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## #411 International Poster Session

5/25/2009

12:00 p.m. - 1:30 p.m.

North Hall A

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**1. Using TAG Teach Methods to Develop Eye Contact Behavior in Children with Autism.** (Applied Behavior Analysis) REGINA L. MAENDLER (The Chicago School of Professional Psychology), John W Eshleman (The Chicago School of Professional Psychology), Traci M. Cihon (The Chicago School of Professional Psychology)

**Abstract:** Many children diagnosed with autism demonstrate limited eye contact behavior with others. Eye contact can be an important prerequisite for the development of other behavioral repertoires including mands, imitation, and social interaction. Because the eye contact movement cycle can be quite brief, it is not always possible to provide immediate reinforcement and often one may inadvertently reinforce another behavior (e.g. looking away). The purpose of this study was to increase eye contact behavior in children diagnosed with autism using two reinforcement methods; contingent positive reinforcement and Teaching by Acoustical Guidance (TAG). During the first treatment condition, descriptive praise statements as well as access to preferred items and activities were made contingent upon occurrences of eye contact behavior. During the second treatment condition, occurrences of eye contact behavior were immediately tagged with an acoustical marker and directly followed by access to a backup reinforcer in the form of descriptive praise statements as well as access to preferred items and activities. Treatment conditions were presented during randomly alternating sessions through a multielement design. Differences in responding between conditions were attributed to the effectiveness of each treatment variable as an intervention for developing eye contact behavior among children with autism.

KEY WORDS: TAG teach, conditional reinforcement, contingent reinforcement, immediacy of reinforcement, eye contact, autism, children, multielement design

**2. Comparing the Effectiveness of Mobile and Immobile Floors for Teaching Fine Motor Skills.**

(Applied Behavior Analysis) NICOLE ANN CISSELL (The Chicago School of Professional Psych.), John W Eshleman (The Chicago School of Professional Psychology), Traci M. Cihon (The Chicago School of Professional Psychology)

**Abstract:** ~~Ogden Lindsley (1963) was one of the first behavior analysts to define the need for fluency. Fluency is necessary to achieve automaticity and permanency in responding (Binder, Haughton, & Eyk, 1990) and has been defined as accuracy plus speed (Binder, 1996). Precision teachers use the tools of fluency and the Standard Celeration Chart (SCC) in order to improve learning and track changes in behavior. The SCC is a semi-logarithmic chart in which changes in learning may be observed. The chart utilizes many symbols in order to denote the frequency of behaviors, the length of fluency timings, and celeration as a function of time. This paper reports the results of a study aimed at evaluating the efficacy of mobile versus immobile floors for teaching fine motor skills to children that have been diagnosed with autism. The study was conducted using Big 6+6 programming in order to teach the component fine motor skills.~~

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**3. The Effects Discrete Trial Training on the Acquisition of Social Skills by Children with Autism.**

(Applied Behavior Analysis) CHERIE ANN FISHBAUGH (SPARC), Corinne M. Murphy (West Chester University), Jennifer E. Dawson (SPARC), Phillip K. Duncan (West Chester University)

**Abstract:** Children with autism experience difficulty in acquiring and generalizing appropriate social skills such as looking at speaker/listener, initiating a conversation, sustaining a conversation, requesting an item, sharing, and playing cooperatively with others. Research shows that exposure to typically developing peers is not enough to acquire social skills and that such skills need to be systematically taught and then generalized to peers. Research is needed to identify effective teaching protocols for social skill development by children with autism. Five students, ages 3-5 years participated in a discrete trial training protocol targeting social skill development. All training took place in small group settings ranging from 3 to 5 participants. Social skills were assessed for each participant before, during, and after training. The results for all participants showed

increases compared to baseline levels for all social skills measured when discrete trial was used as the intervention. Generalization and maintenance data will be provided.

