The Graduate School  
at  
Rowan University  
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Approved by

Professor \_\_\_\_\_

Date Approved

5/1/00

## ABSTRACT

APRIL H. CONTI

### MOTIVATION AMONG STUDENTS WITH LEARNING DISABILITIES

2000

DR. JOHN KLANDERMAN

MASTER OF ARTS IN SCHOOL PSYCHOLOGY

The purpose of this study was to examine whether intrinsic motivation is a major factor in explaining academic performance deficits in children with learning disabilities. Harter's Scale of Intrinsic Versus Extrinsic Orientation in the Classroom was given to 34 students with learning disabilities and 36 students without learning disabilities from Grades 4 to 6 from a suburban, middle-class school district located in Southeastern New Jersey. It was proposed that students with learning disabilities were less intrinsically motivated than students without identified learning disabilities. However, the general pattern of results derived from a T-Test for Independent Samples did not show a significant correlation between motivation orientation. Although students with learning disabilities proved to be less intrinsically motivated on the criteria subscale, they scored similarly to their non-handicapped peers on the challenge, curiosity, mastery, and judgment subscales. These findings may be attributed to the minimal number of participants and that they were not representative of the entire population.

MINI-ABSTRACT

APRIL H. CONTI

MOTIVATION AMONG STUDENTS  
WITH LEARNING DISABILITIES

2000

DR. JOHN KLANDERMAN

MASTER OF ARTS IN SCHOOL PSYCHOLOGY

This study examined whether intrinsic motivation is a primary determinant in explaining academic performance deficits in children with identified learning disabilities. It was found that students with identified learning disabilities are not less intrinsically motivated than students without identified learning disabilities.

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## TABLE OF CONTENTS

<b>CHAPTER 1: THE PROBLEM.....</b>	<b>1</b>
NEED.....	2
PURPOSE.....	3
HYPOTHESIS.....	3
THEORY.....	4
DEFINITIONS.....	7
ASSUMPTIONS.....	8
LIMITATIONS.....	8
OVERVIEW.....	9
<b>CHAPTER 2: REVIEW OF LITERATURE.....</b>	<b>10</b>
OVERVIEW.....	11
MOTIVATION: AN INTRODUCTION.....	11
INTRINSIC MOTIVATION.....	12
EFFECTS OF EXTRINSIC REWARDS ON INTRINSIC MOTIVATION.....	15
INTRINSIC MOTIVATION OF LEARNING DISABLED STUDENTS.....	19
SUMMARY.....	22
<b>CHAPTER 3: DESIGN.....</b>	<b>24</b>
SAMPLE.....	25
MEASURE.....	25
DESIGN.....	28

TESTABLE HYPOTHESES.....	28
ANALYSIS.....	29
SUMMARY.....	29
<b>CHAPTER 4: ANALYSIS OF RESULTS.....</b>	<b>31</b>
RESULTS.....	32
SUMMARY.....	35
<b>CHAPTER 5: SUMMARY AND CONCLUSIONS.....</b>	<b>36</b>
<b>REFERENCES.....</b>	<b>41</b>

## LIST OF TABLES

TABLE 4.1.....	32
TABLE 4.2.....	33

## LIST OF FIGURES

FIGURE 4.1.....	34
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## **CHAPTER 1: THE PROBLEM**

## **NEED**

The success and failure of students with learning disabilities depends largely on their motivation. The desire to explore, discover, understand, and know is intrinsic to people's nature and is a potentially central motivator of the educational process. Yet, all too frequently, parents, teachers, and other educators have ignored intrinsic motivation and viewed education as an extrinsic process. Consequently, people must begin to recognize the importance of intrinsic motivation and emphasize the role of intrinsic and extrinsic motivational processes in the promotion of student's learning and achievement.

Motivation can affect both new learning and the performance of previously learned skills, strategies, and behaviors. Students who are intrinsically motivated to learn about a topic being discussed by a teacher are likely to engage in activities they believe will help them learn. When children learn out of interest and choose to do an activity for no compelling reason, beyond the satisfaction derived from the activity itself, they display higher classroom performance than those predicted by assessed levels of intelligence (Schultz & Switzky, 1990). Therefore, they are apt to attend carefully to the teacher's instruction and mentally organize and rehearse the material to commit it to memory.

Students who are not intrinsically motivated to learn are not apt to be as systematic in their efforts to learn new material. Most children with learning disabilities are simply not intrinsically motivated to pay attention during class and do not organize and rehearse material (Stipek, 1998). Thus, a student's achievement requires the employment of extrinsic supports and structures. Unfortunately, external rewards by themselves are inadequate for maintaining self-determination, competence, and

autonomy, which will enhance academic growth in students with learning disabilities (Deci & Ryan, 1985). When teachers use extrinsic rewards, such as token economies, the behavior sought by the teacher is controlled by external incentives. Therefore, behavior is not likely to become internalized by the student or become an intrinsically motivated activity.

Growing evidence in education (Deci & Chandler, 1986; Pintrich & Schunk, 1996) strongly suggests that such issues have significant implications that extend well beyond academic achievement. Children's experiences in school affect not just the development of their mental talents, but also their emotional adjustment, self-esteem, and personal values. For these reasons, motivational strategies need to be assessed in order to facilitate and channel the intrinsic motivation of children with learning disabilities toward the promotion of learning, discover, and achievement.

### **PURPOSE**

The purpose of this study is to examine whether intrinsic motivation is a major factor in explaining academic performance deficits in children with learning disabilities. Presumably, educators need to become aware of the factors that motivate their students in order to develop and maintain intrinsic motivation and academic success.

### **HYPOTHESIS**

Students with learning disabilities are less intrinsically motivated than students without identified learning disabilities.

## THEORY

Motivation theories are built on a set of assumptions about the nature of people and about the factors that give a driving force to action. Intrinsic motivation theorists contend that this drive comes from an internal disposition to develop skills and engage in learning-related activities. There are several perspectives on intrinsic motivation, all based on the premise that humans have natural inclinations that render some tasks intrinsically motivating. These perspectives include: effectance motivation, mastery motivation, perceived control, self-determination, and emergent motivation.

