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Using TAG to Increase Play Skills

Melissa A. Boggs

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THE CARL AND WINIFRED LEE HONORS COLLEGE
CERTIFICATE OF ORAL DEFENSE OF HONORS THESIS

Melissa Boggs, having been admitted to the Carl and Winifred Lee Honors College in the spring of 2011, successfully completed the Lee Honors College Thesis on April 21, 2012.

The title of the thesis is:

"Using TAG to Increase Play Skills"

A handwritten signature in black ink that reads "R W Malott".

Dr. Richard Malott, Psychology

A handwritten signature in black ink that reads "S Sparks".

Mr. Steven Sparks, Psychology

A handwritten signature in black ink that reads "S Moberg".

Ms. Samantha Moberg, Psychology

Introduction

Establishing and maintaining reinforcers was explained in great detail in B.F Skinner's book *Science and Human Behavior* (1953). Thirteen years later Zimmerman & Hanford (1966) created an experiment that contributed widely to this area of research. They proved that they could shape key pecking behavior in pigeons when the food dispenser accompanied access to food. The pecking behavior continued even when the food was no longer delivered contingent upon that behavior. This indicates that with adequate pairing of a neutral stimulus and an unconditioned stimulus, the neutral stimulus can attain the value of the unconditioned stimulus as long as they are paired together periodically.

Karen Pryor popularized TAG (teaching with acoustical guidance) when training animals in the 1960's. TAG involves pairing a previously established reinforcer (tangibles/food/etc) with an auditory stimulus. Eventually, the auditory stimulus will act as a sufficient reinforcer. These techniques were later generalized in gymnastics, football, and more lately, with children diagnosed with developmental disabilities. Currently, there are very few research articles published on this intervention with clients diagnosed with developmental disabilities.

The goal of this intervention was to successfully pair the sound of click with a child's preferred reinforcer. The neutral stimulus will obtain the properties of the unconditioned reinforcer as long as the two stimuli are paired together periodically. This eventually converted the click into a learned reinforcer. This click was next used to reinforce different components of two playtime behavior chains; thus, increasing appropriate responding during those two playtime activities. The reason

a click was used instead of tangible reinforcers is because tangible reinforcers usually interrupt the behavior chain. The interruption often leads to additional prompting that would not be needed if an immediate and non-interrupting reinforcer were delivered.

Participants

The participant in this study was recruited in a classroom for preschool aged children that provided early intervention services. The individual chosen to participate in this study was a five-year-old male diagnosed with Autism Spectrum Disorder. Researchers chose this student because he already had the basic play repertoire (i.e. can complete any of the component responses, but unable to complete the whole behavior chain without prompts). There were other students that fit the eligibility criteria; however, they were receiving other interventions that may interfere with the integrity of the data. The eligibility criteria included: ability to follow instructions, ability to participate in appropriate playtime behavior, and a diagnosis of Autism Spectrum Disorder.

Methods

For this study multiple-baseline across behaviors (playtime activities) design was used. The dependent variable in this intervention for both playtime behaviors was the percentage of correct components of behavior during each playtime session. The independent variable in this intervention was introducing reinforcement using the clicker. All data were collected at the Kalamazoo Autism Center (KAC). Each session was video recorded and coded so interobserver agreement could be calculated.

First, researchers created a task analysis for the two playtime procedures used in this experiment. This was done so each step of the behavior chain could be determined. There were two component responses involved with the imitative drawing procedure. These behaviors included attending which entails the student making eye contact with the tutor, and successfully drawing the line within three seconds. The paperclip drop procedure was more complex with seven steps. The steps involved for this procedure included: standing up once his name was called, walking to the line taped on the ground, taking the paperclip from the tutor, extending his arm parallel to the ground, dropping the paperclip in/near the can, walking back to his carpet square, and sitting on his bottom on the carpet square. Each of these responses must be completed within three seconds and free from any prompts to be considered correct.

Researchers created a receptive identification testing procedure to determine whether TAG can be an effective reinforcer in a novel procedure. Baseline data were taken on this procedure that taught the participant to receptively identify where animals can be found (fish are found in water, birds are found in the sky, elephant on land, etc). Baseline data were also being collected for the other two playtime procedures concurrently. The purpose of this procedure was to prove that the click was established as a reinforcer by demonstrating that correct responding would increase once the click was implemented.

Once baseline data indicated a steady trend in the testing procedure, researchers began the pairing of the click and the preferred reinforcer. Researchers delivered five to ten pairings of the auditory stimulus (click) and preferred

reinforcers (usually airplane and tickles) non-contingently an hour apart.

Immediately after the third pairing, researchers began reinforcing correct responses in the receptive identification procedure by only using the click. In later sessions, five to ten pairings occurred immediately before the beginning of each procedure.

