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Running head:

THE EFFECTS OF A TOKEN ECONOMY SYSTEM IN
COMPARISON TO SOCIAL PRAISE

**THE EFFECTS OF A TOKEN ECONOMY SYSTEM IN COMPARISON TO
SOCIAL PRAISE ON THE MANIFEST BEHAVIORS OF ELEMENTARY
LEARNING DISABLED STUDENTS**

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**Marshall University Graduate College
in Partial Fulfillment
of the Requirements for the Degree
Education Specialist
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ABSTRACT

The objective of this study was to investigate the effects of a token economy system in comparison to social praise on the manifest behaviors of learning disabled students at an elementary school in West Virginia. The null hypothesis of this study was that there would be no significant difference between a token economy system in comparison to social praise on the manifest behaviors of learning disabled students. The following research question was examined in this study: What are the effects of a token economy system in comparison to social praise on the manifest behaviors of learning disabled students?

Literature relevant to this study revealed that a token economy system can be an effective method for changing or controlling student behavior (Mathur, 1996; Rhode, Morgan, & Young, 1983; Turkewitz, O'Leary, & Ironsmith, 1975; DeMartini-Scully, 2000). Some cautions suggested in the study were also noted. Token economy systems can be time-consuming and costly (Lovitt, 1978). Further research revealed that a strategy that may be effective in a token economy system is to fade away from the constant reinforcing with tangible rewards and have students monitor their own performance (Rhode, Morgan, & Young, 1983; Turkewitz, O'Leary, & Ironsmith, Mathur, 1996; Hartmann & Hall, 1976).

Literature relevant to social praise revealed that in order for social praise to be effective, it must be offered soon after the occurrence of the behavior being reinforced (Hancock, 2000; Sanger & Maag, 1994). Modest changes in behavior were noted as a result of social praise in the research studied (Uncial, Miller, & Owens, 1986; Rawson & Cassidy, 1995).

In this study, ten learning disabled students from an elementary school in West Virginia were tested using the Conners' Teacher Rating Scale-Revised to obtain the manifest behaviors of the Control and Experimental Groups. For the purpose of this research project, the total DSM-IV

scores on the Conners' Teacher Rating Scale-Revised were used to measure the manifest behaviors.

The results of this study found that there was no significant difference between a token economy system in comparison to social praise on the manifest behaviors of elementary learning disabled students. This may have been caused by the similarities of the learning disabled students. Furthermore, these findings do not support the related literature which stated there was a positive relationship between a token economy system and manifest behaviors of learning disabled students. A conclusion and implications for future research ideas were discussed.

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CHAPTER I

Statement of the Problem

Classroom management has generally become a challenge to maintain in school systems. Teachers of students with learning disabilities are regularly seeking new interventions to control inappropriate behaviors.

Inappropriate behaviors in the classroom often interfere with the learning process of both the student exhibiting inappropriate behaviors and the remaining students. Some of these behaviors that can interfere with the learning environment include: being out-of seat, inappropriate talking, and being off-task during teacher instruction.

Improving student discipline remains a high priority in educational programming. Students with learning disabilities as well as social and emotional disorders typically may exhibit noncompliance to teacher requests. Maintaining a positive classroom environment as well as an effective behavior management plan can help to ensure a safe classroom.

Controlling classroom behaviors can be a major challenge. Teachers typically issue several commands for compliance on a daily basis. Unfortunately, some mistakes may be made in the delivery of the commands and the consequences. Teachers can possibly unknowingly reinforce noncompliance, by giving commands and providing low levels of reinforcement for compliance of classroom rules. The delivery of the reinforcers can make a marked difference in the outcome of the classroom behavior management plan.

Purpose:

The purpose of the study is to determine if a token reinforcement program could decrease inappropriate behaviors of students with learning disabilities. Many times, student behaviors are controlled using methods which provide to control their own behaviors.

A wide variety of behavior management techniques have been developed that seem to control classroom behaviors. One such technique that has indicated positive outcomes is a token economy system (Higgins, Williams, & McLaughlin, 2001). A token economy system is a behavior management technique that involves immediately reinforcing a student with a token (check mark, behavior bucks, etc.) for a desired behavior.

The goal of this study is to examine the effects of a token economy system in a comparison to social praise on the manifest behaviors of learning disabled students.

Rationale:

The presence of an effective behavior management technique may influence the quality of the classroom (Higgins, Williams, & McLaughlin, 2001) that awarding tokens for the absence of target behaviors was an effective approach.

