EFFECTS OF A TICKET LOTTERY STRATEGY ON THE ACADEMIC PERFORMANCES OF ELEMENTARY STUDENTS WITH DEVELOPMENTAL DISABILITIES

A Thesis
Presented in Partial Fulfillment of the Requirements for the Degree Master of Arts in the Graduate School of The Ohio State University

By

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* * * * *

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ABSTRACT

The purpose of this study was to evaluate the effect of a ticket lottery on the completion and accuracy of students' work. There were three experimental conditions. Baseline consisted of student receiving verbal and written feedback for the completion and accuracy of assignments. Ticket Lottery condition consisted of the student receiving a raffle ticket for each completed assignment and 100% accurate assignments in addition to verbal and written feedback. A corresponding ticket would then be placed in a jar for an end of the day lottery. Students could earn rewards if their lottery ticket matched the one selected from the jar. The Frequent Lottery Ticket condition was the same as the Ticket Lottery condition with the exception that students could also earn a ticket for on-task behavior.

Six elementary students, developmental disabilities, ranging in age from 8 to 10, were involved in this study. Ticket Lottery procedures were incorporated to determine how these techniques would effect the completion and accuracy of students' daily seatwork assignments. The students could earn a ticket for both the completion of assignments and the accuracy of assignments for completing their daily seatwork assignments following their regular school curriculum and schedule. In summary, there was not shown a functional relationship between academic achievement and any of the
three experimental conditions for the subjects in this study. However, the students did
work harder when ticket lottery procedures were in effect.
DEDICATION

First, I would like to dedicate my thesis to all of my future students who will benefit from the knowledge I gained pursuing my graduate degree the passed few years.

Secondly, I would also like to dedicate my thesis to my family, because without their support, I may not have completed this thesis.

Finally, this thesis is dedicated in memory of my Grandfather, Yohito Imada.
ACKNOWLEDGMENTS

I voice genuine appreciation to Dr. Ralph Gardner for his guidance and wisdom throughout the research. Thanks go to the other member of my advisory committee, Dr. Peter Paul for his suggestions and criticism. I also would like to thank Gary D. Jacobs for all of his time and advice during my graduate program. Thanks also goes to Ms. Debbie Edwards for allowing me to collect my data in her classroom and gain more knowledge on how to handle my own classroom in the future. To my fiancee, David Richard Jancuk, (whom I married one day before graduation on June 13, 1997), for all of his support and immense faith in me, and his willingness to stand by my side through my venture. To my parents Toshio and Kuniko Tahira as well as the rest of my family for all of their financial and mental support when needed. Finally, I would love to thank my dog, Spice Tahira, for all those nights she listened to me complain when I was frustrated and confused.
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CHAPTER 1

Introduction

A properly designed and implemented classroom management program can make a positive difference for students. In order to improve the quality of education for students, both academic and behavioral problems in school have to be addressed. One of the most demanding and complex duties for educators is day-to-day classroom management. A chaotic classroom atmosphere can result in an ineffective instructional environment. Especially, when students engage in disruptive behavior it is difficult for them and other students in the class to engage in assigned tasks (Shook, LaBrie, Vallies, McLaughlin, & Williams, 1990).

The development of a stable learning environment for learners is not an easy task especially if the learners have developmental disabilities. Walberg (1984) discovered that factors affecting learning productivity can be categorized into three parts: instruction, student characteristics, and environment. Walberg (1984) found that numerous factors (i.e., class size, financial expenditures per pupil) related to student achievement are outside of the direct control of the teacher. However students' classroom behavior can be impacted by the teacher. The number of behavior management problems that a teacher handles during instructional time is negatively associated with students' achievement (Mercer & Mercer, 1993). Practical and effective behavior management strategies are
essential and also necessary for teachers to establish an adequate level of classroom order and control. Effective behavior management strategies allow the teacher to manage problem behaviors and to produce an orderly and productive learning environment. The main elements of effective classroom management include: teachers frequently having positive and supportive interactions with students and reinforcing students' accomplishments. Educators can organize the classroom to decrease inappropriate behaviors by reinforcing appropriate behavior, instead of punishing undesired behavior (Webber & Scheuermann, 1991). Teachers however, are more likely to focus on reducing undesired student behavior rather than promoting delivery of positive reinforcement (Shores, Gunter, & Jack, 1993). To manage behavior problems in the school settings, many behaviorally oriented intervention procedures have been developed such as: timeout (Skiba & Raison, 1990), contingency contracting (Miller & Kelley, 1994), level systems (Mastropieri, Jenne, and Scruggs, 1988), and self-management (Kern, Dunlap, Childs, & Clarke, 1994).

The ultimate goal of these strategies is not to simply improved social behavior but to improve the learning environment and subsequently the academic achievement of students (Cartledge & Milburn, 1995). Research has found a positive relationship between classroom social skills and school achievement (Cartledge & Kleefeld, 1989). Social skills such as asking and responding to questions, and participating in academically relevant discussions have been proven to yield strong correlations with achievement (Cartledge & Milburn, 1995). Students with disabilities often demonstrate numerous inappropriate behaviors in the classroom possibly diminishing their opportunity for success.
(Meese, Overton, & Whitfield, 1994). Specifically teaching relevant classroom social skills to students with special needs will enhance their overall school performance (Cartledge & Kleefeld, 1989).

A classroom management system must be appropriately used in order to be effective. It has been shown that teachers tend to judge the acceptability of a classroom management technique based on how much the students will benefit from the new technique, the amount of time required to implement it, the required skills, and material resources needed (Elliott, Witt, Galvin, & Peterson, 1984; Witt & Martens, 1983; Witt, Martens, & Elliott, 1984). Consequently, the easier, more time efficient and less costly the intervention programs the more likely its acceptance by teachers. Typically a class-wide behavior management system is easier to manage than an individualized behavior management system. Proctor and Morgan (1991) used a classwide raffle system to improve the social behavior of children with behavior problems. This class-wide response cost system proved effective in improving the behavior of students with behavior problems.

**Purpose of the Study**

The purpose of this study was to analyze the effects of a ticket lottery behavior management strategy on academic performance of students with developmental disabilities. The primary goal was to evaluate whether implementation of a ticket lottery technique improves the specific academic performance in completion and accuracy of seatwork during morning seatwork period.
Review of the Literature

The literature review section will be divided into three major sections. Three areas of focus are: students with mental retardation, behavior management strategies, the relationship between academic and social behavior.

Students with Mental Retardation

Those who are labeled mentally retarded are a diverse group of people who may exhibit a greater range of behavior concerns and vast differences in their abilities depending on the severity of their disability (Cartwright, Cartwright, & Ward, 1989). In terms of classification, there are four levels of mental retardation: mild, moderate, severe, and profound. Individuals are categorized for having mental retardation based on their adapted behavior and intellectual abilities. The intelligence scores associated with each level are as follows: (a) mild mental retardation...between 50 - 55 and 70; (b) moderate mental retardation...between 35 and 50 - 55; (c) severe mental retardation...between 25 and 35 - 40; and (d) profound mental retardation...below 20 - 25 (Kaplan, 1996, p.129).

In order to understand the range of behaviors within this population, we must question ourselves on first who are students with mental retardation and what are the characteristics of these students. According to the most recent definition by the American Association on Mental Retardation (AAMR), "mental retardation refers to substantial limitations in a person's present functioning. It is characterized by significantly subaverage intellectual functioning, existing concurrently with related limitations in two or more of the following applicable adaptive skill areas: communication, self-care, home living, social
skills, community use, self-direction, health and safety, functional academics, leisure, and work. Mental retardation manifests before age 18" (AAMR, 1992, p.1).

The prospects for life of people with mental retardation are influenced by the kinds of settings where they receive services. At the present, there are more community-based residential programs available to people with all levels of mental retardation such as group homes, halfway houses, and independent living (Comer, 1992). Persons with severe mental retardation may live in closely supervised nursing homes or institutional settings. Those people with moderate level may live in a group home under supervision by the staff. People with mild mental retardation may be able to live independently in the community.

Students with Developmental Handicaps (DH)

The term developmental disability (DD) refers to conditions occurring during the developmental years before age 18 which may preclude an individual's continuing development progress (Peterson, 1987). In order for students to be eligible for a special education program in Ohio and related services, they need to meet the requirements set by the Ohio Department of Education. According to rules for the education of handicapped children by the Ohio Department of Education, eligibility of program for developmentally handicapped children includes that: (a) each child shall have a measured intelligence quotient of eighty or below; (b) each child shall exhibit deficits in academic performance; (c) each child shall exhibit deficits in adaptive behavior which adversely affect the child's educational performance and/or independent daily living skills (Rules for the Education of Handicapped Children, 1992, p. 66).
Students given the label of developmental handicaps (DH), in Ohio, are those students with mild developmental disability (DD). Throughout this thesis, DD/DH are used interchangeably. Students in the mild category of developmental disabilities make up the majority of individuals with developmental disabilities in special education programs. Students with DH by definition, generally attend public schools. Most receive at least part of their instruction in general education classrooms. Students with DH have both academic and adaptive behavior deficits compared to their typical developing peers. Consequently, students with DH often need specific instruction in both academic and social skills. It is important for classroom teachers to consider following instructional factors when they are planning to improve students' academic achievement. Christenson, Ysseldyke, and Thurlow (1989) have identified ten critical instructional factors for students with mild handicaps. Some of these factors were: (a) the degree to which classroom management is effective and efficient; (b) the degree to which teaching goals and teacher expectations for student performance and success are stated clearly and are understood by the student; and (c) the degree to which the teacher actively monitors student progress and understanding (pp. 22, 23, and 26).