Early views of intrinsic motivation explained it in terms of a developmental phenomenon or as dependent upon arousal (Stipek, 1988). White introduced *effectance motivation* that proposed that humans have an intrinsic need to feel competent and interact effectively with the environment. The goal of effectance motivation is a feeling of personal mastery or efficacy. White suggested that effectance motivation is undifferentiated in young children, meaning that it is directed toward environmental features that capture their attention. He also suggested that with development, effectance motivation becomes specialized. Once students enter school, they may direct effectance motivation toward mastery of certain school subjects. Therefore, White's contention is that people possess an effectance motive that propels them toward competence and is satisfied by feelings of mastery is intrinsically appealing.

The following perspective was derived from Harter, who formulated a theory of *mastery motivation* that refined the effectance motivation construct (Harter, 1981). Like White, she believed that effectance motivation was best viewed in a developmental framework, and focused on the effects of success on effectance motivation. However,

Harter felt that the effects of failure were also important. White predicated that the motive is generic, but Harter suggested differentiating it according to domain (school performance, peer relationships). She thought that most behaviors are likely to involve optimally challenging tasks (not too easy or hard), which also should yield maximum pleasure. Successes should produce intrinsic pleasure and perceptions of competence and control, and these in turn should strengthen effectance motivation.

Harter also believed that effectance motivation comes from positive reinforcement by others for independent mastery attempts early in development. This leads the children to develop feelings of competence that increases their effectance motivation and intrinsic motivation. This increased sense of intrinsic pleasure helps to motivate children to engage in subsequent mastery behavior (Schultz & Switzky, 1990).

The third perspective, perceived control, is central to many views of intrinsic motivation. (Pintrich & Schunk, 1996) expanded his social learning theory to include *locus of control*, which is a generalized belief about the extent to which behaviors influence outcomes, successes and failures. People with an external locus of control believe their actions have little impact on outcomes and there is little they can do to change them. However, those with an internal locus of control believe that outcomes are contingent on their actions and largely under their control. Internal locus of control bears some similarity to White's effectance motive, being that individuals with an internal locus of control make greater efforts to attain mastery over their environment.

According to Rotter, locus of control is postulated to affect learning, motivation, and behavior. Students who believe they have control over whether they succeed or fail should be more motivated to engage in academic tasks, expend effort, and persist on

difficult tasks than students who believe their actions have little effect on outcomes.

Thus, Rotter suggests that there is a positive relation between internal locus of control and motivation and achievement in school.

The views of White, Harter, and Rotter stress that motivation derives in part from the belief that people can exert control over their environment. Similarly, Deci, Ryan, Connell, and Skinner (Deci & Ryan, 1985) bring forth the *self-determination* view of intrinsic motivation, theorizing that people have a need to be autonomous and engage in activities because they want to. They presume that intrinsic motivation leads people to seek out and master challenges, which satisfies their needs to be competent and self-determining. However, challenges need to be within student's reach. If challenges are too easy, they will seek more difficult ones, and if challenges are too difficult, they may abandon their efforts. Students want to feel responsible for their actions and free to make choices, but in many classrooms students have few choices. When individuals cannot exercise self-determination, intrinsic motivation will suffer. This theory on self-determination also postulates that intrinsic motivation will decrease when students believe their actions are extrinsically determined.

The final theory on intrinsic motivation was established by Csikszentmihalyi, known as *emergent motivation*. This theory denotes motivation stemming from the discovery of new goals and rewards as a consequence of interacting with the environment. Instead, Csikszentmihalyi believes that behavior is governed by intrinsic and extrinsic motivational forces. Extrinsic forces are biological in nature (food, sleep) or derive from rewards in which the person is socialized (money, prestige). In contrast, intrinsic forces come from the individual's belief that a given outcome is worth striving

for. For these reasons, he suggests that many students feel “bored” in classes because their perceived skills exceed their opportunities for using them (Pascarella, et al., 1981).

Although there are differences in the five perspectives, there are common themes in all the views. Lepper and Hodell (1989) identified four major sources of intrinsic motivation: challenge, curiosity, control, and fantasy. Intrinsic motivation may depend on students finding activities challenging, and depends on their curiosity being piqued by activities that are incongruous or discrepant with their ideas. Also, intrinsic motivation comes from students experiencing a sense of control over their learning and task participation. Finally, activities that help students become involved in fantasy many enhance intrinsic motivation.

## **DEFINITIONS**

Autonomy - need to control one's own decisions.

Competence Motivation - need to feel successful and/or the natural disposition to engage in tasks and activities that contribute to learning and development.

Effectance Motivation - need to feel competent and interact effectively with the environment.

External Locus of Control – feeling that people’s actions have little impact on outcomes and there is little they can do to alter them.

Extrinsic Motivation - motivation to engage in an activity for the sake of attaining a reward or for avoiding some punishment.

Internal Locus of Control – outcomes are contingent on people’s actions and largely under their control.

Intrinsic Motivation - motivation to engage in an activity in the absence of any extrinsic reward or purpose. One chooses to do an activity for no compelling reason, beyond the satisfaction derived from the activity itself.

Learning Disability - a condition that interferes with the capacity to master a skill such as speech, writing, and calculation with numbers.

Motivation – the process of initiating, directing, and sustaining goal-oriented behavior.

Self-efficacy - A person's personal judgements of their performance capabilities for a particular type of task at a particular point in time and is closely linked to expectations for success.

### **ASSUMPTIONS**

One assumption is that subjects in the study generalize to the population. For example, 34 children with learning disabilities and 36 children without learning disabilities were tested, and both the regular education and special education students were taken from the fourth, fifth, and sixth grades. Also, teaching style can affect a student's level of motivation, but in this study it is assumed that teaching style is universal. The second assumption is that the tests were administered to every participant in the same way. There were several teachers who gave the instructions and administered the questionnaires.

### **LIMITATIONS**

A limitation of the study is that the sample is not representative of the entire population because the sample only consisted of children from one grade level and one school. Another limitation is that each specific classification of "learning disability"



could have been studied separately. For example, students with speech, reading, and attention problems could have been tested in different categories instead of grouping them into one entity. Furthermore, since this study was a self-report study participants might not have been completely honest answering the questions.