After the participant reached mastery criteria (two trials at 90% or above, or three trials at 80% or above) in the testing procedure, the click was introduced to the imitative drawing procedure. Researchers continued to collect baseline data for the paperclip drop procedure for four sessions after the imitative drawing procedure began. The click was delivered when a discriminative stimulus was provided and the participant was attending. The second opportunity for reinforcement was when the student successfully completed the drawing, which can be defined as “the student’s drawing had the same orientation and were within two inches of the placement of the drawing of the model on their respective pieces of paper”. Tutors delivered the discriminative stimulus (“do this”) and drew one component at a time and the participant completed the component before the next SD was delivered. If the student did not complete the drawing or did so incorrectly, a tutor provided a full physical prompt in the absence of feedback or delivery of any reinforcers.

The paperclip drop intervention was implemented after the completion of four sessions of the imitative drawing intervention. Researchers provided the click after the completion of each correct component response in the behavior chain. The student had up to seven chances to emit a correct response during each trial. If the participant made an incorrect response, tutors provided a verbal prompt. Later,

researchers changed the correction protocol, and instructed tutors to deliver a partial physical prompt. Mastery criteria were the same as listed above.

Results

During the testing procedure the average rate of correct responses during baseline was 13%. (see graph in Appendix A). Once TAG teaching was implemented, the percentage of correct responses was 94%. Interobserver agreement was calculated 30 percent of sessions with 98% agreement.

The average percentage of correct responses during baseline in the drawing procedure was 31.39% (See graph in Appendix A). The percentage of correct responses after TAG teaching was implemented was 94.68%. Interobserver agreement was calculated 30 percent of sessions with 96% agreement.

The baseline data for the paperclip drop had an average of 52.87% (See graph in Appendix A). The percentage of correct responses after TAG was implemented was 77.3%. Interobserver agreement was calculated 30 percent of sessions with 95% agreement.

Discussion

To display experimental control, a testing procedure was created. The participant was introduced to a novel matching procedure (see-point). The discriminative stimuli were first presented (only the location where the animal could be found was used as the SD "Land" "Water" "Sky"). There only was one outlier in the baseline phase—the tutor delivered unintentional supplemental prompts by looking at the correct answer and incidental learning occurred. Tutors were retrained and correct responding decreased to the rate prior to the outlier.

The behaviors that were measured during the imitative drawing procedure were attending (i.e. making eye contact with the tutor, looking at their drawing) and independently completing an approximation of the tutors drawing (i.e. within three seconds and free from any prompts). Probes were completed once a month to ensure that the participant retained the skills obtained during the current study. For each probe, the participant scored above mastery criteria (i.e. two trials at 90% or above or three trials at 80% or above).

Paperclip drop was the most complex of all the play skills used in this study. The steps in the behavior chain include: stand up, walk to line, take paperclip from tutor, extend arm parallel to ground, drop paperclip near can, walk back, and sit down. With the extra opportunities to respond, correct responding was slightly higher in the baseline condition. To correct this problem, researchers retrained tutors to only deliver partial physical prompts (light tap) and removed any verbal prompts to indicate to the participant that turn was over.

There are several shortcomings of this experiment that should be discussed. The first shortcoming occurred due to when the study was conducted. Data were collected for paperclip drop in late fall and early winter months. Low scores could be a result of the three-week winter break. Another shortcoming is the variation of tutors delivering the auditory reinforcer during the treatment phase. Everyday a different tutor ran the playtime activities at the autism center, therefore each tutor had to be trained individually prior to implementing the intervention. This took extra time and in the beginning of the experiment it created a discrepancy in the data. The last short coming deals with how the playtime activities were ran at the

autism center. As stated earlier, the intervention was implemented in the fall but in the winter semester the autism center began running the playtime activities differently, which could also be the consequent in a decrease in correct responses during the paperclip drop procedure.

Possible directions for future research are limitless. Some ideas include training the student with multiple tutors delivering the reinforcer, which promotes generalization. Shaping other behaviors other than play skills, such as academic skills, physical activities, social skills, etc. Delivering the auditory stimuli to a group of people (e.g. in a classroom setting) when completing a correct response, rather than an individual student. Because there is a lack of current literature regarding TAG in this population, the areas for future research really are unlimited.