Procedures for improving social skills for students with developmental handicaps deals with many of the similar methods as teaching academic skills (Elliott & Gresham, 1993). First of all, teachers need to model the appropriate behavior, then give students a chance to perform the behavior, and third, provide them a corrective as well as positive feedback and, finally, provide opportunities to practice the skills for maintenance (Cartledge & Milburn, 1995).
Types of Classroom Management Systems

Classroom management systems can be divided into three main categories: individual behavior management, self-management, and class-wide behavior management. Individual behavior management refers to the system of contingent reinforcement which is applied to each individual student, therefore individual students have total control over the outcome of their target behavior. Timeout (Skiba & Raison, 1990), contingency contracting (Miller & Kelley, 1994), and level systems (Mastropieri, Jenne, & Scruggs, 1988) are some of the examples that employ an individual behavior management system. Class-wide behavior management refers to group contingency management techniques that are applied to the entire class regardless of an individual student's behavior which may not meet the class criteria.

In many cases, group-oriented strategies promote appropriate behavior by using the influences of a peer group. Good behavior games (Brigham, Bakken, & Scruggs, 1992), group timeout ribbons (Salend & Gordon, 1987), independent group contingency strategies (Brantley & Webster, 1993), token economy (Shook, LaBrie, Vallies, McLaughlin, & Williams, 1990), and response costs (Proctor & Morgan, 1991) are some of the examples of class-wide behavior management strategies. A ticket lottery strategy belongs to a class-wide behavior management.

Individual Behavior Management Strategies

Timeout Procedure: Timeout is a procedure in which no reinforcement is permitted during a specific period of time due to emitting an undesirable behavior, and as a result the student is removed from positive reinforcement (Jansma & French, 1994;
Heron & Harris, 1993; Cooper, Heron, & Heward, 1987). Skiba and Raison (1990) studied a relationship between the use of timeout and academic achievement. All subjects in this study were students with severe behavior disorders and eighty percent of them were males in grades second through sixth. The independent variable was timeout, and the dependent variable was the measurement of students' academic achievement. This study concluded that there was little evidence of a relationship between the usage of timeout and achievement measurement. Other researchers investigated the relationship between the timeout technique and social behaviors and identified that implementation of timeout is effective in reducing inappropriate behaviors such as physical/verbal aggression, noncompliance, throwing objects and tantrums (Olmi, Sevier, & Nastasi, 1997; Mathews, Friman, Barone, Ross, & Christenson, 1987). Barton, Brulle, & Repp (1987) researched the effects of using a differential schedule of timeout in order to diminish maladaptive response of three children with developmental handicaps. The independent variable was implementation of differential timeout, and the dependent variable was the rate of maladaptive behaviors (chin dig, scratch others, and bite others). The study concluded that a differential schedule of timeout was effective in decreasing the maladaptive behaviors.

Contingency Contracting. Contingency contracting is a contract made between a student and a teacher in which a target behavior and a level of frequency of that behavior are agreed upon along with the consequences for the student emitting a particular target behavior (Schloss, Smith, & Schloss, 1995; Kerr & Nelson, 1989; Allen & Kramer, 1990). Miller and Kelley (1994) studied the use of goal setting and contingency contracting for
improving children's homework performance. Subjects in this study were four pairs of parent-child and children ranging from nine through eleven years old. These subjects were selected based on three criteria: (a) scores on the homework problem checklist; (b) homework accuracy rate or on-task rate; and (c) average achievement in math and reading. (Miller, & Kelly, 1994). The independent variable was goal setting and contingency contracting, and the dependent variable was accuracy of completed homework. The primary result of the study was increased work accuracy for all subjects.

**Level System.** Level systems are behavioral systems in which student's behaviors are gradually improved according to hierarchies of levels. As students demonstrate desired behavior at each level and proceed through one level to the next, the behavioral expectations and privileges may change as well. Mastropieri, Jenne, and Scruggs (1988) conducted a study in a high school resource program using a level system to improve academic and social behavior of students with behavioral disturbance. The nineteen subjects ranged from grades ninth to twelfth. Talkouts, out of seat behaviors, and accuracy as well as completion of homework assignment were measured. The results showed the improvement in both social and academic behaviors when the level systems were implemented.

**Self-Management**

Self-management is defined as the personal and systematic application of behavior change strategies that result in the desired modification of one's own behavior (Cooper, Heron, & Heward, 1987, p. 517). Educators have used self-management tactics to assist students in learning a wide variety of skills (i.e., homework organization skills, anger
control skills). Kern, Dunlap, Childs, and Clarke (1994) conducted a study to improve the behavior of students with severe emotional disturbance using a class-wide self-management program. The dependent variables measured in this study were on-task behavior and disruptive behavior. They found that the students showed increased on-task behaviors and decreased disruptive behaviors during the self-management condition.

**Group Behavior Management Strategies**

**Good Behavior Game.** In good behavior games, the class is divided into several groups, and these groups will compete for rewards. The game procedures allows for all groups to obtain the reward simultaneously if each meets the pre-determined criteria. It is necessary that each member in a group is accountable for his/her behavior in order to get rewarded as a group. Brigham, Bakken, and Scruggs (1992) used a cooperative behavior management strategy to reduce inappropriate classroom behaviors with secondary students, age 13 to 14 years, who are developmentally handicapped. Dependent variables measured in this study were off-task active, and off-task passive behavior. The results revealed that application of a cooperative behavior management strategy had an impact on decreasing the level of off-task behaviors of students with developmental disabilities.

**Group Timeout Ribbon.** In the group timeout ribbon program, positive or negative reinforcement is given to the whole group depending on the behavior of all members in the group. Salend and Gordon (1987) examined the effectiveness of a group-oriented timeout procedure on two groups of students in a resource room setting to reduce inappropriate verbalization. These subjects received resource room instruction as a supplement. However, the subjects primary place was in a general classroom environment.
Nine subjects who were learning disabled or emotionally disturbed ranged in age from six to ten years. The independent variable was the implementation of the timeout ribbon procedure, and the dependent variable was inappropriate verbalization for both groups. The experimenters found that the group-oriented timeout ribbon is an effective strategy for decreasing inappropriate verbalization in a resource room setting.

**Independent Group Contingency Management.** In an independent group contingency, the performance of each student does not affect the entire group even though the contingency is delivered to the whole group (Hayford, 1993). Brantley and Webster (1993) used an independent group contingency of public posting system with fourth-grade students in a regular class setting in order to decrease the inappropriate behaviors of talk-out, out-of-seat, off-task behavior, and touching. The results indicated that the group contingency was effective in decreasing undesirable classroom behaviors.

**Token Economy.** Token economy is a reinforcement system that is widely used in many different settings as a behavior management technique (Kaplan, 1996; Myles, Moran, Ormsbee, & Downing, 1992). In order to implement a token economy system, the teacher must first specify the target behavior(s) the students will work on, then the actual reinforcer is decided upon, such as stickers, free recess. The teacher then describes all necessary rules of the token economy so that students know precisely what behaviors are needed in order to earn the tokens. Shook, LaBrie, Vallies, McLaughlin, and Williams (1990) investigated the effect of a token economy on first grade students inappropriate social behavior. The subjects included one girl and two boys from a regular classroom and ranging in age from six to seven years. The independent variable was the implementation
of the a token economy, and the dependent variables were out of seat, talkouts, and other disruptive behaviors such as rocking in chair, digging in desk, and combing hair. The results suggested that the token economy strategy can be quite useful in decreasing the number of inappropriate social behaviors in early elementary students. Evans, Bostow & Pavchinski (1989) examined the effects of token reinforcers in math problems and sight words of a twelve-year-old student with learning disabilities. The changing criterion design was employed with the measurement of percent of correct responses in math problems and sight words. Results showed that the subject's poor academic achievement has been improved with token reinforcement strategy in changing criterion design. Ross and Braden (1991) compared the effects of token reinforcement, cognitive behavior modification, and direct instruction on math skills of ninety-four elementary students with learning disabilities. Two dependent variables measured in this study were standardized math achievement and 2-minute timings of math work. They found that cognitive behavior modification and token reinforcements are equally effective remediation strategies for learning-disabled students' math skills, and both techniques were better than the direct instruction. Rosenberg (1986) conducted a study that implemented a token economy plus a daily classroom rule-review of elementary students with physically and emotionally disturbed. Time-on-task, talking-out, and opportunity to respond were measured. Results indicated that a brief review of the classroom rules adding to a token economy may increase the efficiency in classroom management system.

**Response Cost.** In a setting where response cost procedure is in use, every member in the group has to present appropriate behavior in order to keep the tokens.
Otherwise tokens will be removed. Proctor and Morgan (1991) measured the effects of a response cost raffle procedure on increasing appropriate classroom behavior of students with behavior problems. The participants were four eighth and ninth graders who were students with learning disabilities or behavior disorders. The independent variable was the use of the response cost raffle, and the dependent variable was the measurement of students' appropriate behavior. The results showed that the response cost raffle strategy was effective in increasing desired and decreasing undesired classroom behaviors of junior high school students with learning and behavioral problems.

**Relationship Between Academic and Social Behavior**

Educators have stated that there is a reciprocal relationship between social behavior and academic performance (Ayllon & Roberts, 1974; Witt, Hannafin, & Martens, 1983; Cartledge & Milburn, 1986). Ayllon and Roberts (1974) argue that if we teach students better and they will maintain an orderly behavior. Researchers have also found that it may be possible to decrease or eliminate undesired behavior through systematically reinforcing academic skills (Ayllon, Layman, & Burke, 1972; Broughton & Benjamin, 1978). Thus, increasing students' academic responding may result in ameliorated social behavior (Bullara, 1994). Researchers have demonstrated that, by increasing students' academic responding, there is a subsequent increase in on-task behavior (Bullara, 1994; Shield, 1996).

**Research Questions**

1. Which condition will be more effective in promoting the completion of seatwork assignments Baseline condition, Ticket Lottery or Frequent Ticket Lottery?
2. Which condition will be more effective in increasing student accuracy of seatwork assignments, Baseline condition, Ticket Lottery or Frequent Ticket Lottery?