Usually, students may be given a smile or positive comment for an appropriate behavior. This technique is referred to as social praise. However, some students respond to more immediate, tangible reinforcers. The token economy system has seen some effect across various levels, school populations, and school behaviors (Kazdin, 1982; McLaughlin & Williams, 1988; K.D. O'Leary & Drabman, 1971; O'Leary & Leary, 1976; Williams, Williams & McLaughlin, 1988).

Current research indicates that the token economy procedure has been successfully used to increase productive behaviors in remedial and special classroom settings (McLaughlin &

Williams, 1988). Although there are studies on the effects of a token economy system, they all seem to indicate a need for an extended study. The recent research lacks the needed intervention time for reliable results. The effects of this project will extend the intervention phase to attain more reliable results.

Research Question:

The research hypothesis for this study will be stated in the null hypothesis form as follows: There will be no significant difference between a token economy system in comparison to social praise on the manifest behaviors of elementary learning-disabled students. The following research question will be examined in this study: What are the effects of a token economy system in comparison to social praise on the manifest behaviors of elementary learning-disabled students?

Definition of terms:

The following operational terms will be advanced prior to the undertaking of the study:

Learning Disabled Students. The subjects used in this study will be composed of a group of elementary students, grades four and five who were identified as learning disabled by a multidisciplinary team according to the policies established by the West Virginia Department of Education and placed in a resource room.

Social Praise. Form of positive reinforcement in which the student is verbally reinforced or praised for compliance of rules.

Token Economy System. Classroom behavior management technique which Builds and maintains appropriate classroom performance. The steps involved in this system include: (1) identifying target behaviors (2) specifying and selecting reinforcers

(3) identify token types (4) planning token distribution (5) initiating token system.

Manifest Behaviors. Those behaviors which are easily identified and noticed.

CHAPTER II

Review of the Literature

The studies reviewed in this study investigated the effects of a token economy system in comparison to social praise on the manifest behaviors of learning disabled students. The examination of the literature reviewed focused on an investigation of studies which dealt with the effects of a token economy system on regular education, adults, learning disabled, and mentally retarded students.

The atmosphere of the classroom has much to do with student behavior (Wolfgang & Glickman, 1996). The setting of a classroom should be appealing, with attention given to varying the physical features and the schedule to prevent boredom in both the teacher and the student (Smith, 1988). Teachers should let students know the do's and don'ts: which behaviors are expected or desired and which will not be tolerated. Then, the teacher must consistently reinforce the desired behaviors while ignoring or in some other way extinguishing the undesirable one (Smith, 1988). It seems that a token economy system is one way a teacher can consistently reinforce the desired behaviors of a student.

Token Economy System

A token economy system is an approach in which students are given a mark for reward redeemable at a later time (Lovitt, 1978). Target behaviors to be used in the token economy (Mueller, Sterling-Turner, & Scattone, 2001). Token economy systems can at times be time-consuming and costly (Lovitt, 1978). A separate aspect of a token economy system is response cost. Taking away token or points for disobeying rules is an example of response cost (Lovitt, 1978).

As with many behavior management techniques, if applied correctly and consistently in a systematic fashion over an extended period of time, token economies can be a highly effective method for changing or controlling student behavior (Mathur, 1996). Some reasons that a token economy system may be effective include: (1) tokens can be easily dispensed without disrupting the teaching/learning process; (2) tokens can be exchanged for a variety of individualized backup reinforcers, requirements for earning reinforcement can be adjusted as the needs of the students change, a token economy system may give the teacher flexibility in adjusting the relationship between certain behaviors and rewards, may allow for continued pairing of tokens with more natural social reinforcers; and, (3) token economies can be used to help the student acquire skills that will eventually lead to other more natural reinforcers such as good grades (Mathur, 1996).

The guidelines for implanting a token economy system should be specific (Mathur, 1996).

The guidelines could include steps such as the following:

- determine the target behaviors;
- choose the tokens (beads, poker chips, play money, points, etc.);
- determine how, when, and at what rate tokens will be distributed;
- expand the token economy with other target behaviors as time increases;
- fade the consequences until there is gradual removal of the tokens;
- expand the token system to other settings; and
- make incremental changes in the reinforcement schedule (Mathur, 1996).

Another strategy to incorporate into the token economy system that may help to fade away from the constant reinforcing is to also have the students monitor their own performance as part of the token program, and then gradually fade from the constant tangible tokens

(Rhode, Morgan, & Young, 1983; Turkewitz, O'Leary, & Ironsmith, 1975). Teaching children to self-monitor may be relatively easy and effective in a wide variety of classroom settings (Workman & Katz, 1995).