**4. Teaching Reading and Reading Comprehension Using a Stimulus Equivalence Paradigm: A Case Study in an IBI Classroom.** (EDC; Applied Behavior Analysis) ROSEMARY A. CONDILLAC (Brock University), Lisa Danielle Giewerker (Surrey Place Centre and Brock University), Leanne Small (Surrey Place Centre)

**Abstract:** This poster will present a stimulus equivalence paradigm that was used in an effort to teach reading and reading comprehension to a young boy with Autism, who had not responded to conventional phonetic or whole word approaches. The assessment and training was delivered by instructor therapists in his Intensive Behavioural Intervention (IBI) program. Baseline assessment indicated that for the chosen words, the boy was able to matching picture to dictated name, he could name the picture orally but was unable to name (read) written word, unable to match printed names to the dictated name, or match picture to written word. He was then taught to match the printed names to the dictated names, using standard matching to sample procedures. The results indicated that after teaching the boy to match dictated names to the printed names he was able to orally name the written words, match the pictures to the printed names, and match the printed names to the pictures without any additional teaching. This study provides preliminary evidence of field-effectiveness for the use of a stimulus equivalence paradigm in teaching reading comprehension to a young child with Autism within an IBI program.

**5. The Role of Choice of Task Duration on Percent Success and Acquisition Rate.** (Applied Behavior Analysis) RACHEL MARIE ADAMEK (Lovaas Institute Midwest), Melissa J. Gard (The Lovaas Institute Midwest), Courtney Whitcraft (Lovaas institute)

**Abstract:** Being given a choice of tasks to complete, rather than being told by a caregiver or teacher which task to complete, can be a highly reinforcing for children diagnosed with autism but does not necessarily promote the highest levels of success or acquisition rate. In this study, we will investigate the effects of child's choice on percent success and acquisition rate in three different previously mastered skill areas. Conditions include child choice and therapist choice with differing task durations and magnitudes of reinforcement. For example, in the child's choice condition the child may choose between completing 5 pieces of a puzzle for 1 pretzel or completing the entire puzzle (20 pieces) for 5 pretzels. The goal of this study is to more closely examine the child's preference of task duration and magnitude of reinforcement and how that relates to correct and incorrect responding. The results will lead us to a greater understanding of the child's specific preferences, which can then be utilized to increase the child's skill acquisition by adhering to the condition to which the child demonstrated the most success.

**6. Effects of Training on Discrete Trial Teaching Knowledge and Performance.** (EDC; Service Delivery) ANDREW DOWNS (University of Portland), Alex Siwec (Central Washington University), Robyn Conley Downs (Children's Village), Cindy K. Carroll (Children's Village)

**Abstract:** Parents of children with autism have increasingly demanded that their children be provided publicly funded Discrete Trial Teaching (DTT) based educational programming. Unfortunately, most school professionals receive no training in DTT in their undergraduate or graduate programs, making the training of such individuals critically important. This study evaluated the effects of training on instructor knowledge and performance of DTT and related skills. Nine undergraduate students received an eight-hour DTT training and taught a range of behaviors to six preschoolers with autism. Instructor knowledge was assessed pre- and post-training in the domains of work preparation, DTT technical procedures, and student engagement/management. Instructor performance was assessed in the same domains across several instructional sessions. Pre-training knowledge scores ranged from 4% to 57% and post-training knowledge scores ranged from 52% to 82% correct with instructors scoring highest on the domain of student engagement/management and lowest on work preparation. During DTT sessions with children with autism instructor performance ranged from 59% to 97% correct across domains, with the highest percentage of errors occurring in the domain of DTT technical procedures. The results highlight the need for training programs that effectively improve the knowledge and performance of professionals who provide DTT to children with autism.