3. What condition will be more effective in improving student academic performance, Baseline condition, Ticket Lottery or Frequent Ticket Lottery?

4. What is the students' opinion of using a ticket lottery?

5. What is the classroom teacher's opinion of using a ticket lottery?
CHAPTER 2

Methods

Subjects

The subjects were students in an elementary school classroom for children with developmental handicaps (DH). The subjects included both boys and girls who were diagnosed with developmental disabilities and enrolled in an elementary special education program. This study began with ten subjects, however four subjects were unable to complete the study. Student 7, Student 8, and Student 9 transferred to another school during the study. Student 10 was absent for all of Baseline 2 condition, therefore Student 10's data were eliminated from the study.

Table 1 shows the age, IQ, and grade level for the six subjects who completed the study. There were five second grade students and one third grade student in this study. The range of intelligence (IQ) scores for the six subjects were between 59 and 76. Finally, there were three eight year old students, two nine year old students and one ten year old student.
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Table 1: Students Age, Grade, IQ and Gender

Parental consent for the study was obtained prior to the study, by sending a letter home to each parent with a consent form to be signed and returned by the parent(s). The study followed the regular classroom schedule. The study did not begin until all the students had a signed consent form.

**Setting**

The study was conducted in a self-contained DH classroom in an inner-city public elementary school. The school is part of a large urban school district. The study was implemented daily during the same seatwork time approximately from 9:20 a.m. until 11:05 a.m.

The classroom was set up with students’ desks arranged in rows, and some large tables around the edge of the classroom for teacher-directed activities. Bookshelves and activity materials were arranged around the room (See Figure 1).
Figure 1: Classroom Set-up Diagram

Experimenter

The experimenter was a full-time graduate student majoring in Special Education with certification in Developmental Handicaps at The Ohio State University. The
experimenter had experience in teaching during practicum experiences in elementary and high schools as part of the requirements for the Masters degree. The experimenter also taught in elementary school as a student teacher for eleven weeks.

**Definition and Measurement of Dependent Variables**

The students' academic performance was the dependent variable. Specifically, this included the completion of seatwork and accuracy of seatwork during the morning seatwork period.

**Completed Assignment**

The daily seatwork consisted of work from any subject area that the students were given as independent seatwork. This work was passed out at the beginning of the classroom period with instruction specific to each assignment. The students completed seatwork independently while other students were engaged in a teacher-directed small group activity, such as reading. The seatwork assignments were collected every day at the end of the class period. The work was graded based on its completeness and accuracy, using a "key". The experimenter checked off each assignment against a predetermined list of assignments given out to the students. The experimenter then checked each turned in assignment for completeness. If each question or problem on an assigned task had a student written response it was counted as complete. If all problems or questions were not responded to then the experimenter divided the number of actual student responses by the number of requested answers, and multiplied by 100 to determine the percentage of completion. Each student was given a lottery ticket for each completed assignment.
Accuracy of Assignment

Accuracy of assignment was defined as the student completing problems correctly by him/herself during the allocated time each day. The student's work was scored using an "answer key". To determine the percentage of correct answers, the number of correct responses were divided by the number of total responses possible and then multiplied by 100. If a student answered all the items correctly on the assignment, the paper was scored as 100% accurate. Each student was given a ticket for each 100% paper they turned in each day.

Independent Variable

The independent variable for this study was ticket lottery.

Experimental Design

A modified reversal A-B-C-A-C design was used to examine the effects of the independent variable on the dependent variables. Initial baseline conditions were continued until stability of the data was established, and then independent variables were introduced. After a stable response was achieved in the first intervention, the second intervention was introduced. Then independent variables were withdrawn, and baseline phase was reestablished again. Finally, the independent variable was reintroduced once again to demonstrate a functional relationship between the independent and dependent variables.

Inter-Observer Agreement

This process was done for each assignment for each student. The second reviewer graded unmarked photocopied seatwork for inter-observer agreement. The scores of the
experimenter and the scores of the second reviewer were then compared item by item for each assignment. If there were any disagreements, the number of answers were checked against the number of answers on the "key".

The completion was defined as the student responding in writing to each assigned problem during the allocated time each day. Students earned a ticket for each completed assignment. For example, if the student completed three seatwork assignments out of five seatwork assignments given by the teacher, they earned a ticket for each completed assignment or three tickets.

**Procedures to Ensure Accuracy and/or Reliability of Data**

Procedural reliability was assessed at a minimum of 25% for all sessions throughout this study. The second observer was trained and was asked to record check marks on a checklist during the instructional period to make sure the implementation of the experimental process was consistent with the described procedures. The data were compared, and percentage of agreement was calculated by dividing the number of agreements by both numbers of agreements and disagreements and then multiplying by 100. Accuracy checks were carried out on the accuracy and the completion of the seatwork assignment. The unmarked photocopied seatwork was graded by the second reviewer using a "key", then separately scored seatwork assignments were compared. When there were disagreements between the experimenter and the second reviewer, the answers were checked based on predetermined sets of answers.
Materials

Ticket Lottery Bundles and Lottery Ticket Container

Ticket bundles used in this research included a duplicate ticket with an identical number. One ticket was given to the student and the other ticket were placed in a container. A small container was used for collecting tickets.

Pencils

Students were required to have a pencil for seatwork assignment. If they had no pencil, they were told to use a crayon.

Folder Seatwork Assignments

The daily seatwork included a variety of work in various academic areas (i.e., spelling words, chart writing, coloring pictures, etc...) that students were given in order to review previously instructed skills.

Answer Keys

Because all academic materials used were part of the regular school curriculum, most of these answer keys were developed by the classroom teacher. The classroom teacher developed the predetermined set of answers used to ensure accuracy and/or reliability of data.

Blackboard and Chalks

Blackboards and chalks were used for providing students with the instructions for the seatwork assignments.

Rewards

Rewards used in this study included: paper, pencils, erasers, stickers, stamps,
posters, mini books, cut out pictures of animals, hard candy, and small chocolates.

Data Collection Sheets

Data was collected and recorded on data collection sheets daily. The data sheet consisted of the date, session number, condition, student number, number of seatwork assignments given, number of completed assignments, number of accurate assignments, inter-observer agreement (IOA) measures, and dependent variable reliability.

A Notebook for Recording Daily Information

A separate notebook was used to keep record of other necessary information that occurred during the course of the study.

Independent Variable Checklist

An independent variable checklist was used by the trained observer to make check marks on this checklist during the instructional period to ensure the implementation of the experimental procedure as described.

Informal Teacher and Student Questionnaires

Teacher and student questionnaires were provided at the end of the study to solicit opinions of the ticket lottery technique.

Procedures

Baseline Conditions

The experimenter presented the morning assignments to the students. Each assignment was described and the same amount of time each day was allocated for the completion of the assignments. Then the experimenter asked the students if they had any questions concerning their assignments. All student questions were responded to prior to
students commencing work. The experimenter then instructed the students to begin the assignments. While some students participated in the teacher-directed small group activity, the rest of the students started their seatwork quietly at their desks. The seatwork included worksheets such as spelling, handwriting, write a sentence for the spelling words, alphabet writing, and coloring. The experimenter walked around the classroom encouraging the students to begin work and praising those who were working (i.e., "I like the way you are working"), and the experimenter also gave students verbal direction (i.e., "Once you finish a spelling paper, you can start the math"). The experimenter allowed students to ask any questions that they might have concerning the seatwork assignments. The teacher praised students for accurate answers, and encouraged the students to do their best. At approximately 11:00 am, the students were told to place their names on the seatwork assignment and hand them to the experimenter.

The next school day, all assignments were returned to each student first thing in the morning. Students who had completed all assignments were praised by the experimenter for their effort. Those who turned in 50% or more of the assignments were praised for their effort and encouraged to complete all the assignments. Those who did less than 50% of their assignment were encouraged to work harder to complete their assignments. The regular classroom and school procedures were followed with regard to grading and follow-up for incomplete or no work turned-in. Official grades that students receive on their school report card were graded by the classroom teacher. When students turned in no seatwork, they usually finished it in the afternoon and turned it in to the classroom teacher at the end of the day. When students turned in an incomplete seatwork
assignment, they were asked to complete it before receiving the next seatwork assignments.

For seatwork accuracy Baseline condition, the same procedure was followed as in the seatwork completion Baseline condition. In addition, a student was praised for answering each seatwork assignment at 100% accuracy. The paper was returned the next school day with each assignment from each student marked for accuracy. Students with 100% paper(s), received verbal praise and a sticker on the paper. Those students within the 80 - 99 % accuracy range had a written note of social praise (e.g., Good Work! Excellent! Fantastic!). Those in the 60 - 79% accuracy received comments such as "Good Effort. Go for 100% today". Those under 60% accuracy received written comments such as "Nice try" or "Let's try harder". Students were given direct instruction on errors that they made to increase the possibility of accuracy on their next assignments. The regular classroom and school grading rules were followed during the study.

Ticket Lottery Conditions

The same procedures were in effect as in the Baseline conditions with the addition of the ticket procedure. The experimenter explained the ticket lottery system and how it worked. All assignments were returned to each student the next morning; students who had completed each seatwork assignment were praised by the experimenter for their effort and also received a ticket for every completed assignment. Those who turned in 50% or more of the assignments were praised for their effort and encouraged to complete all of the next assignment. Those who did less than 50% of their assignment were encouraged to work harder to complete their assignments. Students were asked to sign their name on
the back of the ticket as soon as they received it and to put the ticket away. A duplicate ticket with an identical number to the one given to the student was placed in a container by the experimenter. At the end of each day, the experimenter drew 10 percent of the lottery tickets from the container that were given to the students. The student with the ticket matching the one drawn by the experimenter won one of the designated reinforcers such as a sticker, a pencil, cut out animal pictures, a poster, a coloring book, or a small hard candy. At the conclusion of the daily lottery, all remaining tickets in the experimenter's container were destroyed. The experimenter told students to throw out today's tickets, then praised them for their hard work and encouraged them to earn more tickets tomorrow. The regular classroom and school procedures were followed with regard to grading and follow-up for incomplete or no work turned-in.