Conclusion

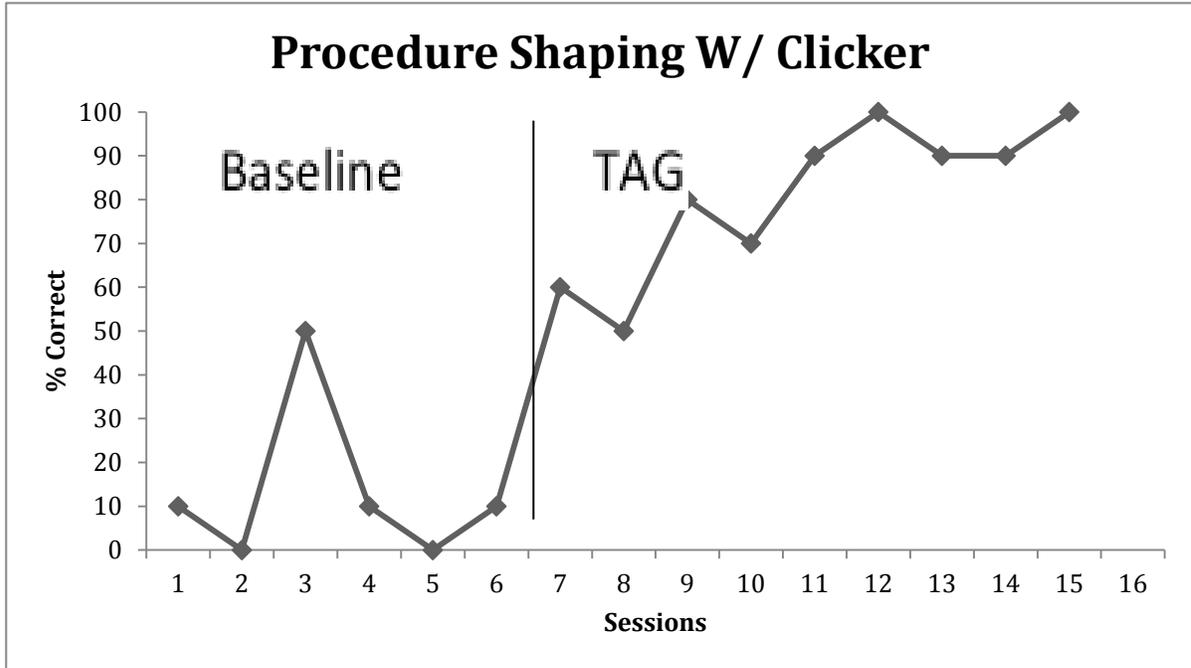
The data found for correct responding indicate that the implementation of the TAG procedure had a profound impact on playtime activities. Researchers were surprised with the effect this intervention produced—theoretically, they were set up for success, and even testimonials on the TAG website indicated it was effective. In the testing procedure, there was a clear level of change and rapid mastery once TAG was implemented. Researchers were confident they had established TAG as an effective reinforcer. Similar results occurred in the other playtime activities. There are several impacts this procedure can have in the field of behavior analysis and early intervention services for children with autism. The reason it can be so influential in interventions for developmental disabilities and autism is that TAG is delivered immediately, which can be an efficient way to reinforce links in a behavior

chain. With results obtained in this study, TAG teaching could have very big implications in the future.

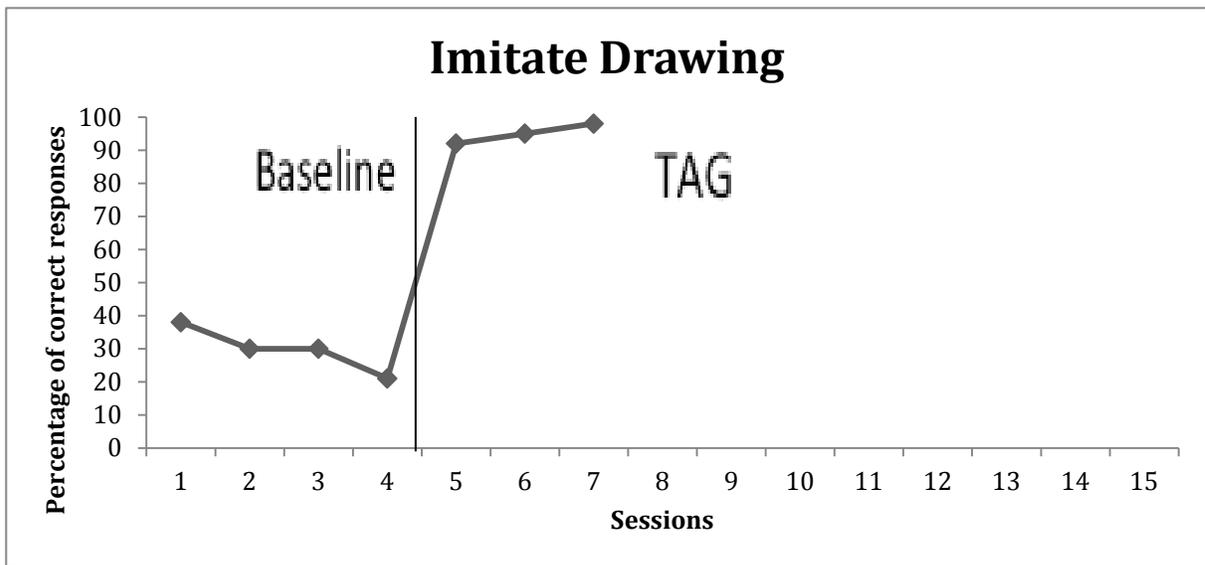
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Appendix A: Graphs