## **OVERVIEW**

In Chapter 1 the need, purpose, hypothesis, and theory explain the importance of intrinsic motivation for sustaining academic growth in children with and without learning disabilities. It also illustrates the limitations of the study and assumptions that may have caused them. In Chapter 2, intrinsic motivation will be explained in greater detail, and the appropriate literature is reviewed. In Chapter 3, the design of the study is described, as well as the sample, operational measure, testable, hypothesis, and analysis. In Chapter 4, the results of the study will be explained, including order of presentation, organization of analysis chapter, restatement of hypothesis, interpretation of results, and statement of significance. Finally, in Chapter 5 summaries and conclusions are made, and implications for future research are presented.

## **CHAPTER 2: REVIEW OF LITERATURE**

## **I. OVERVIEW**

This next chapter examines the literature regarding both intrinsic and extrinsic motivation. The chapter begins by presenting a brief overview of motivation in general, while the following section unfolds a wide variety of literature on intrinsic motivation specifically. The fourth section introduces the concept of extrinsic motivation, which addresses both the negative and positive effects of rewards on intrinsic motivation. Finally, the last section introduces studies that have evaluated intrinsic motivation on students with learning disabilities.

## **II. MOTIVATION: AN INTRODUCTION**

The field of motivation has developed significantly in recent years, bringing forth explanations as to what stimulates individuals to perform certain behaviors. Motivation is used by educators as the process of initiating, directing, and sustaining goal oriented behavior (Stipek, 1998). It is an important quality that affects all classroom activities because it can influence both learning of new behaviors and performance of previously learned behaviors. Learning and performance are related in a reciprocal fashion to motivation because what one does and learns influences one's subsequent task motivation.

Motivation is an important quality that pervades all aspects of teaching and learning. Motivated students display interest in activities, feel self-efficacious, expend effort to succeed, persist at tasks, and typically use effective task and cognitive strategies. Motivated teachers feel that they can help students learn, put extra time into instructional planning, and work with students to help ensure their learning and mastery. However,

determining whether students are motivated internally or through rewards is imperative for academic success.

### **III. INTRINSIC MOTIVATION**

Several different lines of research have now been conducted that point toward the conclusions that being intrinsically motivated to learn improves the quality of learning and that those conditions that are autonomy supporting and informational will promote more effective learning, as well as enhanced intrinsic motivation and self-esteem.

According to Haywood and Switzky (1975) intrinsic motivation is the key concept in a cognitive theory of motivational orientation in which the central idea is behavior for its sake and as its own reward. Children who seek their principal satisfactions by concentrating on intrinsic factors, such as responsibility, challenge, creativity, and task achievement, are referred to as intrinsically motivated. Those who tend instead to avoid dissatisfaction by concentrating on the ease, comfort, safety, security of the environment are referred to as extrinsically motivated. Although all people respond to each kind of incentive, it is the relative balance between the two sources of motivation that constitutes a stable and measurable personality trait. It was reported by Peterson & Swing (1982) that motivational inequality is widespread. Some students work independently for their own satisfaction, while other work because they are required to and do not believe their actions are related to success and failure.

Some correlational studies have related motivational variables to learning and achievement. In one study, Gottfried (1981) used an intrinsic motivation inventory that she had developed to assess children's intrinsic motivation for the specific subject areas

of reading, math, social studies, and science. the same children who completed the intrinsic motivation measure also took standardized achievement tests in each of the four content areas. Their intrinsic motivation scores were then correlated with their achievement scores. The analyses revealed significant correlations between intrinsic motivation and achievement, particularly within the four content areas.

There is considerable evidence suggesting that individuals learn relatively more when they read material that they rate as being intrinsically interesting (Tobias, 1994). The enhanced learning occurs, at least, partly, because people attend more to text that interests them and that this attention helps them process and remember what they have read (Anderson, 1982). Research further suggests that the conditions that produce interest and enjoyment, (which fosters intrinsic motivation) facilitates understanding and conceptual learning but not rote learning (Connell & Ryan, 1984).

A study by Grolnick and Ryan (1985) examined intrinsic motivation in fifth-grade children. Each child read an age-appropriate social studies passage under one of three conditions. Children in one group were told that they would be tested on the material and would receive a grade, which served as the extrinsic condition. However, children in a second group were asked to read the passage to see what they could learn from it, which served as the intrinsic condition. Finally, the last groups of children represented a spontaneous learning condition in which they were asked to read the passage with no prompts for learning the material. Results indicated that children who had been given an intentional learning set, whether intrinsic or extrinsic, evidenced higher rote recall than those with the spontaneous set. However, the extrinsic children were inferior to either of the other groups on conceptual learning. Thus, although extrinsic pressure did not

interfere with the memorization of facts, it did interfere with their grasping the meaning of the passage.

Studies have also shown that individuals are more likely to select challenging tasks when intrinsically motivated than when motivated to obtain an extrinsic reward. Pearlman (1984) found that when a reward (+3 points on the next test) or penalty (-3 points on the next test) was made contingent on whether students' solutions to a problem were correct or incorrect, they selected easier problems than when no reward or penalty was at stake. Also, in a study by Pittman et al. (1982), the preference for simple versions of a task in a situation in which an extrinsic reward was offered carried over even to a situation in which the original reward contingencies were no longer in effect. Therefore, these studies have indicated that intrinsic motivation enhances the selection of challenging tasks, which, in turn, enhances a child's level of education.

According to Connell & Harter (1985), student's motivational orientation and related self-perceptions should predict their actual achievement. Therefore, an intrinsic motivational orientation, along with positive feelings of competence and perceptions of personal control over outcomes, should be associated with higher levels of achievement in school. Conversely, lower levels of achievement would be expected from the child whose motivational orientation was more extrinsic, whose perceptions of competence were relatively low and whose perceptions of control were relatively external.

It seems clear that various experimental studies have confirmed the fact that intrinsic motivation is related to academic performance. When conditions are created that facilitate intrinsic motivation, students' learning, particularly conceptual learning and creative thinking, increases dramatically relative to that of students in settings that

foster extrinsically oriented learning. Although extrinsic controls lead people to memorize well, they fail to promote the type of engagement with the task that results in conceptual learning and creative thinking (Harter & Connell, 1984; Rosenfield, Folger, & Adelman, 1980).