For seatwork accuracy Ticket Lottery condition, the same procedure was followed as in the seatwork completion Ticket Lottery condition. When all assignments were returned to each student the next morning, the experimenter praised verbally and also rewarded students who earned 100% accurate score on the seatwork with a lottery ticket. Those students within the 80 - 99% accuracy range had a written note of social praise (e.g., Good Work! Excellent! Fantastic!). Those in the 60 - 79% accuracy range received comments such as "Good Effort. Go for 100% today". Those under 60% accuracy received written comments such as, "Nice try" or "Let's try harder". Student were asked to sign their name on the back of the ticket as soon as they received it and to put the ticket away. A duplicate ticket with an identical number to the one given to the student was placed in a container by the experimenter. At the end of each day, the experimenter drew
10 percent of the lottery tickets from the container that were given to the students. The student with the ticket matching the one drawn by the experimenter won one of the designated reinforcers such as a sticker, a pencil, cut out animal pictures, a poster, a coloring book, or a small hard candy. At the conclusion of the daily lottery, all remaining tickets in the experimenter's container were destroyed. The experimenter told the student to throw out the present tickets, then praised them for their hard work and encouraged them to earn more tickets tomorrow. The regular classroom and school grading rules were followed during the study.

Frequent Ticket Lottery Conditions

The same procedures were in effect as in the Ticket Lottery conditions. In addition, the experimenter told students that they could earn more tickets during their seatwork period if they worked hard and concentrate on their work. Approximately every five minutes, the experimenter walked around the classroom throughout seatwork time and provided praise by giving a ticket to those students who were working hard and making effort to complete their work. Then the experimenter placed these duplicate tickets in the same container that contained other duplicate tickets. The same ticket drawing procedure as in the Ticket Lottery phase was followed. The regular classroom and school procedures were followed with regard to grading and follow-up for incomplete or no work turned-in.

For the seatwork accuracy Frequent Ticket Lottery condition, the same procedures were in effect as in the Frequent Ticket Lottery conditions of seatwork completion.
CHAPTER 3

Result

In this chapter, the results of the study including the accuracy checks for seatwork and the procedural reliability for the independent variables are presented. More specifically, the results for each student's performance on the completion and the accuracy of the seatwork assignment during Baseline, Ticket Lottery, and Frequent Ticket Lottery phases are presented.

Inter-Observable Agreement

Accuracy Checks

The accuracy checks were carried out on the completion and the accuracy of the seatwork assignment by the experimenter and second trained reviewer.

Seatwork Completion

The accuracy checks were conducted on a daily basis. The unmarked photocopied seatwork was graded by the second reviewer using a "key", then separately scored seatwork assignments were compared. When there were disagreements between the experimenter and the second reviewer, the disputed answers were checked against the predetermined standard or "key". The percentage of agreement was calculated by dividing the number of agreements by the number of agreements and disagreements and then multiplying by 100. The original reliability was 99% and the final reliability was 100%.
Seatwork Accuracy

The seatwork accuracy was checked in the same manner as the seatwork completion. From the calculation using the same formula as used in the seatwork completion, originally 98% reliability was obtained. The final reliability was 100%.

Procedural Reliability

The procedural reliability was assessed at a minimum of 25% of all sessions throughout this study, across conditions. The second observer was trained and was asked to record check marks in a checklist (see Appendix B, C and D) during the instructional period to make sure the implementation of the experimental process was consistent with the described procedures. The procedural reliability for independent variable was 93%.

Daily Seatwork Completion Number

Every morning, students were given five seatwork assignments to complete during seatwork time. Each day the seatwork assignment consisted of different types of worksheets such as spelling, graph paper, writing sentences using the spelling words, coloring, chart writing, connecting dots, drawing pictures, practicing alphabets, writing days of the week, writing months of the year, and filling in the blanks. This was determined by the classroom teacher’s daily schedule.

Student 1

Figure 2 presents Student 1’s daily seatwork completion number. During Baseline 1, Student 1 obtained a mean of 0.6 completed seatwork, range 0.0 to 2.0. During initial Ticket Lottery, the mean number of seatwork completion was 0.8, range 0.0 to 1.0. During Frequent Ticket phase, Student 1 obtained a mean of 0.8 completed seatwork,
range 0.0 to 2.0. During Baseline 2, the mean number of seatwork completion was 1.3, range 0.0 to 2.0. During Frequent Ticket 2, the average number of complete seatwork was 1.0, range 0.0 to 2.0. The combined mean for both Baselines was 0.95 with range of 0.64 to 1.25. The combined mean for both Frequent Tickets phases was 0.92, and the combined range was 0.83 to 1.0.

**Student 1**

![Graph showing number of assignments completed daily for Student 1 across different phases.]

**Figure 2.** Number of Completed Seatwork Assignments. The line break between Sessions 10 and Session 11 was 3 weeks due to winter break.

**Student 2**

Figure 3 presents Student 2’s daily seatwork completion number. During Baseline 1, Student 2 obtained a mean of 0.9 completed seatwork, range 0.0 to 2.0. During initial Ticket Lottery, the mean number of seatwork completion was 0.8, range 0.0 to 2.0.
During Frequent Ticket phase, Student 2 obtained a mean of 0.3 completed seatwork, range 0.0 to 1.0. During Baseline 2, the mean number of seatwork completion was 2.3, range 2.0 to 3.0. During Frequent Ticket 2, the average number of completed seatwork was 1.3, range 1.0 to 2.0. The combined mean for both Baselines was 1.59 with range of 0.92 to 2.25. The combined mean for both Frequent Tickets phases was 0.81 and the combined range was 0.29 to 1.33.

**Student 2**

![Graph showing number of completed seatwork assignments for Student 2 across different conditions.](image)

*Figure 3.* Number of Completed Seatwork Assignments. The line break between Sessions 10 and Session 11 was 3 weeks due to winter break.

**Student 3**

Figure 4 presents Student 3's daily seatwork completion number. During Baseline 1, Student 3 obtained a mean of 1.3 completed seatwork, range 0.0 to 3.0. During initial
Ticket Lottery, the mean number of seatwork completion was 1.1, range 0.0 to 2.0. During Frequent Ticket phase, Student 3 obtained a mean of 0.7 complete seatwork, range 0.0 to 2.0. During Baseline 2, the mean number of seatwork completion was 1.0, range 0.0 to 2.0. During Frequent Ticket 2, the average number of completed seatwork was 1.5, range 1.0 to 2.0. The combined mean for both Baselines was 1.17 with range of 1.33 to 1.0. The combined mean for both Frequent Tickets phases was 1.11, and the combined range was 0.71 to 1.5.

**Student 3**

![Graph](image)

**Figure 4.** Number of Completed Seatwork Assignments. The line break between Sessions 10 and Session 11 was 3 weeks due to winter break.

**Student 4**

Figure 5 presents Student 4's daily seatwork completion number. During Baseline
1, Student 4 obtained a mean of 0.7 completed seatwork, range 0.0 to 2.0. During initial Ticket Lottery, the mean number of seatwork completion was 0.4, range 0.0 to 1.0. During Frequent Ticket phase, Student 4 obtained a mean of 0.4 completed seatwork, range 0.0 to 1.0. During Baseline 2, the mean number of seatwork completion was 0.5, range 0.0 to 1.0. During Frequent Ticket 2, the average number of completed seatwork was 0.5, range 0.0 to 1.0. The combined mean for both Baselines was 0.6 with range of 0.7 to 0.5. The combined mean for both Frequent Tickets phases was 0.5, and the combined range was 0.4 to 0.5.

**Student 4**

![Graph showing number of completed seatwork assignments over sessions]

**Figure 5.** Number of Completed Seatwork Assignments. The line break between Sessions 10 and Session 11 was 3 weeks due to winter break.
Student 5

Figure 6 presents Student 5's daily seatwork completion number. During Baseline 1, Student 5 obtained a mean of 1.6 completed seatwork, range 1.0 to 3.0. During initial Ticket Lottery, the mean number of seatwork completion was 0.9, range 0.0 to 2.0. During Frequent Ticket phase, Student 5 obtained a mean of 1.6 completed seatwork, range 1.0 to 2.0. During Baseline 2, the mean number of seatwork completion was 1.8, range 1.0 to 2.0. During Frequent Ticket 2, the average number of completed seatwork was 2.0, range 1.0 to 4.0. The combined mean for both Baselines was 1.7 with range of 1.64 to 1.75. The combined mean for both Frequent Tickets phases was 1.8, and the combined range was 1.6 to 2.0.

**Figure 6.** Number of Completed Seatwork Assignments. The line break between Sessions 10 and Session 11 was 3 weeks due to winter break.
Student 6

Figure 7 presents Student 6's daily seatwork completion number. During Baseline 1, Student 6 obtained a mean of 2.2 completed seatwork, range 0.0 to 4.0. During initial Ticket Lottery, the mean number of seatwork completion was 2.1, range 1.0 to 4.0. During Frequent Ticket phase, Student 6 obtained a mean of 1.7 completed seatwork, range 0.0 to 3.0. During Baseline 2, the mean number of seatwork completion was 2.0, range 0.0 to 3.0. During Frequent Ticket 2, the average number of complete seatwork was 3.0, range 1.0 to 4.0. The combined mean for both Baselines was 2.1 with range of 2.2 to 2.0. The combined mean for both Frequent Tickets phases was 2.4, and the combined range was 1.71 to 3.0.