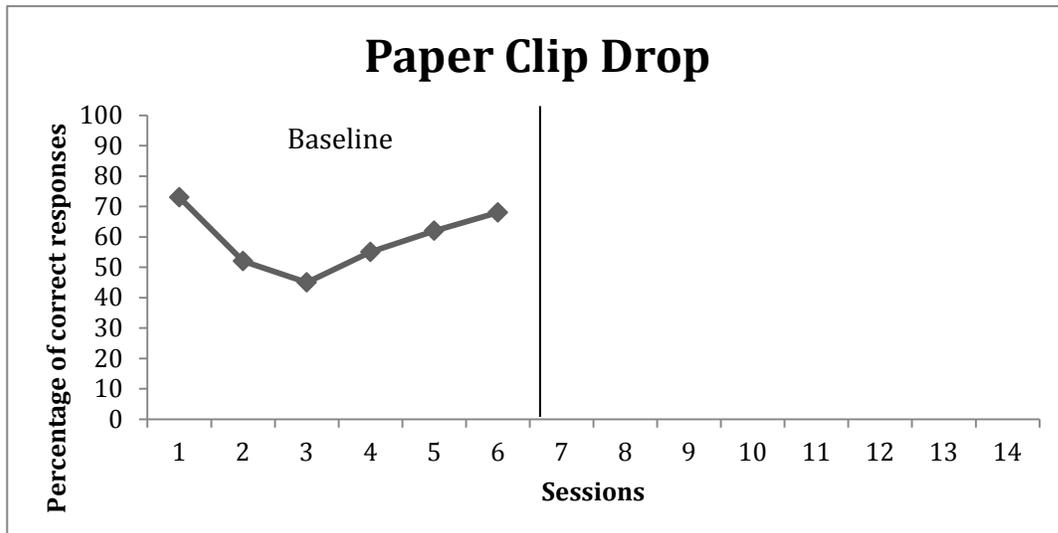
A.1 Testing Procedure Graph



A.2 Imitative Drawing Procedure Graph



A.3 Paperclip Drop Procedure Graph



Appendix B: HSIRB Proposals

B.1 HSIRB Proposal 1

Western Michigan University

HSIRB Application

Using Teaching with Acoustical Guidance to Increase Play Skills

Principal Investigator: Dr. Richard Malott, Department of Psychology
Student Investigator: Steven P. Sparks
Student Investigator: Melissa Boggs

Abstract

Teaching with Acoustical Guidance (TAG) to reinforce correct chains of behavior during structured play activities will be evaluated. TAG involves using auditory stimuli as reinforcer for correct behavior or correct components of behavior. Theoretically TAG works because a click is paired with back up reinforcers and thus becomes a learned reinforcer. As long as the click and the backup reinforcer continue to be paired periodically, the click will maintain its reinforcing properties and can be used to shape behavior to achieve desired results.

For the purpose of the study a click will be paired with a child's preferred reinforcers to establish the click as a learned reinforcer. The click then will be used to reinforce behaviors and components of behaviors necessary for the child to complete different play activities. Baseline data will be measured on the number of play behaviors the child completes independently during structured play activities. The click will then be paired with the delivery of highly preferred reinforcers and be presented contingent upon independent play behaviors while continuing to pair the click with reinforcers during predetermined time periods. Data will be collected on the number of independent behaviors emitted after the introduction of the click as a reinforcer.

This area of study could possibly have a large impact in the area of autism because there are many instances in which delivering a tangible reinforcer contingent upon a correct component of a skill will interrupt the next behavior in the chain. The implementation TAG will allow the tutor to unobtrusively and efficiently shape component responses involved in a larger behavioral chain, resulting in faster skill acquisition.

Purpose/Background Information

Skinner went into great detail on establishing and maintaining conditioned reinforcers in his book *Science and Human Behavior* (1953) and this area of analysis has been well studied since. One experiment that contributed widely to this area of research was conducted by Zimmerman & Hanford (1966). In this experiment they showed that when access to food was accompanied by food dispenser, they could shape key pecking using the food dispenser even though the food was no longer delivered contingent upon that behavior. The main implication of this study is that through sufficient pairing of an unconditioned reinforcer and a neutral stimulus, the neutral stimulus can obtain the reinforcing value of the unconditioned reinforcer as long as the two stimuli continue to be paired periodically.