**7. Evaluation of a Self-Instructional Package for Instructing University Students to Conduct Discrete-Trials Teaching with Children with Autism.** (EDC; Applied Behavior Analysis) SANDRA SALEM (University of Manitoba & St. Amant), Daniela Fazzio (University of Manitoba and St. Amant), Lindsay Maureen Arnal (University of Manitoba & St Amant Research Center), Pamela Jane Fregeau (St. Amant), Kendra Thomson (University fo Manitoba and St. Amant), Garry L. Martin (University of Manitoba), Dickie C. T. Yu (U. of Manitoba & St. Amant Research Centre)

**Abstract:** A self-instructional package to train four university students to implement Discrete-Trials Teaching (DTT) sessions with children with autism was investigated. Using a modified multiple-baseline design across participants, the students' ability to conduct DTT to teach a confederate role-playing a child with autism was evaluated, before and after studying a self-instructional manual (Fazzio & Martin, 2007) plus watching a video demonstration. All scoring was conducted with the use of the Discrete Trials Teaching Evaluation Form, known as the DTTEF (Fazzio, Arnal, & Martin, 2007). For each participant overall improvement in performance was made, although not all the participants performed as well as expected. Of the four participants, two achieved mastery and those two participants then demonstrated considerable DTT skill while conducting a teaching session with a child with autism. Future research using this self instructional package could come in the form of studying with a partner and should take into account factors such a motivation.

**8. Instructing and Assessing Individuals to Conduct Discrete-Trials Teaching: A Review and Future Directions.** (TBA; Applied Behavior Analysis) KENDRA THOMSON (Universityof Manitoba and St. Amant), Garry L. Martin (University of Manitoba), Lindsay Maureen Arnal (University of Manitoba & St Amant Research Center), Daniela Fazzio (University of Manitoba and St. Amant), Dickie C. T. Yu (U. of Manitoba & St. Amant Research Centre)

**Abstract:** Early intensive behavioral intervention (EIBI) has been identified as the treatment of choice for children with autism spectrum disorders. A common strategy for conducting EIBI is discrete-trials teaching (DTT). There is a demand for research-based, economical, rapid training techniques to teach tutors and parents of children with autism to conduct DTT. A review of 20 experiments that focused on teaching individuals how to conduct DTT illustrated that many different forms of DTT instruction exist, and are often reported briefly which makes replication difficult. Further, evaluations of assessment tools for scoring individuals' DTT performance are lacking. In response to this need, we developed a 21-item component checklist, the Discrete-Trials Teaching Evaluation Form (DTTEF) to assess instructors' DTT performance. The DTTEF has been shown to have high face validity, high interobserver reliability for live scoring, and high concurrent validity with trainees attempting to apply DTT to teach a confederate role-playing a child with autism. The DTTEF differentiated between DTT performances of trainees before and after receiving DTT instruction. Considering the high demand for personnel trained in delivering DTT to children with autism, further research in developing a more standardized method of instructing and assessing individuals' DTT performance is highly warranted.

**9. Improving Treatment Integrity: Increasing Correct Parent Implementation of Instructional Programs.** (EDC; Applied Behavior Analysis) JENNIFER SMITH (BEACON Services), Kim Klemek (BEACON Services), Robert K. Ross (BEACON Services)

**Abstract:** A critical variable in implementing interventions in home-based settings is the ability of that environment to support the implementation of those procedures. Specifically, interventions to be implemented by parents/caregivers must be selected for their ability to be delivered by parents/caregivers. Additionally, training protocols must result in successful implementation of the procedures. Previous studies have found that improving correct implementation of treatment procedures with parents, specifically with discrete trial teaching, has resulted in generalization to teaching other skills (Lafasakis & Sturney, 2007). Although, researchers have made an effort to reveal best practice for improving treatment integrity with teachers (Coddington et al., 2005) few studies have been conducted to identify strategies for improving treatment integrity with parents. The current study conducted a parametric analysis of the variables associated with implementation of treatment procedures. They identified the most common errors associated with failure to implement treatment and instructional procedures correctly, as well as variables associated with successful

implementation. Study findings suggest that failure to produce fluent skill performance in training settings as well as high levels of correct initial performance in in-vivo settings, is correlated with poor implementation outcomes. Results are discussed in terms of training implications for home-based consultants.