![Graph showing daily seatwork completion for Student 6](image)

**Figure 7.** Number of Completed Seatwork Assignments. The line break between Sessions 10 and Session 11 was 3 weeks due to winter break.
Group Data

As shown in Table 2, during Baseline 1, the mean number of completed seatwork assignments was 1.24 with range of 0.64 to 2.23. During Frequent Tickets 1, the mean number of completed seatwork assignments was 0.93 and the range was 0.29 to 1.71. The mean number for Baseline 2 was 1.46, with range of 0.5 to 2.25. The mean number for Frequent Tickets 2 was 1.56, and the range was 0.5 to 3.0. The combined Baselines mean was 1.36 with range of 0.6 to 2.12. The combined Frequent Tickets phases mean was 1.25, and the range was 0.47 to 2.36.

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<th>Freq Ticket 1</th>
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<th>Freq Ticket 2</th>
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Note. Freq = Frequency, Comb = Combined.

Table 2: Mean Number of Completed Seatwork Assignments
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*Note:* Freq = Frequency, Comb = Combined

Table 3: Mean Percentage of Completed Seatwork Assignments

**Daily Seatwork Accuracy Number**

Every morning, students were given five seatwork assignments to complete accurately during seatwork time. Each day the seatwork assignment consisted of different types of worksheets such as spelling, graph paper, writing sentences using the spelling words, coloring, chart writing, connecting dots, drawing pictures, practicing alphabets, writing days of the week, writing months of the year, and filling in the blanks. This was determined by the classroom teacher's daily schedule.

**Student 1**

Figure 8 presents Student 1's daily seatwork accuracy number. During Baseline 1, Student 1 obtained a mean of 0.1 accurate seatwork, range 0.0 to 1.0. During initial Ticket Lottery the mean number of seatwork accuracy was 0.0, range 0.0 to 0.0. During
Frequent Ticket phase, Student 1 obtained a mean of 0.0 accurate seatwork, range 0.0 to 0.0. During Baseline 2 the mean number of seatwork accuracy was 0.0, range 0.0 to 0.0. During Frequent Ticket 2 the average number of accurate seatwork was 0.0, range 0.0 to 0.0. The combined mean for both Baseline conditions was 0.1 with range of 0 to 0.09. The combined mean for both Frequent Tickets was 0.0, and the combined range was 0.0 to 0.0.

**Student 1**

![Graph showing number of accurate seatwork assignments vs sessions]

**Figure 8.** Number of Accurate Seatwork Assignments. The line break between Sessions 10 and Session 11 was 3 weeks due to winter break.

**Student 2**

Figure 9 presents Student 2's daily seatwork accuracy number. During Baseline 1, Student 2 obtained a mean of 0.0 accurate seatwork, range 0.0 to 0.0. During initial
Ticket Lottery, the mean number of seatwork accuracy was 0.0, range 0.0 to 0.0. During Frequent Ticket phase, Student 2 obtained a mean of 0.0 accurate seatwork, range 0.0 to 0.0. During Baseline 2, the mean number of seatwork accuracy was 0.0, range 0.0 to 0.0. During Frequent Ticket 2, the average number of accurate seatwork was 0.0, range 0.0 to 0.0. The combined mean for both Baselines was 0.0 with range of 0.0. The combined mean for both Frequent Tickets was 0.0, and the combined range was 0.0 to 0.0.

**Figure 9.** Number of Accurate Seatwork Assignments. The line break between Sessions 10 and Session 11 was 3 weeks due to winter break.

**Student 3**

Figure 10 presents Student 3’s daily seatwork accuracy number. During Baseline 1, Student 3 obtained a mean of 0.0 accurate seatwork, range 0.0 to 0.0. During initial
Ticket Lottery, the mean number of seatwork accuracy was 0.1, range 0.0 to 1.0. During Frequent Ticket phase, Student 3 obtained a mean of 0.0 accurate seatwork, range 0.0 to 0.0. During Baseline 2, the mean number of seatwork accuracy was 0.0, range 0.0 to 0.0. During Frequent Ticket 2 the average number of accurate seatwork was 0.0, range 0.0 to 0.0. The combined mean for both Baselines was 0.0 with range of 0.0. The combined mean for both Frequent Tickets was 0.0 and the combined range was 0.0 to 0.0.

**Student 3**

![Graph showing number of accurate seatwork assignments over sessions]

**Figure 10.** Number of Accurate Seatwork Assignments. The line break between Sessions 10 and Session 11 was 3 weeks due to winter break.

**Student 4**

Figure 11 presents Student 4's daily seatwork accuracy number. During Baseline 1, Student 4 obtained a mean of 0.2 accurate seatwork, range 0.0 to 1.0. During initial
Ticket Lottery, the mean number of seatwork accuracy was 0.3, range 0.0 to 1.0. During Frequent Ticket phase, Student 4 obtained a mean of 0.0 accurate seatwork, range 0.0 to 0.0. During Baseline 2, the mean number of seatwork accuracy was 0.0, range 0.0 to 0.0. During Frequent Ticket 2, the average number of accurate seatwork was 0.0, range 0.0 to 0.0. The combined mean for both Baselines was 0.1 with range of 0.0 to 0.23. And the combined mean for both Frequent Tickets was 0.0 and the combined range was 0.0 to 0.0.

**Student 4**

![Graph showing data for Student 4's Seatwork Assignments across different phases.]

**Figure 11.** Number of Accurate Seatwork Assignments. The line break between Sessions 10 and Session 11 was 3 weeks due to winter break.

**Student 5**

Figure 12 presents Student 5's daily seatwork accuracy number. During Baseline 1, Student 5 obtained a mean of 0.1 accurate seatwork, range 0.0 to 1.0. During initial
Ticket Lottery, the mean number of seatwork accuracy was 0.0, range 0.0 to 0.0. During Frequent Ticket phase, Student 5 obtained a mean of 0.0 accurate seatwork, range 0.0 to 0.0. During Baseline 2, the mean number of seatwork accuracy was 0.0, range 0.0. During Frequent Ticket 2, the average number of accurate seatwork was 0.0, range 0.0 to 0.0.

The combined mean for both Baselines was 0.1 with range of 0.0 to 0.09. The combined mean for both Frequent Tickets was 0.0 and the combined range was 0.0 to 0.0.

**Student 5**

![Graph showing seatwork assignments](image)

**Figure 12.** Number of Accurate Seatwork Assignments. The line break between Sessions 10 and Session 11 was 3 weeks due to winter break.

**Student 6**

Figure 13 presents Student 6's daily seatwork accuracy number. During Baseline 1, Student 6 obtained a mean of 0.8 accurate seatwork, range 0.0 to 2.0. During initial
Ticket Lottery, the mean number of seatwork accuracy was 0.7, range 0.0 to 2.0. During Frequent Ticket phase, Student 6 obtained a mean of 0.3 accurate seatwork, range 0.0 to 1.0. During Baseline 2, the mean number of seatwork accuracy was 0.3, range 0.0 to 1.0. During Frequent Ticket 2, the average number of accurate seatwork was 1.0, range 0.0 to 2.0. The combined mean for both Baselines was 0.6 with range of 0.25 to 0.85. The combined mean for both Frequent Tickets was 0.7, and the combined range was 0.29 to 1.0.

**Student 6**

![Graph showing number of accurate seatwork assignments over sessions](image)

**Figure 13.** Number of Accurate Seatwork Assignments. The line break between Sessions 10 and Session 11 was 3 weeks due to winter break.

**Group Data**

As shown in Table 4, during Baseline 1, the mean number of accurate seatwork
assignment was 0.2 with range of 0.0 to 0.85. During Frequent Tickets 1, the mean
number of accurate seatwork assignments was 0.05, and the range was 0.0 to 0.29. The
mean number for Baseline 2 was 0.04 with range of 0.0 to 0.25. The mean number for
Frequent Tickets 2 was 0.17, and the range was 0.0 to 1.0. The combined Baselines mean
was 0.15 with range of 0.0 to 0.6. The combined Frequent Tickets mean was 0.12, and
the combined range was 0.0 to 0.7.

<table>
<thead>
<tr>
<th>Student</th>
<th>Baseline 1</th>
<th>Ticket 1</th>
<th>Freq Ticket 1</th>
<th>Baseline 2</th>
<th>Freq Ticket 2</th>
<th>Comb Baseline</th>
<th>Comb Freq Ticket</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.09</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.10</td>
<td>0.00</td>
</tr>
<tr>
<td>2</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>3</td>
<td>0.00</td>
<td>0.08</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>4</td>
<td>0.23</td>
<td>0.29</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.10</td>
<td>0.00</td>
</tr>
<tr>
<td>5</td>
<td>0.09</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.10</td>
<td>0.00</td>
</tr>
<tr>
<td>6</td>
<td>0.85</td>
<td>0.73</td>
<td>0.29</td>
<td>0.25</td>
<td>1.00</td>
<td>0.60</td>
<td>0.70</td>
</tr>
<tr>
<td>Group</td>
<td>0.20</td>
<td>0.18</td>
<td>0.05</td>
<td>0.04</td>
<td>0.17</td>
<td>0.15</td>
<td>0.12</td>
</tr>
</tbody>
</table>

Note: Freq = Frequency, Comb = Combined

Table 4: Mean Accuracy of Seatwork Assignments
<table>
<thead>
<tr>
<th>Student</th>
<th>Baseline</th>
<th>Ticket</th>
<th>Freq Ticket</th>
<th>Baseline</th>
<th>Freq Ticket</th>
<th>Comb Baseline</th>
<th>Comb Freq Ticket</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1.8</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>1.3</td>
<td>0.0</td>
</tr>
<tr>
<td>2</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>3</td>
<td>0.0</td>
<td>1.5</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>4</td>
<td>4.6</td>
<td>5.7</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>3.5</td>
<td>0.0</td>
</tr>
<tr>
<td>5</td>
<td>1.8</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>1.3</td>
<td>0.0</td>
</tr>
<tr>
<td>6</td>
<td>16.9</td>
<td>14.5</td>
<td>5.7</td>
<td>5.0</td>
<td>20.0</td>
<td>14.1</td>
<td>10.9</td>
</tr>
<tr>
<td>Group</td>
<td>1.0</td>
<td>1.0</td>
<td>0.0</td>
<td>0.0</td>
<td>1.0</td>
<td>1.0</td>
<td>0.0</td>
</tr>
</tbody>
</table>

**Note.** Freq = Frequency, Comb = Combined

Table 5: Mean Percentage of Accurate Seatwork Assignments

**Ticket Lottery Questionnaire**

In order to measure how much the students benefited from the Ticket Lottery teaching technique, a written questionnaire form was given to students and the classroom teacher at the end of the study. It consisted six questions for the students and five questions for the classroom teacher on the use of a ticket lottery (see Appendix F and G). Due to students’ difficulty with reading and writing the questionnaire was read individually to each student.