#### **IV. EFFECTS OF EXTRINSIC REWARDS ON INTRINSIC MOTIVATION**

Although external rewards have been used in the classroom for more than a century to bring about desired behavior, their efficacy is being questioned by educators and parents. Researchers have found that tangible rewards and other extrinsic motivators can have detrimental effects on the intrinsic motivation of the learner (Beck, 1978; Deci, 1975; Deci & Ryan, 1985; Greene & Lepper, 1974; McCullers et al., 1987). According to Cameron & Pierce (1994) if students are told that they will earn a desired reward for participating in or successful completion of a task, they are less likely to tackle the same task when no incentive is offered.

Research has shown that rewards or punishments used to control behavior are often perceived by the learner as stressful (Deci & Ryan, 1985). Self-determination can be limited if students perceive rewards as controls upon their task performance (Adelman & Taylor, 1990). Intrinsic motivation prompts an individual to seek out challenges, to choose to participate in a task, to feel competent, and to feel part of a community (Gottfried, 1983). Therefore, rewards contingent on task performance or level of achievement can affect the forces of intrinsic motivation negatively.

Extrinsic rewards can undermine intrinsic motivation when initial interest is high, when extrinsic constraints are salient, and when they provide a bribe for participation in

the activity (Leeper & Hodell, 1989). Leeper (1981) found that unnecessarily powerful extrinsic rewards, temporal deadlines, and excessive adult surveillance can all be shown to have effects on children's later intrinsic interest in the activity. The detrimental effects on intrinsic motivation are less likely to occur when extrinsic rewards are seen as bonuses rather than bribes (Dev, 1997).

Studies further reveal that if children will do an activity voluntarily, the activity is satisfying enough to justify itself (Fair & Silvestri, 1992). Once a reward is given, such as a piece of candy, the activity becomes overjustified, and the child begins to perform tasks for rewards, rather than for personal satisfaction. Therefore, added rewards actually diminish interest.

An early study by Lepper, Greene, and Nisbett (1973) provided evidence for the detrimental effects of rewards on intrinsic motivation. A nursery school playroom was the setting for an experiment in which the amount of time children spent drawing while using felt-tip pens was recorded. Following this basic initial observation period, the children were randomly divided into three experimental groups: (1) an expected reward condition, (2) a no reward condition, and (3) an unexpected reward condition. A week after the initial test period the pens were again placed on the tables in the nursery school with no mention made of rewards. The investigators observed the children and recorded the amount of time spent with the pens as a measure of intrinsic interest. Researchers found that the mean percentage of free time spent with the magic markers was substantially less for children in the expected reward condition than in either the no reward or the unexpected reward conditions. These findings suggest that when children are offered a bribe for doing something they enjoy a decrease in interest will result.



Conversely, children who are surprised by a reward after doing something they like will have an increase in interest.

A study completed by Ross (1975) also reveals the salience of rewards. Ross offered preschoolers a prize for playing a drum (an intrinsically interesting activity). For some subjects, no further mention was made of the reward, others (salient reward condition) were told that the reward was in a nearby box and they could have it at the conclusion of the study, and control children were neither offered nor given a reward. Salient-reward subjects displayed less subsequent interest in playing the drum compared with the other two conditions. In a second study, preschoolers were promised a reward for playing with drums. Some subjects were told to think about the reward as they engaged in the activity (salient condition), others were told to think about something else (distraction condition), and those in a control condition were not given thinking instructions. Relative to the salient and control conditions, distraction subjects showed more interest in playing with drums.

The outcome of these studies are fairly consistent. People who expect to receive a reward for doing something don't perform as well or even bother to try as those who expect nothing. When the reward is gone so is any original interest in the task. In general, the more cognitive sophistication and open-ended thinking required, the worse people perform when they are working for a reward (Greene & Lepper, 1978).

In contrast, there are researchers who have found that extrinsic rewards are not detrimental to intrinsic motivation. For example, a study done by Vasta, et al (1978) on 12 kindergarten and first-grade children, showed that extrinsic reinforcers did not undermine the intrinsic motivation of the subjects. Also, in a meta-analysis of 101

experimental studies, Cameron and Pierce (1994) concluded that, overall, rewards and reinforcement do not decrease intrinsic motivation, but verbal praise can increase intrinsic motivation. They also found that expected tangible rewards given for simply completing a task can have a detrimental effect on the individual's intrinsic motivation.

A study done by Kruglanski et al. (1975) investigated the interaction between intrinsic motivation and extrinsic motivation on 48 boys between the ages of 14 and 15 years. They hypothesized that intrinsic motivation would be enhanced by a reward whenever it is associated with a task, but that the introduction of a reinforcer not normally associated with the task may decrease the desire to engage in the task. The results of this study supported their hypotheses. They also found that interest in an activity that was stimulating and engaging for the subjects decreased when rewards were made contingent upon participation. Thus, reinforcing mere participation in an activity may not be as beneficial as has been believed. Also, linking a reward too closely and too often to a task may be harmful to long-term maintenance of that behavior.

Research acquired by Chance (1992), using extrinsic rewards proves effective in teaching or maintaining good discipline. Some teachers believe that extrinsic rewards should be used, even if they reduce interest in learning. They feel that it's better to have students read even if they only do it when required than to have them not read at all. In some cases, positive feedback has been shown to enhance intrinsic motivation, independent of any other reward offered (Cameron & Pierce, 1994) or to have no effect on subsequent intrinsic motivation of the subject.

The research reveals that extrinsic rewards can either enhance or reduce interest in a task, depending on how they are used in the particular situation. However, because

extrinsic rewards can be detrimental at times, it is important for individuals to be intrinsically motivated rather than extrinsically motivated.

## **V. INTRINSIC MOTIVATION OF LEARNING DISABLED STUDENTS**

Only during the last decade has there been a noticeable increase in investigations that focus on the motivation of learning disabled students. These students relate primarily to self-esteem, locus of control, and their relation to attribution theory with limited research on intrinsic motivation (Deci & Chandler, 1986; Grolnick & Ryan, 1990).