TAG (Teaching with Acoustical Guidance) is recognized as first being used by Karen Pryor when she pioneered the technique while training animals in the 1960's (http://www.tagteach.com/About_TAGTeach). Later these techniques were used in sports training such as gymnastics (tagteach.blogspot.com), and football (Stokes, Luiselli, Reed, & Fleming 2010). It has been in only the last decade or so that TAG has started being used with developmentally disabled clients. To date, there are very few peer reviewed articles available and presentations regarding TAG have been presented at the Association for Behavior Analysis International annual conference (http://www.tagteach.com/Autism_and_Special_Education).

The goal of the proposed experiment is to pair a click with a child's preferred reinforcers thus conditioning it as a learned reinforcer. The click will then be used to reinforce components of two different playtime behavioral chains, which should increase the appropriate behaviors within those activities. The click is being used in place of a tangible reinforcer because the delivery of the tangible usually interrupts the playtime activity and the component behavior in which it was delivered contingent on. This interruption may lead to additional prompting that may have not been necessary if the food delivery had not interrupted the chain. If the click can successfully be conditioned then it will be able to reinforce these component behaviors without interrupting the behavior chain included in the playtime activities.

Participant Recruitment

Participants will be recruited with procedures consistent with the American Psychological Association code of ethics (please see the standard operating procedures HSIRB #11-08-20). Participants will be made aware of the study through their placements at an early intervention service (WoodsEdge Learning Center or the Kalamazoo Autism Center). All participating children will be of preschool age, ranging from 18 months to 7 years of age. Prior to selecting eligible participants, the research will discuss the project with the classroom teacher at WoodsEdge Learning Center and the director of the Kalamazoo Autism Center. Children will be recommended based on the appropriateness of the educational goals of the project with the child's current educational program. Fliers will be distributed to parents

whose children have 1) been diagnosed with autism or other developmental disabilities and 2) demonstrate a need for the intervention, in order to acquire consent to use the children's data in presentations, theses, dissertations and/or publications. Fliers will be sent home in each child's daily correspondence log, along with two copies of a consent form that details their participation in the project. These fliers will assure parents that their child's data will remain confidential, and no identifying information (e.g. names) will be utilized in any presentations or publications.

If additional families express interest in the project, yet are not selected for recruitment at that time, all information from the project will be made available to them upon the completion of the project. In addition, children and families not selected for direct participation will be able to access the information upon the completion of the project.

At this time only the children involved in the study will receive the intervention. At the completion of the study, if the expected results are achieved, the intervention will be made available to all children that have deficits in completing the component responses in long behavioral chains during play activities.

The families of the children, who are selected to participate in the project, will be provided with result of the study at the family's regularly scheduled progress meeting.

Informed Consent Process

Parents of children who are participating directly in the project will receive two copies of an informed consent document asking permission for their data to be used theses, publications, and/or presentations (Appendix A). Parents will have the opportunity to sign and return one copy and keep the other copy for their records. Parents will be assured that their child's data will remain confidential and that no identifying information will be released (e.g. names). I will receive the consent forms. The two playtime activities involved are imitating drawing and paperclip drop. Imitating drawing involves having a tutor sit in front of the student and drawing a single component of the picture (such as a single circle that makes up part of a snowman) while prompting the children as necessary to imitate that component. The behavior of the children involves attending to the tutor and imitating their drawing. Paperclip drop involves having a tutor sit in front of the children, telling them whose turn it is, and prompting them as necessary. When it is their turn the children are to stand up, walk up to the line, take the paperclip, extend their arm, drop the paperclip in/near the hole in the lid of a coffee can, walk back to their seat, and sit down.

Research Procedure

First a task analysis of the two playtime procedures will be completed to determine each step necessary to successfully complete the behavioral chain. Next baseline will be conducted to determine the percentage of component behaviors the child is getting correct prior to the intervention. At the same time baseline will be taken on a procedure that will teach the participant to receptively identify where different animals are found (fish in water, eagle in sky, lion on land, etc.) the

purpose of this procedure is to prove that it is possible to reinforce correct responding for a novel skill using only the clicker before we spend much time trying to reinforce a much more complex chain of behaviors.

The first day after baseline data has finished being recorded, 5-10 pairings of the click and the preferred reinforcer will be delivered non-contingently an hour apart, and directly after the third pairing training will begin on the receptive identification procedure using only the click. On subsequent teaching sessions, 5-10 pairings will occur immediately prior to the procedure being conducted. This will continue until the participant has completed 2 consecutive sessions of 10 trials with 90% accuracy, or 3 consecutive sessions of 10 trials with 80% accuracy.