**Results of Student Questionnaire**

The first question asked the students whether they preferred receiving verbal praise or verbal praise with tickets for their seatwork completion and accuracy. Five out of six students said that they liked verbal praise and tickets. The second question asked whether
verbal praise or verbal praise and tickets helped to motivate the students to complete seatwork accurately. Again five of the six students agreed that verbal praise and tickets helped them to complete seatwork accurately. The third question pertained to the frequent lottery technique in which they were given more tickets during seatwork time compared to only receiving tickets for the completion and accuracy of work. All of the students responded "Yes" to more tickets. The fourth question asked if students were more motivated to work harder when they received a ticket during seatwork time. All six students stated that they were motivated to work harder with more tickets given by the experimenter during seatwork time. Questions five and six focused on what students' disliked and liked about the ticket lottery. Four students stated that there was nothing that they did not enjoy about the ticket lottery. Two students seemed confused about the question and said "passing out tickets". Four students agreed that they enjoyed the prize, and one student liked getting tickets. One student did not respond to the question.

Results of Teacher Questionnaire

The classroom teacher completed a separate questionnaire (see Appendix G) on the same day that students were verbally given their questionnaire. The teacher remarked that the ticket lottery technique was very easy, and any classroom teacher could use it. She thought that the ticket lottery worked well with students who were not working for some reason and students who can use some boosting in their performance. She also stated that she would recommend the ticket lottery to new teachers with less than twelve students. She indicated the biggest improvement was the way the students changed from
working for the prize to working for the praise. In terms of academic performance, she noticed an improvement in students' completion of seatwork.

<table>
<thead>
<tr>
<th>Student</th>
<th>Question 1</th>
<th>Question 2</th>
<th>Question 3</th>
<th>Question 4</th>
<th>Question 5</th>
<th>Question 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Prize &amp; Thank You</td>
<td>Verbal Praise &amp; Tickets</td>
<td>Yes</td>
<td>More Tickets</td>
<td>None</td>
<td>Prize</td>
</tr>
<tr>
<td>2</td>
<td>Verbal Praise &amp; Tickets</td>
<td>Verbal Praise &amp; Tickets</td>
<td>Yes</td>
<td>More Tickets</td>
<td>None</td>
<td>Prize</td>
</tr>
<tr>
<td>3</td>
<td>Verbal Praise &amp; Tickets</td>
<td>Verbal Praise &amp; Tickets</td>
<td>Yes</td>
<td>More Tickets</td>
<td>None</td>
<td>Prize</td>
</tr>
<tr>
<td>4</td>
<td>Verbal Praise &amp; Tickets</td>
<td>Verbal Praise &amp; Tickets</td>
<td>Yes</td>
<td>More Tickets</td>
<td>Passing Out Tickets</td>
<td>Prize</td>
</tr>
<tr>
<td>5</td>
<td>Verbal Praise &amp; Tickets</td>
<td>No Response</td>
<td>Yes</td>
<td>More Tickets</td>
<td>None</td>
<td>Getting Tickets</td>
</tr>
<tr>
<td>6</td>
<td>Verbal Praise &amp; Tickets</td>
<td>Verbal Praise &amp; Tickets</td>
<td>Yes</td>
<td>More Tickets</td>
<td>Passing Out Tickets</td>
<td>No Response</td>
</tr>
<tr>
<td>Group</td>
<td>Verbal Praise &amp; Tickets</td>
<td>Verbal Praise &amp; Tickets</td>
<td>Yes</td>
<td>More Tickets</td>
<td>None</td>
<td>Prize</td>
</tr>
</tbody>
</table>

Table 6: Results of Student Questionnaire
CHAPTER 4

Discussion

In this chapter, the research questions are discussed in relation to the results of this study. The limitations of the study, implications for the classroom, and future recommendations for using ticket lottery technique are also presented.

Research Questions

Which condition was more effective in promoting the completion of seatwork assignments, Baseline, Ticket Lottery, or Frequent Ticket Lottery condition?

There was no significant change in the performance of students under the three experimental conditions (see Table 3). Student 1 and Student 5 performed slightly better in Frequent Ticket conditions than during Baseline conditions. Student 6 performed approximately the same in both Baseline and Frequent Ticket conditions. The rest of the three students performed slightly better in Baseline conditions. It may be that the results of students trying to complete seatwork quickly and turned in unacceptable or inaccurate work so they did not have to do leftover seatwork for homework assignment. Throughout the study, sudden changes in daily schedules occur in which the students had gym class or morning assembly during their seatwork time. Students may have had a hard time going back to the seatwork activities right after they attended gym class or the morning assembly. Therefore, none of the three conditions seemed more effective than the other.
two in promoting seatwork completion.

Which condition was more effective in increasing student accuracy of seatwork assignments, Baseline, Ticket Lottery, or Frequent Ticket Lottery condition?

A functional relationship between the experimental condition and dependent variable was not shown. Table 5 shows, that in this study two students performed the same during the Baseline and Frequent Ticket phases. Accuracy percentage for Student 2 and Student 3 in both Baseline and Frequent Ticket phases was 0.0. Four students performed better during Baseline phase. Student 1 accurately completed seatwork assignment 1.3% during combined Baseline conditions and 0.0% during combined Frequent Ticket conditions. Student 4 performed seatwork accurately 3.5% during combined Baseline conditions and 0.0% during combined Frequent Ticket conditions. Student 5 accurately completed seatwork assignment 1.3% during combined Baseline conditions and 0.0% during combined Frequent Ticket conditions. Student 6 performed seatwork accurately 14.1% during combined Baselines and 10.9% during combined Frequent Ticket conditions. It is assumed that the various difficulty of seatwork assignments contributed to these unexpected results. The seatwork assignments was from the curriculum already determined by classroom teacher. It seemed that the seatwork in the beginning of the study consisted of relatively simple worksheet assignments such as coloring and dotting. The seatwork assignments by the end of the study consisted of somewhat difficult assignments such as practicing cursive alphabets, forming complete sentences using learned spelling words, and fill in the blank exercises to enhance grammatical knowledge.
Whenever students turned in unacceptable or inaccurate homework to the teacher, they needed to redo it before starting their seatwork assignment for that day. This made students hurry to redo old work and complete that day's work. This could have contributed to inaccuracies in the seatwork assignments. There was no significant difference across the experimental conditions. In the future, to evaluate the effectiveness of this strategy, carryover work from the previous day should not be included with the current day's work during the time considerations.

**What condition was more effective in improving student academic performance, Baseline, Ticket Lottery, or Frequent Ticket Lottery?**

There is no functional relationship between improving students' seatwork performance (completion/accuracy) and using ticket lottery technique (See Table 2 and Table 4). Although group mean seatwork for both completion and accuracy number during Baseline condition was higher than the mean Frequent Ticket condition, some students performed slightly better in the Frequent Ticket condition. Student 5's mean seatwork completion number during combined Baselines was 1.7, and the mean seatwork completion during combined Frequent Ticket conditions was 1.8. Student 6's mean seatwork completion number during combined Baselines was 2.12, and the mean seatwork completion during combined Frequent Ticket conditions was 2.36. Regarding mean seatwork accuracy numbers, three students performed the same or a slightly better during the Frequent Ticket condition. In particular, Student 6's mean seatwork accuracy number during combined Baselines was 0.6, and the mean seatwork accuracy during combined Frequent Ticket conditions was 0.7. The results may be due to the fact that the students
did not always make an associations between completing seatwork assignment accurately and earning tickets. The experimenter repeatedly told the students to be careful because the correct completed papers would receive tickets. Delivering reinforcement the next day for their performance from the day before made them more difficult to see the relationship between seatwork performance and getting tickets. A functional relationship between any of the three conditions and academic performance could not be determined.

What Was the Students' Opinion of Using a Ticket Lottery?

All six students were given a questionnaire to respond to six questions which were read to each student individually. According to the results of the questionnaire (see Table 6), five students preferred verbal praise and tickets over receiving only verbal praise and also verbal praise and obtaining a ticket helped to motivate them to complete the seatwork accurately. Student 1 stated prize and thank you question 1, and Student 5 gave no response to question 2. All six students enjoyed receiving tickets more frequently during their seatwork time compared to only earning tickets for completion and accuracy of their work. They responded that they worked harder when they received tickets while they were working. Presumably, students were able to associate working with earning the ticket more closely during the Frequent Ticket phase than during the ticket phase where students earned tickets for completion and accuracy from their previous day's seatwork. Four students said that there was nothing that they did not enjoy about the Ticket lottery, and two students stated that they disliked passing out tickets in response to question 5. Four students liked to get a prize, and Student 5 liked getting tickets. Student 6 did not respond to question 6.
What Was the Classroom Teacher's Opinion of Using a Ticket Lottery?

From the classroom teacher's point of view, the ticket lottery technique seemed very easy, and any classroom teacher could use it. She thought that the lottery ticket works with students who are not working and, also, who can use something to boost their performance. She stated that she would recommend the ticket lottery to other classroom teachers particularly for new teachers. In response to question 4, she saw improvement in the way students worked for a prize by completing seatwork to please the experimenter. She indicated that she saw an improvement in the student's completion of work. If the measurement tool had been more sensitive these types of improvement might have been captured. As it is a functional relationship between improving completion and accuracy of seatwork and using ticket lottery was not established.