A recent direction in studying the motivational characteristics of learning disabled students involves investigations that relate to attitudes impacting academic performance. In two studies by Haywood (1968a, 1968b), involving children with and without learning disabilities, it was found that intrinsically motivated learners worked harder and longer on a task than the extrinsically motivated learners. Those who learned intrinsically were characterized as “overachievers” and those who learning extrinsically were characterized as “underachievers” on test of school achievement. Of crucial importance was the finding that these motivational influences intensity as the intellectual ability levels of the students decrease and that a disproportionate number of low-ability children were reported to be extrinsically motivated (Haywood, 1968a).

In a follow-up study (Haywood, 1968b), school achievement scores of intrinsically and extrinsically motivated 10-year-olds were matched on age, sex, and IQ, in reading, spelling, and arithmetic. Then, they were compared over a 3-year period. Results revealed that the achievement scores of intrinsically and extrinsically motivated

students in the superior intelligence groups did not differ as a function of motivational orientation in any of the achievement areas. However, in both the average and low normal groups the intrinsically motivated students were achieving in school at about one full grade level ahead of the extrinsically motivated students in the same IQ group.

This study suggests that low ability intrinsically motivated students may compensate for their lower intelligence levels by increasing their effort and intrinsic involvement in academic activities (Haywood, 1968a, 1968b). This conclusion has been further validated in more recent studies (Switzky, 1985) that have investigated individual differences in students with and without learning disabilities, in intrinsic and extrinsic motivation, and how these differences affect learning and performance in the classroom. Furthermore, this study also found that having an intrinsically motivational orientation to learning is helpful to students. That is, performance levels tend to be at or above those predicted by mental age levels. In addition, this motivational effect was reported to be most significant in children experiencing learning disabilities.

Furthermore, additional research has supported the notion that students with learning disabilities are more likely than those without to experience motivational difficulties. Nichollas, Mckenzie, and Shufro (1994) interviewed elementary school students about schoolwork, homework, and personal learning projects, such as learning about astronomy. Four groups of students were distinguished. The first group experienced school knowledge as necessary for preparing for life and inseparable from their personal projects. The second group saw such knowledge as necessary for preparing for life, but as less engaging than their personal projects. Also, those in the third group felt that schoolwork was an imposition, contrasting sharply with satisfying

personal learning projects. Finally, those in the fourth group lacked absorbing personal learning projects and found schoolwork to be an imposition. Results revealed that students with learning disabilities fell into the last category, proving that they were not intrinsically motivated to perform academic tasks.

In addition, Wilson and David (1994) investigated school attitudes and intrinsic motivation of learning disabled students in grades 4 through 8. These students answered a questionnaire, which evaluated the students' perception of their ability to function within the school environment and willingness to engage in learning activities in the elementary school curriculum. Results indicated that learning disabled students, compared to their non-disabled peers, have significantly lower academic intrinsic motivation scores. These results were significant across all four subject areas (reading, mathematics, social science, and science), as well as general academic intrinsic motivation.

Another study by Rogers and Saklofski (1985) found significantly low affective measures, such as self-concept, locus of control, and expectations for academic performance, in elementary-age learning disabled students compared to nondisabled students. The investigations of locus of control in LD students have found that learning disabled students perceive their locus of control to be more external than do nondisabled students. Furthermore, studies examining the level of self-concept in relation to academic failure have typically found lower measure in learning disabled students (Bryan, 1991).

The study of student intrinsic motivation has correlated with attribution, cognitive, and competence theories. According to Gottfried (1983), learning disabled

students attribute their failure to outside factors like poor ability and poor teaching which are beyond their control. In contrast, students without learning disabilities assume more internal responsibility regarding their learning by attributing their failures to factors, such as lack of effort or laziness (Adelman, 1978; Chapman, 1988; Wilson & David, 1994). It was also reported that students with learning disabilities expect failure even when new tasks are presented (Butkowsky & Willows, 1980). More importantly, Chapman (1988) reported that students with learning disabilities perceived themselves as less academically competent and are less likely than those without disabilities to interpret their academic performance in ways that maintain active learning. It was also revealed that lower track students and low-achieving students tend to favor factual knowledge more than do high-achieving students (Nicholls, McKenzie, & Shufro, 1994). Therefore, students with learning disabilities viewed school knowledge as factual and impersonal and found it less personally enriching or mind-expanding, compared to nondisabled students.

## **VI. SUMMARY**

After reviewing the literature it can be concluded that motivation plays a vital role in a student's education. Determining whether students are motivated by their own drives or from external rewards is imperative for academic success. However, research has proven that being intrinsically motivated enhances abilities in both school and social environments. Being intrinsically motivated presents the most promising alternative to extrinsic rewards. Unlike external reinforcers, intrinsic rewards actually teach.

There has been a significant amount of research on motivation of students with learning disabilities. The academic success of learning disabled students is inferior to

students without identified learning disabilities because they seem to have negative views of their abilities. Therefore, they rely on external reinforcers to complete academic tasks. For these reasons, this present study focuses on the levels of motivation in learning disabled students. Children with identified learning disabilities are more intrinsically motivated than children without identified learning disabilities.

## **CHAPTER 3: DESIGN**



## **SAMPLE**

This study included two groups of participants who were both in the fourth, fifth, and sixth grades. The first group of subjects consisted of 34 students (11 fourth graders, 10 fifth graders, and 13 sixth graders) with identified learning disabilities, ranging from ages 9 to 12. There were 8 males and 26 females that were taught in both self-contained classrooms and resource rooms.

The second group of subjects in the study consisted of 36 students (12 fourth graders, 12 fifth graders, and 12 sixth graders) who do not have identified learning disabilities. These students were taught in regular education classrooms. There were 18 males and 18 females ranging from ages 9 to 12.

All of the participants in this study were students from Berkeley Township School District in Southeastern New Jersey. The participants consisted of predominantly Caucasian children from a suburban area who are of middle-lower to middle socioeconomic status.