Regular Education Students

Providing students with skills for getting along and working with others requires general educators to integrate behavior management and social skills reinforcements techniques into the curriculum (Maag & Webber, 1995). Some regular education teachers have difficulty implementing behavior change programs because of training and time (Prater, 1994). A recent study (DeMartini-Scully, et al., 2000) indicated that the use of a token economy and response cost was successful in reducing disruptive behaviors of two female students in general education. The reinforcements must be systematically and contingently applied. A token economy is one of the methods used in general education classrooms which encourage students to engage in target behaviors (Bandura, 1977). In a regular education classroom, a behavior modification program, which included a token economy was implemented to kindergarten students (Schnofield, 1990). The study involved three kindergarten classrooms in a rural elementary school. The purpose was to improve attendance and punctuality patterns of the kindergarten students. Also incorporated into the intervention were self-esteem and parent involvement components (Schnofield, 1990).

The students received a smile sticker each day he/she was punctual and/or present. The stickers were then placed on an "I am Special" button (Schnofield, 1990). The students were then able to exchange tokens for tangible prizes when he/she was present five times per week. The parent involvement aspect included sending "I am Special" buttons weekly. One of the classrooms was able to obtain 100 percent attendance (Schnofield, 1990).

The study suggested that absenteeism could affect future dropout as well as success in reading (Schnofield, 1990). Another predictor of future dropouts is retention (Schnofield, 1990) in one or more of the earlier grade levels. The author comments that the importance of this study can perhaps help to eliminate absenteeism at an early age (Schnofield, 1990).

The study used consistency with steps of a token economy system as seen in other research articles. The steps included those such as identifying target behavior, establishing tokens, and expanding the token economy system. The research study seemed to indicate an overall effective project in implementing the token economy system. The only downfall is the choice of the subject sample. The author did not include the race or specific number of subjects in the sample. Both of these factors could seriously affect the results of the study outcome (Stage & Quiroz, 1997).

A second study examining the effects of a token economy system involved adolescents ages 13-to 17 consisting of sixteen students. The students were not labeled as having any specific disability. The purpose of this study was to evaluate months of a token economy system to reduce fines students received daily.

Students would receive a lottery ticket (from teacher) for receiving no fines (Miller & Cosgrove, 1990). The winning ticket would receive \$10. Conditions in the lottery were changed on a weekly basis. The results of this experiment were shown to not be effective in reducing inappropriate behaviors in the students. Azrin and Holz (1996) predicted that fines, due to their punishing effects, would result in increased aggression among the adolescents. Also, while lotteries have been proven effective in modifying behaviors of some adults, they have obviously failed in this case (Iwata et al., 1976; Pedalino & Gamboa, 1974; Shoemaker & Reid, 1980).

Some of the reasons this may not have worked were the delay between token reinforcement and performance. Generally, reinforcement is more effective when it immediately follows the behavior (Bandura, 1969; Kazdin, 1977). This research article was chosen because it was one that was shown not to be effective when using a token economy system, and some reasons why it may not have worked.

Hearing Impaired Students

Failure to comply with instructions immediately tends to be a problem for many students (Buisson & Murdock, 1995). Within a deaf resource classroom, this specific teacher in the study could not get her two students to complete a single written assignment in the prescribed amount of time. The two deaf students were 10 and 11 years-of-age, and one of which was also classified as learning disabled aside from hearing impaired.

The goal of the research was to increase latency, which was defined as the length of time it took a student to complete the heading on the paper (Mace et al., 1988). The design of this experiment included giving a student a token when a kitchen timer rang on a variable interval schedule (Buisson & Murdock, 1995). The student could then purchase edible treats or school supplies at the end of the week.

The results indicated a decrease in off-time from 7 minutes to approximately 40 seconds. This demonstrates the effectiveness of using token to modify students' behavior (Ayllon & Azrin, 1968). A changing design using varying phase length was set forth by the guidelines of Hartmann and Hall (1976).

The critical aspect of this research article was it involved an exceptionality not

typically addressed in research. The hearing impaired student may respond to a token economy system, as well as other exceptionalities. A suggestion would be to continue to fade the token economy system in the classroom based on a reinforcement schedule.

Mentally Retarded Students

Many students with mild mental retardation appear to be uninterested or unmotivated to learn (Dweck, 1975). Others seem motivated but are overly concerned about their performance, thus avoiding the challenges inherent in difficult tasks or new academic experiences (Okolo & Bahr, 1995). Challenging students with mild mental retardation is one way to increase motivation. A token economy system is a method used that could motivate students to try harder.

A study on mentally retarded African American students was conducted on four boys and three girls (Akande, 1997). The students received cents contingent upon a correct response. Cents were then used to buy backup reinforcers such as sweets or access to a video or listening to music (Akande, 1997). The token economy was established in order to increase appropriate responses, and decrease verbal outbursts. The results of the study indicated a positive outcome with the use of a token economy as well as self-monitoring techniques to be useful with mild mentally retarded students (Akande, 1997).