Limitations of the Study

The research had eight possible limitations that might have impacted the results. The limitations were various difficulty in seatwork, the length of the study, unexpected changes in daily schedules, leftover seatwork for homework, delivery of reinforcement, insensitivity of students' completion and accuracy measurement, time spent for doing homework from the day before, and time of seatwork assignment.

Various Difficulty in Seatwork

Everyday, five seatwork assignments were different. In other words, it was possible that one day's seatwork was more difficult than the another day's seatwork. Because of this reason, some students needed more time to complete their work.
The Length of the Study

Due to the limited research time, there were not enough days for each condition to establish longer, stable data points. By the time students were able to adjust to the Baseline condition, it was time to move on to the intervention phase.

Unexpected Changes in Daily Schedule

Because students attended gym on Monday, music on Tuesday, and sometimes an unexpected assembly and/or an afternoon art session was switched to the morning, the amount of seatwork time was restricted. Some students needed a longer transition time from one situation to the other.

Leftover Seatwork for Homework

As a classroom rule, whatever seatwork the student does not complete during seatwork period, he/she completes it as homework. The students figured out that if they tell the classroom teacher that the seatwork has been turned in to the experimenter, they do not have any homework. In fact, students did not turn in all seatwork, and almost all their submitted work were inaccurate. Consequently, students took more time to complete their work accurately.

Delivery of Reinforcement

Lottery ticket drawing was carried out, and, the winner was determined on the next day based on the previous day's seatwork completion and accuracy. It seemed that students did not have any association of completing seatwork accurately and receiving the ticket a following day.
Ininsensitivity of Students’ Completion and Accuracy Measurement

With respect to the grading of students’ seatwork, the measurement was not sensitive enough to reflect minute improvement of student performance. Unless the seatwork was 100% complete and/or 100% accurate, the seatwork was counted as incomplete and/or inaccurate and data point was shown as 0.

Time Spent Doing Homework from the Day Before

When students brought incomplete and/or inaccurate homework to the classroom teacher, they were told to finish and/or fix their homework first, then start their new seatwork assignments. In other words, whenever they turned in incomplete homework, students had less time to complete seatwork assignment accurately.

Time of Seatwork Assignment

Some students particularly those who were taking medication and those who had a tendency to become fatigued during seatwork assignment had difficult time doing seatwork assignments. These students needed time for their medication to kick in and to be fully awake to start their seatwork assignment.

Implications for the Classroom

There were three implications for the classroom usage of the ticket lottery technique. First, the use of ticket lottery needs to be further researched. Second, the ticket lottery technique should be used for not only improving academic areas but also for improving social behaviors, however the target behaviors should be more clearly defined and there should be less variability from one day’s task to the next day’s tasks in order to evaluate effectiveness. At the beginning of a school year, for example, a teacher can set
specific classroom rules, and within short time periods, students learn what is expected in the classroom and their target behavior is reinforced systematically. Third, the ticket lottery is easily administered by any classroom teachers but teachers need to work hard to assess for effectiveness. In order to conduct the ticket lottery, the required skills and material needed are minimal and, also, the amount of time required to implement it is minimal, once the teacher becomes used to the routine. Clear recommendations about using a ticket lottery can not be made based on this study.

**Recommendations for Future Research**

Following are a few recommendations for future researchers. First, the seatwork difficulty should be kept constant to see if a functional relationship exists between ticket lottery and academic performance. Second, in order to motivate students who have developmental disabilities, more frequent ticketing should be implemented. Third, it is important to use more sensitive measuring techniques to measure a students' completion and accuracy of their work so that a smaller improvement can be observed.

**Summary**

The purpose of this study was to analyze the effects of a ticket lottery behavior management strategy on academic performance of students with developmental disabilities. The main objective was to examine whether implementation of a ticket lottery technique improves the specific academic performance in completion and accuracy of seatwork during morning seatwork time. Six students (four boys and two girls) with developmentally handicaps ranging from 8 to 10 years participated in this study. A modified reversal experimental A-B-C-A-C design was implemented. During Baseline 1,
students were instructed to do five seatwork assignments during morning seatwork time and they received only praise, verbal direction, and corrective feedback for their performance. During the Ticket phase, the procedure used was the same that was used in the Baseline phase. Besides delivery of praise, verbal direction, and corrective feedback, students earned tickets for every completed and also every accurate seatwork they turned in. During Frequent Ticket phase 1, the same procedures were in effect as in the Ticket Lottery conditions. In addition, students who were working hard to complete their work during seatwork time earned tickets approximately every five minutes. During Baseline 2, the conditions were the same as for Baseline 1 and during Frequent Ticket 2, the conditions were the same as for Frequent Ticket 1.

In this study, the overall results revealed that there was no functional relationship between the use of the ticket lottery technique and improving students' academic performance. Although ticket lottery did not improve students' completion and accuracy of their seatwork assignments, this study revealed that students were more motivated to complete seatwork accurately when tickets were given more frequently while students were working.

Past researchers have shown that their behavior management systems are effective in improving students' academic performance (Miller & Kelley, 1994; Mastropieri, Jenne, & Scruggs, 1988; Evens & Bostow, 1989; Ross & Braden, 1991). The results of this research were different from those previous findings. This may be due to many factors such as time of the seatwork assignment, unexpected daily schedule changes, the limited length of the study, and homework rules in the classroom. Previous studies also have
shown that certain behavior management techniques are effective in ameliorating students' social behaviors in the classroom (Kern, Dunlap, Childs, & Clarke, 1994; Brigham, Bakken, & Scruggs, 1992; Salend & Gordon, 1987; Brantley & Webster, 1993; Shook, LaBrie, Vallies, McLaughlin, & Williams, 1990; Proctor & Morgan, 1991). Even though social behavior was not measured in this study as one of the dependent variables, students seemed to concentrate more on their work, and they tried to continue working harder, especially during Frequent Ticket conditions. This study did not support the functional relationships between the use of ticket lottery technique and improvement of students' academic performance, however, it revealed limitations (i.e., insensitivity of dependent variable measurement, various difficulty in seatwork assignment, and delivery of reinforcement) for the future researchers to consider. Finally, the ticket lottery technique is a behavior management technique that reinforces appropriate behavior through delivery of positive reinforcement instead of punishing undesired behaviors. Based on the results of a teacher's questionnaire and the experimenter's own experience using the ticket lottery technique, it is a technique that is time efficient, less costly, and easily implemented by any classroom teachers. Additional research should focus on assessing this technique in other classroom settings.
References


Cartledge, G., & Kleefeld, J. (1989). Teaching social communication skills to elementary school students with handicaps. Teaching Exceptional Children, 22 (1), 14-17.


APPENDIX A

STUDENT ATTENDANCE FORM
**Student Attendance Form**

<table>
<thead>
<tr>
<th>Date:</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
</tr>
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<tbody>
<tr>
<td>Student 1</td>
<td>P</td>
<td>P</td>
<td>P</td>
<td>A</td>
<td>A</td>
</tr>
<tr>
<td>Student 2</td>
<td>P</td>
<td>P</td>
<td>P</td>
<td>P</td>
<td>A</td>
</tr>
<tr>
<td>Student 3</td>
<td>P</td>
<td>P</td>
<td>P</td>
<td>P</td>
<td>A</td>
</tr>
<tr>
<td>Student 4</td>
<td>A</td>
<td>A</td>
<td>P</td>
<td>P</td>
<td>A</td>
</tr>
<tr>
<td>Student 5</td>
<td>P</td>
<td>P</td>
<td>P</td>
<td>P</td>
<td>A</td>
</tr>
<tr>
<td>Student 6</td>
<td>P</td>
<td>P</td>
<td>P</td>
<td>P</td>
<td>P</td>
</tr>
</tbody>
</table>

**Note.** P = Present, A = Absent
APPENDIX B

INDEPENDENT VARIABLE CHECKLIST - CONDITION: BASELINE
### Independent Variable Checklist - Condition: Baseline

**Reliability Checklist**

**Date:** / /97  

**Condition: Baseline**

<table>
<thead>
<tr>
<th>Behaviors to observe</th>
<th>Occurring?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. When graded seatwork is returned to the students, the experimenter praises and/or encourages the students based on their completion and accuracy of seatwork.</td>
<td>Yes No</td>
</tr>
<tr>
<td>2. The experimenter gives corrective feedback for incorrect response to increase the possibility of completion and accuracy on their next assignment.</td>
<td>Yes No</td>
</tr>
<tr>
<td>3. The experimenter presents and explains each seatwork assignment to the students.</td>
<td>Yes No</td>
</tr>
<tr>
<td>4. The experimenter tells students to complete seatwork accurately within allocated time, and encourages them to do their best.</td>
<td>Yes No</td>
</tr>
<tr>
<td>5. The experimenter asks the students if they have any questions regarding seatwork.</td>
<td>Yes No</td>
</tr>
<tr>
<td>6. The experimenter responds to the student's question (if they have) prior to students commencing work.</td>
<td>Yes No NA</td>
</tr>
<tr>
<td>7. The experimenter tells the students to begin seatwork.</td>
<td>Yes No</td>
</tr>
<tr>
<td>8. The experimenter walks around the classroom encouraging the students to begin work.</td>
<td>Yes No</td>
</tr>
<tr>
<td>9. The experimenter praises those students who are working.</td>
<td>Yes No</td>
</tr>
<tr>
<td>10. The experimenter gives students verbal direction if necessary.</td>
<td>Yes No</td>
</tr>
</tbody>
</table>

**Observer:**  

**Reliability:** Yes No
APPENDIX C

INDEPENDENT VARIABLE CHECKLIST - CONDITION: INTERVENTION 1
Independent Variable Checklist - Condition: Intervention 1
Reliability Checklist

Date: / /97  Condition: Intervention 1

Behaviors to observe

1. When graded seatwork is returned to the students, the experimenter praises and/or encourages the students based on their completion and accuracy of seatwork. Yes No