## **MEASURE**

The participants in this study were given a 30-item questionnaire, "The Scale of Intrinsic Versus Extrinsic Orientation in the Classroom", created by Susan Harter, Ph.D. (1980). This scale measures the student's motivation for classroom learning determined by his or her intrinsic interest in contrast to a more extrinsic orientation. Using this framework, five dimensions of classroom learning were delineated which could be characterized as having both an intrinsic and extrinsic motivational pole:

Intrinsic Pole		Extrinsic Pole
A. Preference for Challenge (Does the child like hard challenging work?)	vs.	Preference for Easy Work Assigned (Does the child like the easier assignments and school subjects?)
B. Curiosity/Interest (Does the child work to satisfy his/her own interest and curiosity?)	vs.	Pleasing the Teacher/Getting Grades (Does the child do schoolwork in order to satisfy the teacher, obtain marks and grades?)
C. Independent Mastery (Does the child prefer to do their own work and figure out problems on his/her own?)	vs.	Dependence on the Teacher (Does the child rely on the teacher for help and guidance, particularly when it comes to figuring out problems and assignments?)
D. Independent Judgment (Does the child feel that he/she is capable of making certain judgments about what to do?)	vs.	Reliance on Teacher's Judgment (Is the child primarily dependent on the teacher's opinion and judgment about what the do?)
E. Internal Criteria (Does the child know when he/she has succeeded or failed on school assignments or tests?)	vs.	External Criteria (Is the child dependent upon external sources of evaluation such as teacher feedback, grades, marks?)

This scale uses a "structured alternative format" in which the student is asked to decide which kind of person is more like him or her. Then, the student is asked whether this is "sort of true" or "really true" for him or her. The effectiveness of the question format lies in the implication that half of the children in one's reference group view themselves in one way, whereas the other half view themselves in the opposite manner. That is, this type of question warrants either choice. The option of checking "sort of true for me" or "really true for me" broadens the range of choices over the typical two-choice (true and false) format. Additionally, none of the choices involve the response "false", but rather decides which of the options is most true for him or her. Harter (1980)

emphasizes that the verbal elaborations given for their choice indicate that children are giving accurate perceptions of their motivational orientations rather than socially desirable responses.

Each item is scored on an ordinal scale from 1 to 4 where a score of 1 indicates the maximum extrinsic orientation, and a score of 4 indicates the maximum intrinsic orientation. After the individual items have been scored, they were transferred to a Data Coding Sheet. For each child, mean scores for each subscale represented the child's profile across the five dimensions. Following that an Individual Pupil Profile form, for plotting subscale scores for a given child is used to determine the participant's overall motivational orientation.

The validity of this scale was based on factor analytic procedures. The factor pattern clearly revealed that a five-factor solution, reflecting the five subscales, was appropriate. The average loadings for items on their designated factors is between .46 and .53, and no items systematically cross-load on other factors (Harter, 1980).

The reliability of each subscale was assessed by employing a reliability coefficient (Kuder-Richardson Formula 20) which provided an index of internal consistency. Reliabilities ranged from .78 to .84, .68 to .82, .70 to .78, .72 to .81, and .75 to .83, for Challenge, Independent Mastery, Curiosity, Judgment, and Criteria subscales respectively.

With regards to the subscale and item content, the following distinction is important. The Challenge, Curiosity, and Mastery subscales each had a distinctive motivational quality in that they tapped issues involving what the child *wants* to do, *likes* to do, and *prefers* to do. A child with a high score on these subscales expresses that he or

she is intrinsically motivated to engage in the mastery process. However, the Independent Judgment and Internal Criteria subscales seem to tap more cognitive-informational structures, involving what the child knows, what the basis is for decision-making, and how much the child learns about the rules for school. A high scorer on these subscales indicated that he or she can make judgments rather autonomously.

## **DESIGN**

In order to test the participants, a letter for approval was written to Berkeley Board of Education. Also, a parent consent form was developed which was given to the students' parents. Prior to administering the questionnaire, parents were required to return permission slips to the teachers.

The questionnaire, "The Scale of Intrinsic vs. Extrinsic Orientation in the Classroom", was administered to the students by the teachers. The directions were read to the participants followed by two sample questions. The participants were informed that the questionnaire was not a test and that there were no right or wrong answers. Furthermore, the students were told they could stop the questionnaire at any time, and that their questionnaires would remain completely anonymous. Overall, it took the students approximately 20 minutes to complete.

## **TESTABLE HYPOTHESES**

Null Hypothesis: Students with identified learning disabilities are not less intrinsically motivated than students without identified learning disabilities.

Alternate Hypothesis: Students with identified learning disabilities are less intrinsically motivated than students without identified learning disabilities.

### **ANALYSIS**

The statistical test used in this study was a T-Test for Independent Samples because two groups were studied using the same scale. The independent variables included students with identified learning disabilities and students with no identified learning disabilities. The dependent variable included the students' scores on the questionnaire. It was predicted that students with identified learning disabilities would score higher on the extrinsic pole and lower on the intrinsic pole than students in the regular education classrooms.

### **SUMMARY**

The present study included two groups of participants: 1) students with identified learning disabilities who were taught in both self-contained classrooms and resource rooms, and 2) students with no identified learning disabilities who were taught in regular education classrooms. Each participant were students from a suburban school district in Southeastern, New Jersey. The students were given a 30-item questionnaire, "The Scale of Intrinsic vs. Extrinsic Orientation in the Classroom", which measured the students' intrinsic and extrinsic motivational levels. The scale was administered by the teachers, and took approximately 20 minutes to complete. The statistical test used was a T-Test for Independent Samples. It was predicted that students with identified learning disabilities

would score higher on the extrinsic pole and lower on the intrinsic pole than students with no identified learning disabilities.

## **CHAPTER 4: ANALYSIS OF RESULTS**

## **RESULTS**

Null Hypothesis: Students with identified learning disabilities are not less intrinsically motivated than students without identified learning disabilities.

Alternate Hypothesis: Students with identified learning disabilities are less intrinsically motivated than students without identified learning disabilities.