The author (Akande, 1997) indicated that a pattern continued in this study, as found in previous studies, which concerned the use of, self-monitoring as an intervention procedure. The geographic area was a limitation in this study. The study was conducted in Nigeria, and all other ethnic backgrounds were eliminated. Therefore, those wanting to receive a sample from various backgrounds would not find this study to be helpful.

Behavior and Emotional Disorders

Students with emotional and behavioral disorders represent a group that experience problems that may include aggressive, disruptive and antisocial behavior, and depression (Shores & Jack, 1993). Children with behavior disorders often engage in behavior that is offensive to those with whom they interact (Shores & Jack, 1993). These students may also experience problems that include aggressive, disruptive, and antisocial behavior; social rejection by peer; depression; and inadequate academic achievement (Cullinan, Sabornie, 1992). Substantial evidence shows that many students with challenging behaviors also have a history of academic failure (Kauffman, 1997; Kerr & Nelson, 1998). When disruptive classroom behaviors do occur, teachers historically have relied on disapproval, punishment (Scott, DeSimone, Fowler, & Webb, 2000) and exclusion as strategies to reduce or eliminated the problem behaviors. Yet evidence suggests that these interventions are ineffectual (Scott, DeSimone, Fowler, & Webb, 2000).

A study by Musser, Bray, Kehle, and Jenson (2001) was employed to reduce disruptive classroom behavior in three school-aged students with social and emotional disorders. The use of a token economy system was used to manage behaviors. Response cost was also utilized in the management of behaviors. Three African American males and one African American female of New York were the subjects of the study. The students were identified as having oppositional defiant disorder (ODD), and attention deficit hyperactivity disorder (ADHD). Students earned stickers for compliance of targeted behaviors. The stickers were later used for other tangible reinforcers.

This study was important in that it identified a potential effectiveness of using multi-component, teacher-friendly, classroom based interventions for children with behavior and

emotional disorders (Musser, Bray, Kehle, & Jenson, 2001). The use of a mystery motivator in the token economy system has been discussed in only four prior studies (Sheridan, 2000).

A limitation to this study was the threat to the external validity because of a single-subject design (DeMartini-Scully et al., 2000). The results cannot be generalized to other individuals. However, this study was a replication of a previous investigation (DeMartini-Scully et al., 2000) and therefore strengthens the external validity of the results.

A second study observed was one in which six behavior disordered males between the ages of 11 and 13 were identified as subjects. All boys were enrolled in fifth and sixth grade in elementary school. These students displayed a variety of behaviors, including depression, ADHD, aggression, self-abuse, and sexual acting out (Kern & Dunlap, 1994). The students earned points for on-task and compliant behaviors in exchange for token store items. A response cost system was also intact and points were taken away for inappropriate behaviors (Kern & Dunlap, 1994). Students were also provided self-monitoring sheets on the corner of their desk.

This article was important because of the use of several different techniques including token economy, self-monitoring, and response cost. The use of more than one technique allow for more student interaction. The results of the study found this to be effective in that the use of more than one behavioral method may improve on-task behavior of students described as emotionally or behaviorally disordered (Drabman, Spitalni, & O'Leary, 1984). Some research has indicated that self-management along with other methods (token economy) produce greater maintenance and generalization than adult-mediated procedures (Dunlap, Johnson, Winterling, & Mortelli, 1988). This research seemed to be consistent with previous articles studied.

Learning Disabled Students

Encouraging children's intrinsic motivation can help them to achieve academic

success (Dev, 1997). So many learning disabled students do not see the value of school and the reinforcement system that it provides, that we see problem behaviors often emerging as a way to mask academic failure (Hilton, 1985). With a system that rewards appropriate behavior and the completion of work the learning disabled teacher is able to make a major step toward returning these students to the mainstream (Hilton, 1985).

The purpose of the following research article was to determine if a student with learning disabilities would respond to a token economy behavior management system. The study included a 10-year old third-grade male student who was classified as learning disabled. The student exhibited high rates of disruptive behaviors which included out-of seat behaviors, talking-out, and poor seat posture (Stokes & Osnes, 1988). The study took place in an elementary classroom in rural Washington (Dev, 1997).

This study suggested the token economy to be effective in the treatment of inappropriate behaviors (Rutherford & Nelson, 1988; Stokes & Osnes, 1988). Prior to the study, social praise was initiated as the only reinforcer. The present study was a replication of the earlier works of Broden, Hall, Dunlop, and Clark (1970) with middle school students.