#### **10. Increasing Staff Performance of PRT Motivational Strategies Using Staff Self-Management.**

(Applied Behavior Analysis) RACHEL L RODRIGUEZ (Behavioral Support Partnership), Yvonne Bruinsma (Behavioral Support Partnership)

**Abstract:** Providing consistent high quality state-of-the-art interventions for children and their families with ASD in the community can be a challenge. Staff training plays a central role in maintaining high quality standards in the provision of services. Relatively little research has been conducted on the most efficient and effective way to teach staff to implement PRT strategies during direct intervention sessions. Most typical staff training and support in the field consists of initial one to two week training followed by weekly or monthly supervision groups with limited in-field support. This study explores the effectiveness of staff self-management as a tool to increase staff performance of PRT motivational strategies. During the intervention phase, following a short refresher by a supervisor, staff self-monitored their correct use of a PRT technique for 10-minute intervals during a direct intervention session with a child with ASD. A multiple baseline across participants was employed to investigate the efficacy of self-management in improving staff performance. Data suggested improvements across participants and may indicate that self-management is a valuable tool, especially as it requires relatively few supervisory hours for a field with limited resources. Future directions will also be discussed.

#### **11. A Literature Review: Evaluation of Treatment Options for Students who Engage in Ritualistic Behavior.**

(DDA; Theory) HESTER BEKISZ (The Genesis School), Mary Ellen McDonald (Hofstra University), Erin Sparacio (Eden II Programs/ The Genesis School)

**Abstract:** Students diagnosed with Autism Spectrum Disorder often have repetitive and stereotyped patterns of behavior (APA, 1994). These characteristics often overlap with the diagnostic criterion of Obsessive Compulsive Disorder (OCD). OCD is an anxiety disorder characterized by intrusive thoughts, worries and/or repetitive behaviors that individuals engage in to reduce anxiety (APA, 1994). Features such as repetitive behavior and thoughts, ritualistic behaviors and compulsions are common in both disorders. The purpose of this literature review is to examine the current literature base of treatment options for individuals who engage in ritualistic and repetitive behavior. Typical interventions may involve cognitive behavioral therapy, such as exposure and response prevention. This review will examine the research on these treatment options and their effectiveness for students diagnosed with autism who engage in ritualistic behavior. It will also assist in future research in the area of treatment options for ritualistic and repetitive behavior and autism spectrum disorders.

#### **12. The Relative Contributions of Preference and Functionality in Noncontingent Reinforcement Schedules.**

(Applied Behavior Analysis) TAMARA L. PAWICH (Eastern Michigan University), James T. Todd (Eastern Michigan University), Marilyn K. Bonem (Eastern Michigan University)

**Abstract:** Noncontingent reinforcement (NCR), the response-independent delivery of reinforcers, has been demonstrated to be an effective response suppression method for a variety of problem behaviors displayed by children, even when not combined with extinction. The purpose of the current study was to determine whether preference for specific reinforcers in another context led to greater response suppression through an experimental comparison of NCR with a functional reinforcer versus preferred stimuli. Two preschool-aged children with autism and tantrums maintained by tangible reinforcement participated. Preference values were evaluated through paired-choice assessments. Three preferred stimuli were selected for NCR-Preferred experimental conditions, based on varied levels of preference (i.e., highest, lowest, moderate). Results indicated that NCR-Functional and NCR-Preferred had suppressive effects across participants, but the predetermined level of preference did not have an effect. These data provide additional empirical support for the use of NCR without extinction in the treatment of tangibly-maintained behaviors and question the utility of a priori identification of alternative, tangible stimuli via preference assessment.