After scoring "The Scale of Intrinsic Motivation versus Extrinsic Orientation in the Classroom," it was found that students with identified learning disabilities were not less intrinsically motivated than students without identified learning disabilities on four of the subscales: Preference for Challenge vs. Preference for Easy Work Assigned, Curiosity/Interest vs. Pleasing the Teacher, Getting Grades, Independent Mastery vs. Dependence on the Teacher, and Independent Judgment vs. Reliance on the Teacher's Judgment. However, students with identified learning disabilities proved to be less intrinsically motivated on the criteria subscale compared to their non-handicapped peers (see Table 4.1). These results indicate that students with identified learning disabilities scored similarly to their non-handicapped peers on the challenge, curiosity, mastery, and judgment subscales. Nonetheless, students with identified learning disabilities scored lower on the criteria subscale compared to their non-handicapped peers. For these reasons, the null hypothesis was supported by the data.

Table 4.1

	Challenge Subscale	Curiosity Subscale	Mastery Subscale	Judgment Subscale	Criteria Subscale
Significance Level	.708	.395	.703	.491	.017
Accept/Reject Null Hypothesis	Accept	Accept	Accept	Accept	Reject



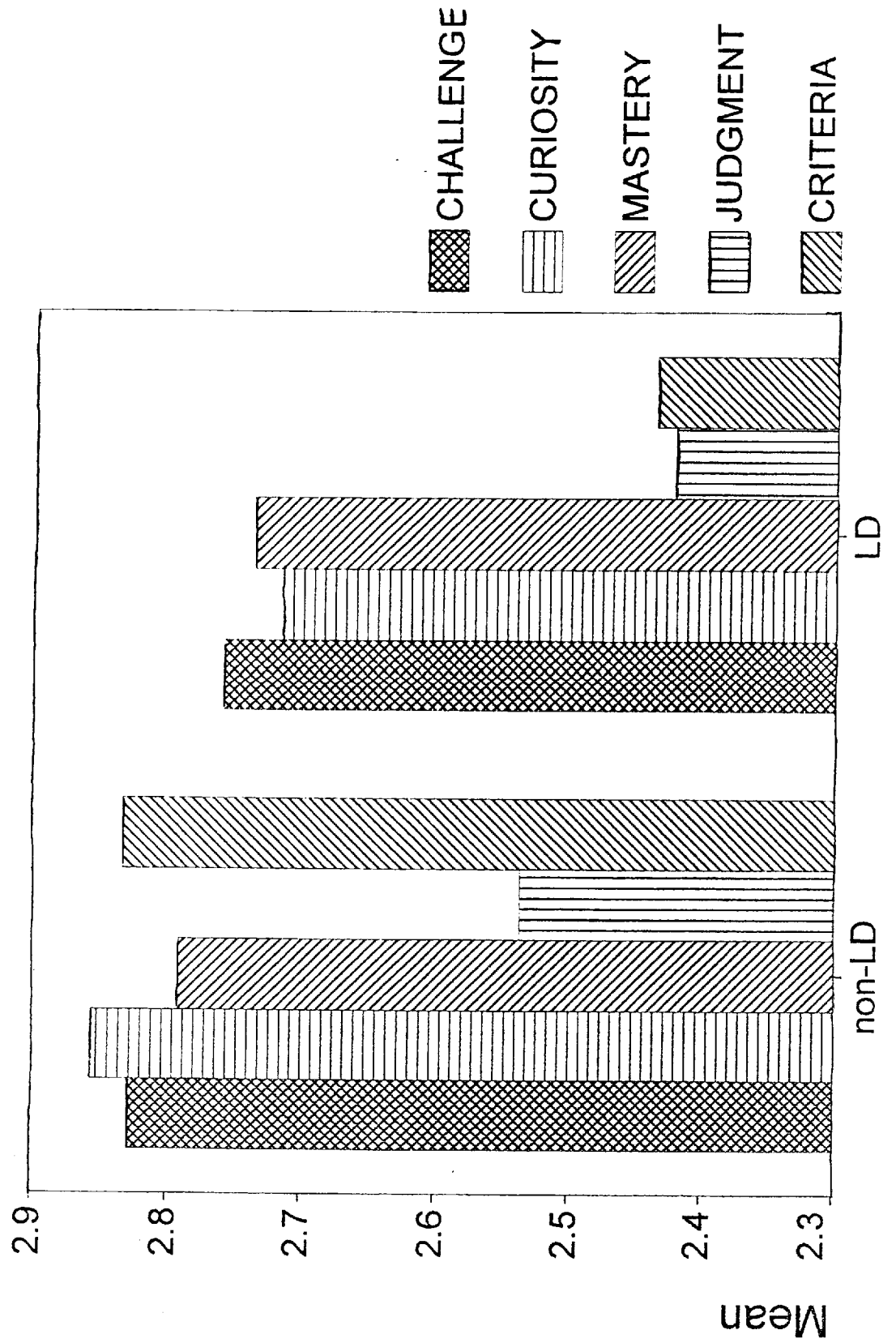
Since group scores change systematically with grade and age a student's score can only be meaningfully interpreted with this norm in mind. A score of 4 designates the maximum intrinsic motivation, while a score of 1 designates the maximum extrinsic orientation. Thus, the mean scores indicate the motivational levels for both groups used in this study (see Table 4.2). Students with identified learning disabilities received a mean score of 2.76 while students without learning disabilities received a mean score of 2.83 on the challenge subscale (see Figure 4.1). Both groups received similar mean scores on the curiosity subscale (Non-LD=2.86, LD=2.72; see Figure 4.2), mastery subscale (Non-LD=2.79, LD=2.74; see Figure 4.3), and judgment subscale (Non-LD=2.53, LD=2.42; see Figure 4.4). However, there was a significant mean difference for students with identified learning disabilities compared to their non-handicapped peers on the criteria subscale (Non-LD=2.83, LD=2.44; see Figure 4.5).