A limitation to this study was the apparent lack of time used to implement the token economy system. There is a brief study on the effectiveness of a token economy system on Ryan a fourteen-year old student with learning disabilities. The setting was a rural town. Ryan is often confrontational and rebellious (Buchanan & Scobie, 1988). He seems to respond to the rewards of a token reinforcement system. It was not difficult for Ryan to select rewards, since he was economically disadvantaged.

The planning and implementation of this study centered on alienating one student decreasing incidences of behavior outbursts (Buchanon & Scobie, 1988). This research article was found to

be consistent with others cited earlier noting to plan for eventual fading of the program through increased expectations, increased cost of reinforcers, or increased time between token reinforcement (Maccini & Gagnon, 2000).

Social Praise

Social praise, a type of external reward addressed in many theories of motivation, has been recognized as an important mediator in the development of students' motivation in the classroom. Social praise has contributed to potential usefulness as an enhancer to student motivation (Hancock, 2000).

For social praise to be effective most researchers seem to agree to the following:

- (1) praise must be contingent upon the behavior being reinforced
 - (2) praise must specify clearly the behavior being reinforced
 - (3) praise must be offered soon after the occurrence of the behavior being reinforced
 - (4) praise must be believable to the recipient (Hancock, 2000).
- Furthermore, some research efforts have discovered that exaggerated praise given after every answer loses its credibility, even if the teacher is sincere (Hancock, 2000).

However, if used correctly social praise can be a powerful reinforcer in the classroom of classroom learning.

Regular Education College Students

A plethora of research projects have been conducted on grades K-12 concerning the effectiveness of social praise (Hancock, 2000). This study examined the effectiveness of social praise on sixty-one 3rd year students enrolled in college courses. Fifty-two of the students were men, and nine were women. The sixty-one students were randomly assigned to one of four sections for lessons, which lasted for 55 minutes each (Hancock, 2000).

This study was unique in that it offered a sample of the population in education that

is normally not considered in research projects. College-age students were represented in this study only to study social praise.

Social praise, which stated in this article and is consistent with other articles, report that social praise must be contingent upon the behavior being reinforced, it must specify clearly the behavior being reinforced, and social praise must be offered soon after the occurrence of the behavior being reinforced (Hancock, 2000).

This study found that disruptive behaviors occur and persist if teachers use verbal praise as their only classroom management strategy. It was also noted that effusive praise given after every answer loses its credibility, even if the teacher is sincere. However, the results of this study also indicated that when exposed to social praise effectively (as mentioned above), college students spent more time on homework to prepare for lessons (Hancock, 2000).

The only information in this study in question was the reason for choosing a much larger sample of men than women. If this study was to be done over, a sample more representative of both genders may seem more reliable.

Behavior Disorders

Educational researchers, administrators, and teachers at all levels remain concerned about the motivation levels of many students on the public and private school classrooms (Hancock, 2000). This group of students with emotional and behavioral disorders represents a heterogeneous group (Sanger & Maag, 1994). Teachers of students with behavior disorders are continuously attempting to find effective ways to positively affect students' motivation to learn (Hancock, 2000).

A study, which examined the effectiveness of an intensive academic curriculum in increasing academic intrinsic motivation, also included the use of social praise. The subjects were 42 10-12

year old fourth grade males. One-fourth of the students were African American, and the remainder was Caucasian. The students exhibited marked classroom behavior problems (Rawson, 1992).

The study stated the importance of its existence was to note that academic intrinsic motivation (accomplished by social praise) is positively related to school achievement (Rawson, 1992). As noted in previous journal articles, (Gottfried, 1982) using social praise as a remediation intervention can demonstrate significant changes with subjects, so the outcome of behavior-disordered females and social praise was not studied.

Learning Disabilities

Modest changes in behavior as a direct result of social praise with learning disabled children have been well documented (Uncial, Miller, & Owens, 1986). Positive increases in self-esteem and concept have been directly linked to a positive environment. Rawson and Cassady (1995) also studied a group of learning disabled students ages 8-12. The students participated in a 10-day residential behavioral program that incorporated social praise within the classroom to improve group interaction. The effectiveness of this intervention was measure using the Multidimensional Self-Concept Scale. The results indicated that all students who participated in eight days of interventions improved (Rawson & Cassidy, 1995). The contents of this program with social praise also included a token economy system. Therefore, the results stated in previous articles, which states that social praise work best when accompanied by another method of behavior management. There were no significant contradictions found in this article, although the sample size may need to reflect the female gender in future studies.

Summary of the Literature

As a result of reviewing the literature concerning the effects of a token economy system in comparison to social praise on the manifest behaviors of learning disabled students, it appears the token economy system has many advantages for teachers and students. It was cited that many researchers found not only do teachers recommend this system, but it was found to be effective in research projects.