Once these goals have been achieved the click will start being delivered contingent upon correct component behaviors for each of the two playtime behaviors. This will continue until the participant has completed 2 consecutive sessions with 90% accuracy, or 3 consecutive sessions with 80% accuracy. Probe sessions will also be conducted to determine if correct responding has increased across any of the other playtime activities, and whether or not the high level of correct response maintains a month or two after the intervention is completed.

Methodology

For this intervention a multiple-baseline across behaviors (playtime activities) design will be used. The playtime activities being trained are paperclip drop and imitate drawing which are normal playtime activities that all the children at the Kalamazoo Autism Center take part in. The baseline for both playtime behavior chains will start simultaneously; as long as baseline stays stable the intervention for the first chain of behaviors will start after 5 or so baseline sessions. The second set of behaviors will receive the intervention after at least 4 more baseline sessions as long as the data remains stable. The dependant variable, for both sets of behaviors, is the percentage of correct components of behavior during each play session, and the independent variable is the introduction of the reinforcement using the clicker. The data will be conducted in the classroom of the Kalamazoo Autism Center and all sessions will be video recorded and coded for data collection and interobserver agreement purposes.

Risks and Costs to and Protections for Participants

Although the skills targeted in this project are related to the child's individualized education plan, they do not impact the child's placement in the centers. Parent and child participation is voluntary. The declination or withdrawal from the project, at any time, will not affect the education provided to the child.

To protect the rights of the children and parents who participate in the project, their videotapes and data will remain confidential. The videotaped sessions will not be shared with any person not directly involved in the project in the project, unless consent is otherwise given.

If participation in the project causes concern, anxiety, or distress for the children or the parents, the parents may contact me at (269) 387-4481 or in the Department of Psychology at Western Michigan University. Additionally, participant

rights information can be obtained from the Office of the Vice President for Research at Western Michigan University at (269) 387-8298.

Benefits of Research

The primary objective of this project is to thoroughly evaluate the educational achievements of the children involved and to work to continuously improve their educational procedures and their skill acquisition. Additionally, the project seeks to improve instructional techniques and learning rates for additional children in the classroom.

Confidentiality of Data

The data collected will be stored for at least three years, and will be filed and locked in my office at Western Michigan University. Only individuals involved in the project will have access to the data.

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B.2 HSIRB Proposal 2 Revised

Western Michigan University**HSIRB Application****Using Teaching with Acoustical Guidance to Increase Play Skills**

Principal Investigator: Dr. Richard Malott, Department of Psychology
Student Investigator: Steven P. Sparks
Student Investigator: Melissa Bogggs

Abstract

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For the purpose of the study a click will be paired with a child's preferred reinforcers to establish the click as a learned reinforcer. The click then will be used to reinforce behaviors and components of behaviors necessary for the child to complete different play activities. Baseline data will be measured on the number of play behaviors the child completes independently during structured play activities. The click will then be paired with the delivery of highly preferred reinforcers and be presented contingent upon independent play behaviors while continuing to pair the click with reinforcers during predetermined time periods. Data will be collected on the number of independent behaviors emitted after the introduction of the click as a reinforcer.

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For this intervention a multiple-baseline across behaviors (playtime activities) design will be used. The playtime activities being trained are paperclip drop and imitate drawing which are normal playtime activities that all the children at the Kalamazoo Autism Center take part in. The baseline for both playtime behavior chains will start simultaneously; as long as baseline stays stable the intervention for the first chain of behaviors will start after 5 or so baseline sessions. The second set of behaviors will receive the intervention after at least 4 more baseline sessions as long as the data remains stable. The dependant variable, for both sets of behaviors, is the percentage of correct components of behavior during each play session, and the independent variable is the introduction of the reinforcement using the clicker. The data will be conducted in the classroom of the Kalamazoo Autism Center and all sessions will be video recorded and coded for data collection and interobserver agreement purposes.

Risks and Costs to and Protections for Participants

Although the skills targeted in this project are related to the child's individualized education plan, they do not impact the child's placement in the centers. Parent and child participation is voluntary. The declination or withdrawal from the project, at any time, will not affect the education provided to the child.

To protect the rights of the children and parents who participate in the project, their videotapes and data will remain confidential. The videotaped sessions will not be shared with any person not directly involved in the project in the project, unless consent is otherwise given.

If participation in the project causes concern, anxiety, or distress for the children or the parents, the parents may contact me at (269) 387-4481 or in the Department of Psychology at Western Michigan University. Additionally, participant

rights information can be obtained from the Office of the Vice President for Research at Western Michigan University at (269) 387-8298.

Benefits of Research

The primary objective of this project is to thoroughly evaluate the educational achievements of the children involved and to work to continuously improve their educational procedures and their skill acquisition. Additionally, the project seeks to improve instructional techniques and learning rates for additional children in the classroom.