2. The experimenter gives corrective feedback for incorrect response to increase the possibility of completion and accuracy on their next assignment. Yes No

3. The experimenter gives out the tickets for every completed and also accurate seatwork assignment. Yes No

4. The experimenter asks students to sign his/her name on the back of the ticket as soon as they receive it. Yes No

5. The experimenter places the duplicate ticket in a container. Yes No

6. The experimenter presents and explains each seatwork assignment to the students. Yes No

7. The experimenter tells students to complete seatwork accurately within allocated time, and encourages them to do their best. Yes No

8. The experimenter asks the students if they have any questions regarding seatwork. Yes No

9. The experimenter responds to the student's question (if they have) prior to students commencing work. Yes No NA

10. The experimenter tells the students to begin seatwork. Yes No

11. The experimenter walks around the classroom encouraging the students to begin work. Yes No

12. The experimenter praises those students who are working. Yes No

13. The experimenter gives students verbal direction if necessary. Yes No

14. The experimenter draws out lottery tickets from the container that are given to the students. Yes No
15. The experimenter destroys all the remaining tickets in the container. Yes No

16. The experimenter tells the students to throw out today's tickets. Yes No

17. The experimenter encourages students to earn more tickets in tomorrow's seatwork assignment. Yes No

Observer: Reliability: Yes No
APPENDIX D

INDEPENDENT VARIABLE CHECKLIST - CONDITION: INTERVENTION 2
Independent Variable Checklist - Condition: Intervention 2
Reliability Checklist

Date: /97

Condition: Intervention 2

Behaviors to observe

1. When graded seatwork is returned to the students, the experimenter praises and/or encourages the students based on their completion and accuracy of seatwork.  
2. The experimenter gives corrective feedback for incorrect response to increase the possibility of completion and accuracy on their next assignment.  
3. The experimenter gives out the tickets for every completed and also accurate seatwork assignment.  
4. The experimenter asks students to sign his/her name on the back of the ticket as soon as they receive it.  
5. The experimenter places the duplicate ticket in a container.  
6. The experimenter presents and explains each seatwork assignment to the students.  
7. The experimenter tells students to complete seatwork accurately within allocated time, and encourages them to do their best.  
8. The experimenter asks the students if they have any questions regarding seatwork.  
9. The experimenter responds to the student’s question (if they have) prior to students commencing work.  
10. The experimenter tells students that they earn more tickets during seatwork if they work hard and concentrate on their work.  
11. The experimenter tells student to write their names as soon as they receive it.  
12. The experimenter tells the students to begin seatwork.
13. The experimenter walks around the classroom encouraging the students to begin work.

Occurring?

Yes  No

Yes  No

Yes  No

Yes  No

Yes  No

Yes  No

Yes  No

Yes  No

Yes  No

Yes  No

Yes  No

Yes  No

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14. The experimenter gives students verbal direction if necessary.  
Yes  No

15. Approximately, every five minutes, the experimenter walks around the classroom throughout seatwork time and praise them by giving a ticket to those students who are working hard and concentrating on their seatwork assignments.  
Yes  No

16. The experimenter places these duplicate tickets in a same container that contains other duplicate tickets.  
Yes  No

17. The experimenter draws out lottery tickets from the container that are given to the students.  
Yes  No

18. The experimenter destroys all the remaining tickets in the container.  
Yes  No

19. The experimenter tells the students to throw out today's tickets.  
Yes  No

20. The experimenter encourages students to earn more tickets in tomorrow's seatwork assignment during assigned seatwork time.  
Yes  No

Observer: Reliability:  
Yes  No
APPENDIX E

DATA COLLECTION SHEET
# Data Collection Sheet

**THE FOLLOWING IS FOR COMPLETION**

| Name | # Finsh | E1 # | E1 Rel | Rel. # row | Rel. Final (%) | E1 # | E2 # | E2 Rel | Rel. # row | Rel. Final (%) | E1 # | E3 # | E3 Rel | Rel. # row | Rel. Final (%) | E1 # | E4 # | E4 Rel | Rel. # row | Rel. Final (%) | E1 # | E5 # | E5 Rel | Rel. # row | Rel. Final (%) | E1 # | E6 | E6 Rel | Rel. # row | Rel. Final (%) | E1 # | E100 | E100 Cor |
|------|--------|------|--------|------------|----------------|------|------|--------|------------|----------------|------|------|--------|------------|----------------|------|------|--------|------------|----------------|------|------|--------|------------|----------------|------|------|--------|------------|----------------|------|------|--------|------------|----------------|------|------|--------|------------|----------------|------|------|--------|------------|----------------|
| 1    |        |      |        |            | 100.0          |      |      |        |            | 100.0          |      |      |        |            | 100.0          |      |      |        |            | 100.0          |      |      |        |            | 100.0          |
| 2    |        |      |        |            | 100.0          |      |      |        |            | 100.0          |      |      |        |            | 100.0          |      |      |        |            | 100.0          |
| 3    |        |      |        |            | 100.0          |      |      |        |            | 100.0          |      |      |        |            | 100.0          |      |      |        |            | 100.0          |
| 4    |        |      |        |            | 100.0          |      |      |        |            | 100.0          |      |      |        |            | 100.0          |      |      |        |            | 100.0          |
| 5    |        |      |        |            | 100.0          |      |      |        |            | 100.0          |      |      |        |            | 100.0          |      |      |        |            | 100.0          |
| 6    |        |      |        |            | 100.0          |      |      |        |            | 100.0          |      |      |        |            | 100.0          |      |      |        |            | 100.0          |
| Tot. |        |      |        |            |                |      |      |        |            |                |      |      |        |            |                |      |      |        |            |                |

**THE FOLLOWING IS FOR ACCURACY**

| Name | # Finsh | E1 # | E1 Rel | Rel. # row | Rel. Final (%) | E1 # | E2 # | E2 Rel | Rel. # row | Rel. Final (%) | E1 # | E3 # | E3 Rel | Rel. # row | Rel. Final (%) | E1 # | E4 # | E4 Rel | Rel. # row | Rel. Final (%) | E1 # | E5 # | E5 Rel | Rel. # row | Rel. Final (%) | E1 # | E6 | E6 Rel | Rel. # row | Rel. Final (%) | E1 # | E100 | E100 Cor |
|------|--------|------|--------|------------|----------------|------|------|--------|------------|----------------|------|------|--------|------------|----------------|------|------|--------|------------|----------------|------|------|--------|------------|----------------|------|------|--------|------------|----------------|
| 1    |        |      |        |            | 100.0          |      |      |        |            | 100.0          |      |      |        |            | 100.0          |      |      |        |            | 100.0          |
| 2    |        |      |        |            | 100.0          |      |      |        |            | 100.0          |      |      |        |            | 100.0          |      |      |        |            | 100.0          |
| 3    |        |      |        |            | 100.0          |      |      |        |            | 100.0          |      |      |        |            | 100.0          |      |      |        |            | 100.0          |
| 4    |        |      |        |            | 100.0          |      |      |        |            | 100.0          |      |      |        |            | 100.0          |      |      |        |            | 100.0          |
| 5    |        |      |        |            | 100.0          |      |      |        |            | 100.0          |      |      |        |            | 100.0          |      |      |        |            | 100.0          |
| 6    |        |      |        |            | 100.0          |      |      |        |            | 100.0          |      |      |        |            | 100.0          |      |      |        |            | 100.0          |
| Tot. |        |      |        |            |                |      |      |        |            |                |      |      |        |            |                |      |      |        |            |                |

**Abbreviations**

- DNI = Did not hand in
- NC = Not Completed
- SW = Seatwork

**Reliability DV:**

Yes No __ % _ %
APPENDIX F

STUDENT QUESTIONNAIRE
Student Questionnaire

1. Did you prefer receiving verbal praise or verbal praise and tickets for their seatwork completion and accuracy?

2. Which one verbal praise or verbal praise and tickets helped you to motivate to complete the work accurately?

3. Did you enjoy the ticket more when you are given more tickets during your seatwork time compare to you only earn ticket for completion and accuracy of your work?

4. Were you more motivated to work harder when you received a ticket during seatwork time?

5. Tell me the things you did not enjoy in ticket lottery?

6. Tell me the things you liked about the ticket lottery?
APPENDIX G

TEACHER QUESTIONNAIRE
Teacher Questionnaire

1. How easy or difficult ticket lottery system seems to manage?
2. Did you prefer ticket lottery system, why or why not?
3. Would you recommend the ticket lottery to other classroom teachers?
4. Overall, do you think a ticket lottery system helped improving students' working behaviors, why or why not?
5. Overall, do you think a ticket lottery system helped improving students' academic performance (completion and/or accuracy), why or why not?
APPENDIX H

PARENTAL CONSENT FORM
The Ohio State University

Parental Consent Form for Participation in Research

I consent to allow my child to participate in a research study examining the effects of a behavior management strategy as a procedure to improve the academic performance during morning seatwork period. The study will be conducted during school by Yukako Tahira, under the direction of Dr. Ralph Gardner III, Associate Professor of Special Education at The Ohio State University. The study will start in Autumn 1996 and will last for approximately ten weeks.

I understand that I have had the opportunity to obtain additional information regarding the study and that any questions I have brought have been answered to my full satisfaction. Further, I understand that I am free to withdraw consent at any time and to discontinue participation in the study without any consequences to me. I also understand that my child's identity will not be revealed in any publication, document, recording, or any other forms of report that will be produced from this study.

Finally, I acknowledge that I have read and fully understand the consent form. I sign it freely and voluntarily. A copy has been given to me.

Name of the Parent or Guardian: ________________

Date: ___/___/99   Signature: ____________________

Name of Principal Investigator: ________________

Date: ___/___/99   Signature: ____________________

Name of Co-investigator: ______________________

Date: ___/___/99   Signature: ____________________

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