While some researchers state the token economy may be time-consuming and costly to administer, it seemed as though many found the benefits of the token economy to surpass the negative aspects. Social praise was found to be most effective when used with another method of behavior management. Of the many articles reviewed in this study, only one article has been found concerning the long-term effects of a token economy system. It seems that although the system works while in effect, no one is certain about the long-term benefits of articles concerning social praise, the female gender needs to more represented in the studies. The majority of literature seems to reveal the observations of males, and only a few females particularly in the areas of learning disabilities and behavior disorders. It must also be stated that many of the articles found contained few subjects, which may need to be increased for validity. The study of the effectiveness of a token economy system in comparison to social praise on the manifest behaviors of learning disabled students is important because an effective means of monitoring and reinforcing behaviors is necessary to maintain a positive classroom environment for all students.

CHAPTER III

Research Design and Methodology

This study was designed to investigate the effects of a token economy system in comparison to social praise on the manifest behaviors of elementary learning-disabled students. For the purpose of this research project and scoring, manifest behaviors will be measured using the total DSM-IV score on *The Conners' Teacher Rating Scale-Revised (CTRS-R:L)*. The *CTRS-R:L* was administered to students with learning disabilities served in a Resource Room to compare manifest behaviors of an Experimental and Control Group.

Subjects

The subjects chosen for the study consisted of ten- learning disabled students who ranged from ages eight-to-eleven years-of-age. All of the subjects attended a rural elementary school in southern West Virginia. All of the subjects participating in the study were all identified as learning disabled according to the policies and procedures established by the West Virginia Department of Education, and were placed in a special education setting for a portion of the day.

Grade distribution for the subjects in the research project were as followed:

(1) one from second grade, (2) two from third grade, (3) four from fourth grade; and, (4) three from fifth grade. The subjects consisted of six males and four females, all of which were Caucasian. The I.Q. scores were all in the average range of intelligence and ranged from 78-112 (see Table 1 in the Appendix). The students were all served in the resource room for an

average of three-and-a-half hours per day. The shortest time being two hours, and the longest was three hours.

Method

The *CTRS-R:L* was administered to each subject to assess the level of marked manifest behaviors of the subjects. Students were randomly chosen from an Experimental Group using the token economy method, and a Control Group using social praise. The *CTRL-R:L* has thirteen total categories. These categories included: (1) oppositional, (2) cognitive problems/inattention, (3) hyperactivity, (4) anxious-shy, (5) perfectionism, (6) social problems, (7) psychosomatic, (8) Conners' ADHD index, (9) restless-impulsive, (10) emotional lability, (11) inattentiveness, (12) hyperactivity/impulsiveness; and (13) total DSM-IV. However, for the purpose of this research project the Total DSM-IV raw scores were used to analyze the data. Teachers completed a scale, which consisted of 59 questions used on a Lickert Scale (not true at all, just a little true, pretty much true, and very much true). The scoring is based on the completion of these questions.

The Control Group and Experimental Groups were assigned based on the instruction of two different classroom settings. The Control Group consisted of five learning disabled students (two females, three males). The Control Group included one second grade student, two third grade students, one fourth grade student, and one fifth grade student. The method of social praise was administered as the classroom management technique in the research project. The questions completed by the teachers were based on classroom observations and prior knowledge of the students' behaviors. The answers were recorded and scored by the resource room teacher in the study.

The Experimental Group consisted of five learning disabled students (two females, three males). In the Experimental Group, the token economy system was used.

The same procedure of testing was followed by the Experimental Group. The students were then assessed on the *CTRS-R:L* administered by the resource room teacher.

Instrumentation

The *CTRS-R:L* was used to assess the behaviors in the Experimental and Control Group. The approximate test time is 15-20 minutes. The tests were scored based on a raw score converted into a t-test score. The T-score conversions are based on the age and sex of the subjects. The mean for a T-score is 50, while the standard deviation is 10. In the *CTRS-R:L* a T-score above 65 and above is usually considered clinically significant (Conners, 1997).

There are five age categories for the *CTRS-R:L* (1) 3-5 year olds (2) 6 to 8 year olds (3) 9-to-11 year olds (4) 12-to-14 year olds; and, (5) 15 year olds. The age groups used in this research project were 6-to-8 year olds and 9-to-11 year olds. Broadly speaking, the scoring of the test is simply the higher the raw score, the greater (or more severe) the problems (Conners, 1997).