Confidentiality of Data

The data collected will be stored for at least three years, and will be filed and locked in my office at Western Michigan University. Only individuals involved in the project will have access to the data.

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Appendix C: Informed Consent

C.1: Kalamazoo Autism Center Informed Consent

**Western Michigan University
Department of Psychology**

Principal Investigator: Richard W. Malott, Ph.D., BCBA
Title of Study: Continuous Quality Improvement Projects at Kalamazoo Autism Center

You are being invited to participate in a research project titled Continuous Quality Improvement Projects at Kalamazoo Autism Center. The purpose of this project will be (1) to evaluate the intensive behavioral treatment provided in two preschool settings for children diagnosed with autism and other developmental disabilities and, based on these evaluations, (2) to continuously improve aspects of the treatment and assessment procedures provided for children. Program evaluation and treatment/assessment adjustments are part of the standard continuous quality improvement efforts of the classroom where the project will be conducted. The behavior of the children in the project will be documented through direct observation and video recordings. The project will take place in the preschool classroom at Kalamazoo Autism Center, where treatment is provided by undergraduate and graduate practicum students. We are requesting permission to use these evaluation, training, and assessment data in Doctoral dissertations, Master's projects, undergraduate projects and honors theses, presentations, and/or publications to document the effectiveness of this continuous quality improvement effort. This consent document will explain the purpose of this research project and will go over all of the time commitments, the procedures used in the study, and the risks and benefits of participating in this research project. Please read this consent form carefully and completely and please ask any questions if you need more clarification.

What are we trying to find out in this study?

The purpose of this research project is to train BA, MA, and PhD students to be human-service practitioners, generally with a specialty in preschool autism and early childhood developmental delays; not to be either basic or applied researchers. I am training my students to continuously evaluate the effects of their work with the children and to modify their treatment/training procedures accordingly. Therefore our first criterion in any practicum project, thesis, or dissertation is for the children directly involved in the projects to immediately benefit from their involvement; not just that their involvement will contribute to the long-term betterment of the treatment of subsequent children. Our second criterion is that children that are not involved in the projects, theses, and dissertations, will also benefit from the findings of those studies through the continuous quality improvement of classroom curriculum and teaching procedures.

Who can participate in this study?

You are being invited as a participant because your child is enrolled in the ECSD classroom at Kalamazoo Autism Center.

Where will this study take place?

This study will take place at Kalamazoo Autism Center in Portage, MI.

What is the time commitment for participating in this study?

If you agree to participate in this research project, your child's progress will be monitored while they are enrolled in the classroom at Kalamazoo Autism Center.

What will you be asked to do if you choose to participate in this study?

If you choose for your child to participate in this study, their daily performance at Kalamazoo Autism Center will be evaluated by Dr. Malott and his graduate students.

What information is being measured during the study?

This study will collect data on the children's behavior, including the children's acquisition of desirable skills and reduction of undesirable behaviors. Data are recorded in terms of percentage of correct responses for each child for the educational programs assigned to him or her as part of enrollment in Kalamazoo Autism Center, the occurrence of problem behaviors, and skills obtained throughout their time at the centers. Examples of areas that may be addressed in this project include acquisition of verbal behavior, prompting strategies, skill maintenance, generalization, transfer of training, and revisions of skill acquisition procedures, and replacement of undesirable behavior with alternative appropriate behaviors.

What are the risks of participating in this study and how will these risks be minimized?

Participation in this research project does not involve any known risks, discomfort, or inconvenience.

What are the benefits of participating in this study?

The primary objective of this project is to thoroughly evaluate the educational achievements of the children involved and to work to continuously improve their educational procedures and their skill acquisition. Additionally, the project seeks to improve instructional techniques and learning rates for additional children in the classroom. All improvements made to classroom training procedures are part of standard continuous quality improvement designed to constantly improve the education provided to the children in the classroom.

Are there any costs associated with participating in this study?

There are no costs associated with this study.

Is there any compensation for participating in this study?

There is no compensation for participating in this study.

Who will have access to the information collected during this study?

Student investigators will be collecting all the data for this research study. They will be the people with access to the information. Any individual data will not be disclosed. The investigator will keep your records for this research project private in a secure location at Western Michigan University, 2536 Wood Hall that only they may access. We may present the information from this research project at meetings or conferences, and use it in theses and dissertations.

What if you want to stop participating in this study?

Your participation in this research project is voluntary. You do not have to participate in this research project. If you decide to choose to have your data utilized for research, then please indicate your consent by signing and dating in the space provided below. Your decision whether or not to take part will not affect your current or future involvement with Kalamazoo Autism Center or any of its affiliates. If you do decide to participate, then you are free to change your mind and discontinue participation at any time. You may contact Dr. Richard Malott at (269) at any time with any questions or concerns about your participation in this research project. You may also contact the Chair, Human Subjects Institutional Review Board (HSIRB) at (269) 387-8293 or the Vice-President for Research at (269) 387-8298 if questions or problems arise during the course of the research project.