Table 4.2

	GROUP	MEAN	SD
CHALLENGE	Non-LD	2.83	0.69
	LD	2.76	0.86
CURIOSITY	Non-LD	2.86	0.68
	LD	2.72	0.70
MASTERY	Non-LD	2.79	0.59
	LD	2.74	0.63
JUDGMENT	Non-LD	2.53	0.69
	LD	2.42	0.66
CRITERIA	Non-LD	2.83	0.70
	LD	2.44	0.66

Overall, the results support the fact that one should identify the components of a construct, such as motivational orientation, rather than consider a global or unitary construct. Since the data cannot be merely summed across all items and calculated as a

Figure 4.1



total scale score, each of the five subscales were compared individually used in the study. Thus, by using the T-Test for Independent Samples the comparison of students with learning disabilities to their non-handicapped peers was found to be statistically significant on only one subscale: Internal Criteria for Success/Failure vs. External Criteria (.017,  $p < .05$ ). The other four subscales did not prove to be statistically significant: Preference for Challenge vs. Preference for Easy Work (.708,  $p > .05$ ), Curiosity/Interest vs. Pleasing the Teacher, Getting Grades (.395,  $p > .05$ ), Independent Mastery vs. Dependence on the Teacher (.703,  $p > .05$ ), and Independent Judgment vs. Reliance on the Teacher's Judgment (.491,  $p > .05$ ).

### **SUMMARY**

In this study, a T-Test for Independent Samples was used to test the following hypothesis: students with identified learning disabilities are less intrinsically motivated than students without identified learning disabilities. The null hypothesis was accepted since significance was only found in one out of five subscales. The challenge, curiosity, mastery, and judgment subscales showed no significant difference in motivational levels among students with and without identified learning disabilities. However, students with identified learning disabilities were less intrinsically motivated compared to their non-handicapped peers on the criteria subscale.

## **CHAPTER: SUMMARY AND CONCLUSIONS**

Learning has been found to be enhanced by intrinsic motivation. In fact, researchers have found that retention and generalization improve when learning is intrinsically motivated rather than extrinsically motivated (Beck, 1978; Deci, 1975). Academic intrinsic motivation has been found to be significantly related to achievement in students with (Adelman, 1978; Adelman & Taylor, 1990; Deci & Chandler, 1986) and without (Deci, 1975; Deci & Ryan, 1985) learning disabilities.

Current theories of motivation stress the importance of intrinsic motivation on academic performance of children with identified learning disabilities. When these children learn out of curiosity, challenge, and self-determination, they are more likely to succeed in the classroom. Students who are intrinsically motivated to learn about a topic being discussed by a teacher are likely to engage in activities they believe will help them learn. When children learn out of interest and choose to do an activity for no compelling reason, beyond the satisfaction derived from the activity itself, they display higher classroom performance than those predicted by assessed levels of intelligence (Schultz & Switzky, 1990).

The purpose of this study was to examine whether intrinsic motivation is a major factor in explaining academic performance deficits in children with learning disabilities. It was proposed that students with learning disabilities are less intrinsically motivated than students without identified learning disabilities. However, the general pattern of present results did not show a significant correlation between motivation orientation as measured by Harter's scale of "Intrinsic Versus Extrinsic Orientation in the Classroom" within this sample of identified learning disabled children. Although students with learning disabilities proved to be less intrinsically motivated on the criteria subscale

compared to their non-handicapped peers, they scored similarly to their non-handicapped peers on the challenge, curiosity, mastery, and judgment subscales.

These results appear contrary to a view that the academic underachievement of learning disabled children is mediated by an external motivational orientation (Adelman, 1978; Calder & Staw, 1975; Cameron & Pierce, 1994; Deci & Chandler, 1986; Dev, 1997; Gottfried, 1981; Harter, 1981; Haywood & Switzky, 1968b; Lepper, 1981; Lepper & Hodell, 1989; Wilson & David, 1994). One reason as to why the results did not support the hypothesis could be attributed to the administration of the questionnaire. For instance, different teachers gave the subjects directions. All of the students without learning disabilities were able to read and answer the questionnaire on their own. However, most of the students with learning disabilities had the questionnaire read to them by their teacher. It is possible that some teachers could have unknowingly biased the test by indicating "the right answer".

Another reason as to why children with learning disabilities were not found be less intrinsically motivated than their non-handicapped peers can be attributed to specific interventions and curriculum used with the learning disabled students. It is possible that the teachers of students with learning disabilities from Berkeley Township School District have modified and further supplemented classroom practices with an instructional methodology that tends to promote and encourage intrinsic motivation.

A limitation of the present findings can be attributed to the minimal number of participants. This study included only 70 participants from fourth, fifth, and sixth grades, 34 of which were identified with learning disabilities and 36 who were not identified with

learning disabilities. If the sample was larger the results may have been more sound and applicable because more students could have been tested.

Another limitation may be due to the fact that the sample was not representative of the entire population. The participants only consisted of students who came from one suburban, middle-class, school district in Southeastern New Jersey. Perhaps if students from different locations and different socioeconomic status' were tested the results might have supported the hypothesis.

Based on the present study, it may be concluded that students with identified learning disabilities are not less intrinsically motivated than students without learning disabilities. However, since research has found contradictory results (Adelman, 1978; Calder & Staw, 1975; Cameron & Pierce, 1994; Deci & Chandler, 1986; Dev, 1997; Gottfried, 1981; Harter, 1981; Haywood & Switzky, 1968b; Lepper, 1981; Lepper & Hodell, 1989; Wilson & David, 1994) it can be presumed that the sample size was not representative of the entire population.

The amount of research reviewed examined intrinsic versus extrinsic motivational levels among students in general. However, there seems to be a paucity of research that addresses issues focused on intrinsic motivation specifically among students with learning disabilities. With a view to overcoming this limitation, further research in these areas should be studied. A broader and deeper knowledge base could be built by investigating: (a) factors which affect or are related to academic intrinsic motivation in students with learning disabilities; (b) methods for identifying these factors; (c) reliable and valid measures to assess the academic intrinsic motivation of students with learning disabilities; (d) a variety of strategies designed to encourage and/or develop intrinsic

motivation in students with learning disabilities; and (e) the long term effects of developing academic intrinsic motivation in students with learning disabilities.

In addition, researchers and educators have expressed the need to explore psychophysiological interventions and expand the variety of instructional practices to improve the efficacy of students with learning disabilities (Adelman & Taylor, 1986). They have suggested that teaching styles, curriculum content, and evaluation procedures and policies should be flexible enough to meet the needs of each child in the classroom.

All of these suggestions have implications for practice and further studies focusing on the assessment of academic intrinsic motivation, and the development of intervention methods to enhance intrinsic motivation of students with learning disabilities. The aim being, to enable all students to achieve and retain the maximum learning possible.



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