The *CTRS-R:L* was tested on 1,897 students for the normative sample (985 males and 1,008 females). The students were ages 3 to 17. The total normative samples for the *CRS-R* were well over 8,000 students (Conners, 1997). Ethnicity was also a factor in the *CRS-R*, as six different ethnic groups were used in the normative sample (African American, Asian, Caucasian, Hispanic, Native American, other).

Reliability indicated in the *CTRS-R:L* the range of internal reliability was from .88 to .95, varying slightly on the subscales. Test-retest reliability was moderate to high across the various forms. This was measured using 49 children and adolescents.

Construct validity between long and short forms of the *CRS-R* were near 1.0 (Conners, 1997).

Moderate to high correlations were found when comparing the various teacher and parent forms. Discriminant validity was measured using an ADHD group and a control group without a

diagnosed attention problem on the *CTRS-R:L*. The ADHD group scored significantly higher than the non-ADHD group on all subscales except the Social Problems subscales (where the groups were not significantly different). The *CTRS-R:L* results have shown that they are pertinent and flag childhood and ADHD and adolescent behavioral problem (Conners, 1997).

Data Analysis

When researching problems or potential problems in behavior, it is often necessary to determine whether the test performance of one group is significantly different from that of another group. In other cases, it is sometimes necessary to determine whether the test performance of a group is significantly different from the norm. The DSM-IV total score was the evaluation score used to determine manifest behaviors. The DSM-IV was compared between the control and experimental groups. The mean of group one was compared to the mean of group 2 to measure any significance.

When researchers wish to make decisions of this nature, the use of a “*t*” test is often necessary. In this study, a *t* test was the measure used as well. An alpha level of .05 was used for this statistical test. Processing of data was accomplished by the application of hand tabulation.

CHAPTER IV

Results

The purpose of this study was to investigate the effects of a token economy in comparison to social praise on the manifest behaviors of elementary learning disabled students. Two groups were studied in this particular research project, with five subjects in each group. An independent t test was used to analyze data. The results of the analysis of the data obtained are presented in this chapter.

An independent t test was used to analyze the data with the use of hand tabulation. This method was used to determine if there was a significance between a token economy system and social praise in comparison to the manifest behaviors of learning disabled students. The independent t tests is the most appropriate statistical analysis in determining the magnitude of the relationships of two variables because in research studies it is often necessary to determine whether the performance of a Control Group was significantly different than the Experimental Group.

The Conners' Teacher Rating Scale- Revised contained a total of 59 questions. The questions included subcategories which measured different behavior including: social problems, ADHD index, anxious-shy, restless-impulsive, oppositional, hyperactivity, psychosomatic, emotional lability, and a total score. The total score was used in this particular rating scale as the measure to assess the students' manifest behaviors. A high Score in this test presented in a red area on the scoring sheet, indicated significant manifest behaviors in a particular student.

The Conners' Teacher Rating Scale-Revised was administered to each student in the research project. The independent t test was then performed to measure a significance of the two groups. A statistical significance was not found between raw score for the Control Group and Experimental Group in that $t=1.7$, $p=.2306$ (see Table 3 of the Appendix).

In addressing the issue of the quality of instruction, Table 1 summarizes the factors that influence the scoring and administration of testing procedures. These included grade, gender, age IQ, and race. It should be noted that all of the students used in the study were Caucasian. The grade distribution ranged from 2nd grade to 5th grade. Also, the gender of the students was a factor in this test because there were profiles for males, and a separate profile for females. The scoring of the two genders varied according to the profile sheets.

Table 2 of the Appendix indicates the raw score data for the Control and Experimental Groups. The raw scores were derived from the DSM-IV total score. The higher raw scores indicate an above average correspondence with DSM-IV diagnostic criteria for significant behaviors (Conners, 1997).

In summary, it appears that the raw scores of the Control Group and Experimental Group indicated no significant difference in the manifest behaviors of the two groups. The means, standard deviations, and the degrees of freedom for the two groups are shown in Table 3 of the Appendix. These results retained the null hypothesis that stated there is no significant difference between a token economy in comparison to social praise on the manifest behaviors of elementary learning disabled students.

CHAPTER V

Discussion

This study examined the effects of a token economy in comparison to social praise on the manifest behaviors of elementary learning disabled students at an elementary school in West Virginia. The hypothesis of the study was that there would be no significant difference between a token

The following research question was examined in this study: What are the effects of a token economy system in comparison to social praise on the manifest behaviors of learning disabled students? The results of this study found no significant statistical difference between a token economy in comparison to social praise on the manifest behaviors of learning disabled students. This may indicate that there was a constriction of range between the variables because the sample was limited to students with similarities that may have included: white students, approximately the same socioeconomic status, learning disabilities, small sample size, and elementary students.