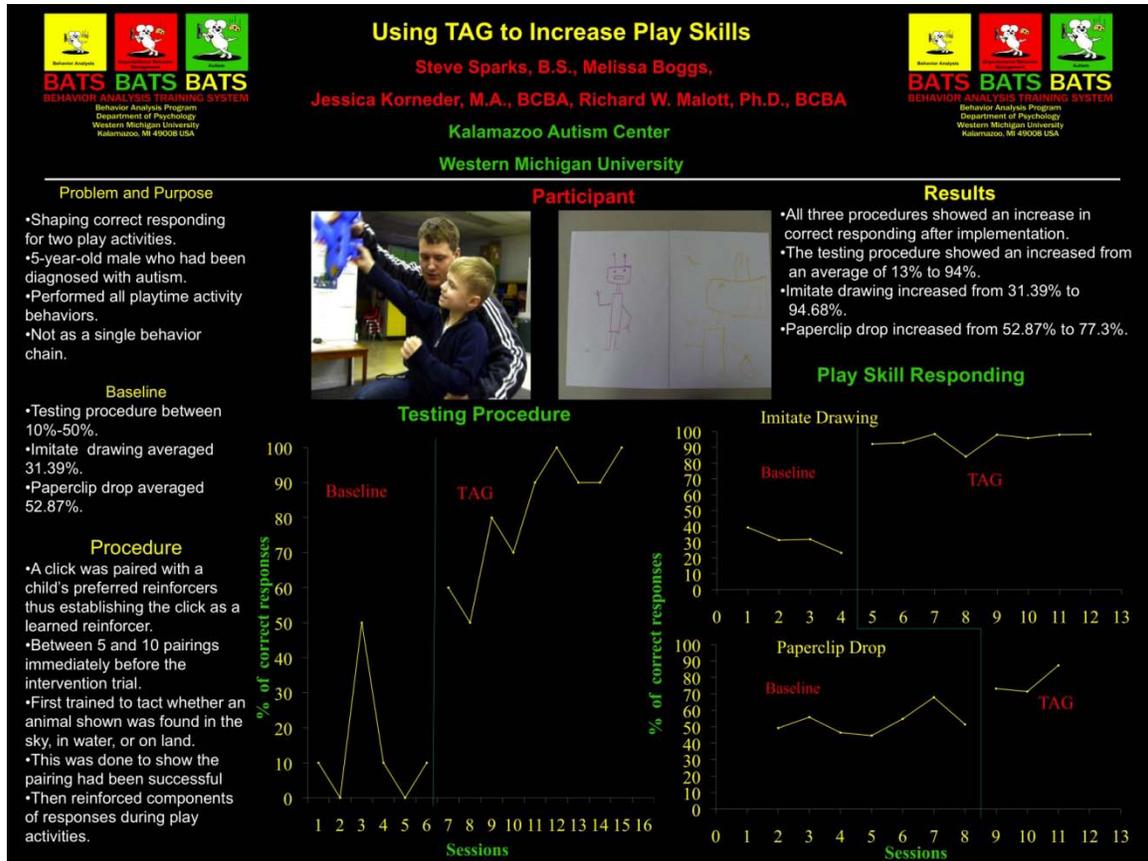
This consent document has been approved for use for one year by the Human Subjects Institutional Review Board (HSIRB) as indicated by the stamped date and signature of the board chair in the upper right corner. Do not participate in this study if the stamped date is older than one year.

I have read this informed consent document. The risks and benefits have been explained to me.

Please Print Your Name

Appendix D: Poster

D.1 Association of Behavior Analysis Poster Proposal



Steve's Autism Project

Do not run unless you have been trained

Receptive animal categories

- Objective: To teach Child receptively tact where different animals are found (land, sky, water)
- Materials: Animal cards, clicker
- Set-up: 5-10 pairings of the clicker with the prior to starting the procedure
- Trials: 10 trials/session. Rotate through all previous responses. Take data on new responses only.
- Procedure: Put out pictures of animals from each category and provide S^D “water, land, or sky”
- Correct Response:
 - Mark a (+) on the datasheet and provide praise & reinforcers (intermittently as child progresses)
- Incorrect Response:
 - Mark a (-) on the datasheet and begin prompt hierarchy
- Phase change: 2 at 90% or 3 at 80%

Phases

Phase 1	One picture from each category
Phase 2	Two pictures from each category
Phase 3	Three pictures from each category

Appendix F: Works Cited

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