Summary

The results of the study does not support the related literature reviewed which stated that a token economy system can be more effective in controlling manifest behaviors than the traditional method of social praise (Mathur, 1996). Furthermore, the results of this study are not consistent with research findings that also stated token economies can be a highly effective method for changing or controlling student behaviors (Mathur, 1996). The results of the study were not consistent with specific studies designed to research the effectiveness of a token economy system and learning disabilities. Buchanon & Scooby's (1988) research concluded that a token economy system was successful in decreasing manifest behaviors in learning disabled

students including: decreasing absences, increasing self-esteem, and decreasing behavioral outburst. Also, Maccini & Gagnon (2000) found a token economy system to be effective with learning disabled students when used with increase expectations of students, increased cost of reinforcers, and increased time between token reinforcements. On the other hand, research findings indicated that only modest changes in manifest behaviors were noted using the method of social praise with learning disabled students (uncial, Miller, & Owens, 1986).

Many of the raw scores, including males and females, showed significant behaviors (See Table 2 in the Appendix) following the study. These results were not consistent with the evidence related to the literature, which indicated that a token economy system would decrease significant behaviors after being properly implemented (Higgins, Williams, McLaughlin, 2001).

Conclusion

In conclusion, this study's results may have been significant if some o the factors in the study were different. The first factor that my have affected the outcome is the sample size. Having only ten subjects may change the outcome of the statistics, in that a larger sample size must be used in order to have valid results in any study.

Second, a more representative sample affecting race should have been used in this study. The school used for this study has a 90% Caucasian population, serving no other race but Caucasian in the resource room.

The third factor that may have affected this study were student age variances. There was an age variance from second to fifth grade. The researcher believes that some manifest behaviors may be outgrown or controlled as student get older, therefore leaving the younger group at a disadvantage. The social praise group (Control Group) tended to have younger-aged students.

On the other hand, the token economy group (Experimental Group) had older students. The difference in the ages of the two groups could possibly have an impact on the scoring.

Fourth, the implementation of the study should be longer in duration. This study was conducted for six weeks. A future study with more time to allow for the implementation of the two behavior programs may prove to show a significance between the two groups. The researcher believes a study of twelve weeks or more would be a more representative time for implementing the behavior programs.

Lastly, the students should have been chosen at random from different schools, as opposed to one to help generalize outcomes. Factors that could have affected the results of this study were to choose students of varying races and socioeconomic status. As mentioned previously in this study, only those students in a low economic status were chosen, because of the location of the school. Being in a rural West Virginia school, all of the students represented in this study were from a low-income household. In a future study, these factors should be remembered for more valid results from the sample chosen.

Recommendations

A future study of the same could be implemented and may include some of the prior suggestions to achieve statistical results. A future study might use a longer time period to develop and implement the study. This may help the study in reaching a level of significance. Also, the students may be tested using the Conners' Rating Scales or other reliable tests before and after the implementation of the study to show improvement in the initial manifest behaviors of the groups. Other recommendations for a future study would include, as mentioned in the previous section, are include a larger and more representative sample size and choose students from different schools.

This study was interesting and challenging to implement, and to observe the outcome that a token economy system that used in learning disabled students was not significant. This implies, perhaps, that future studies in education research should examine learning disabled students and approaches on how to manage manifest behaviors in the classroom. It would also be a recommendation to include social praise as one of the groups in order to discuss its implications on the behaviors of learning disabled students.

The results of the study indicate that there is no significant difference between a token economy system in comparison to social praise on the manifest behaviors of elementary learning disabled students. Therefore, the results retained the null hypothesis and answered the research question: There will be no significant difference between a token economy system in comparison to social praise on the manifest behaviors of learning disabled students.

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APPENDIX

Table 1

Summary of Information on Learning Disabled Students Within the Resource Room

<u>Grade</u>	Gender	Age	IQ	Race
5	male	11.6	110	white
5	male	11.7	93	white
5	male	11.3	104	white
4	female	9.8	78	white
4	female	10.3	96	white
4	female	10.3	112	white
4	male	10.5	78	white
3	female	9.7	96	white
3	male	10.1	70	white
2	male	8.10	106	white

Table 2

Raw Score Data for Group One and Group Two

<u>Group 1</u> <u>(Control Group)</u>	<u>Group 2</u> <u>(Experimental Group)</u>
29	24
35	18
23	22
24	32
16	15

Table 3

Performance of Group One and Group Two on Behavior Rating Scale

Group One	t test	Group Two
(Control)		(Experimental)
Mean=15.87	t=1.7*	Mean=22.2
S.D.=6.35	p>.05	S.D.=5.81

Note: *Nonsignificant