**13. Effects of Response Restriction and Reallocation on Automatically Reinforced Behavior: An Analogue for Studying Stereotypic Behavior.** (DDA; Applied Behavior Analysis) Regina A Carroll (Saint Cloud State University), John T. Rapp (St. Cloud State University), KENDRA L WICKLAND (St. Cloud State University)

**Abstract:** Response allocation has been studied with both animal and human participants and included one response or multiple responses. Researchers also became interested in the concepts of response restriction and reallocation. In other words, what would happen to baseline levels of responding after restrictions were placed on certain stimuli or operants. Preference assessments provided an easy way to impose restrictions and assess response reallocation. Similar to previous studies, the present study utilized free-operant preference assessments and examined response restriction as a factor affecting response allocation. Unlike previous studies, the restrictions were not placed on the “highly preferred” items, but rather on the “moderately preferred” items. Additionally, instead of continuing the restrictions throughout the assessment, reversals back to baseline conditions were conducted to analyze shifts in response allocation. The purpose of the present study was to determine the effects of restricting access to moderately preferred items. More specifically, the purpose was to determine if shifts in response allocation will occur during free-operant and restricted access conditions and how these results may apply to the conceptual understanding and treatment of stereotypic behavior. Results for two of three participants indicated that the restrictions produced changes in the levels of free-operant responding in the subsequent phases. An additional study placed restrictions on participants high-preference item determined from initial free-operant assessments. For one of the participants, restricting the high-preference item produced increases in engagement with other items. For the two remaining participants all items were restricted except the high-preference item and responding with that item increased during the restriction phases and then returned to initial free-operant levels following the restrictions. Data was collected from an internship project conducted in a local elementary school and the presentation will allow behavior analysts and those aspiring to their degree how to conduct research utilizing behavioral concepts in analogue conditions. Additionally, how the results of such research can further the conceptual understanding and create new ideas for work with individuals in applied settings.

**14. Fading Protective Equipment for a Self Injurious Child with Autism.** (Applied Behavior Analysis) ARIANNA SCATTONE (Alpine learning group), Barbara Hoffmann (Alpine Learning Group), Bridget A. Taylor (Alpine Learning Group), Wayne Fisher (Munroe-Meyer Institute, UNMC)

**Abstract:** Some individuals with autism engage in self injurious behavior (SIB) requiring the use of protective equipment. Some of these individuals seek out the equipment, making it difficult to fade. The participant was a boy with autism with a history of severe SIB (e.g., slapping face, punching ears). Arm splints similar to those worn for orthopedic purposes were used that prevented hand-to-head contact. During times it was necessary to remove the splints (e.g., to complete tasks requiring arm use), the participant repeatedly requested splints and engaged in SIB to have the splints reapplied. The purpose of this study was to shape tolerance of splint removal for increased durations. A preferred reinforcer was reserved for use in sessions during which the participant was required to complete tasks with one splint removed. The participant was asked to make a choice between accessing the splint or continuing to work for the preferred reinforcer. A changing criterion design demonstrated that the participant learned to perform an increased number of responses to complete tasks (e.g., additional pieces of a puzzle) without engaging in SIB. Data also indicated that the participant increased the number of times per session that he chose to work without the splint.

**15. Reducing Stimulatory Behavior with Toys through the use of Structured Play Scripts.** (DDA; Applied Behavior Analysis) KRISTINE FAIS (BEACON Services), Gilah Haber (BEACON Services), Robert K. Ross (BEACON Services)

**Abstract:** The use of toys or other play objects in repetitive or unusual manner, often described as “stimulatory behavior”, is seen in many young children with autism. For many of these children modeling of appropriate toy use or correction procedures for “inappropriate” toy use does not result in reduction of stimulatory behavior or production of adaptive/functional toy use. The current study attempted to directly establish a repertoire of functional play skills with toys using specific play scripts. The goal was to determine if the presence of increased adaptive/functional play skill repertoires with some toys would result in an increase in functional play with untrained toys. The study also assessed rates of stimulatory behavior with

untrained toys. Results indicate that as the repertoire expanded across multiple toys rates of targeted stimulatory behavior decreased in untrained toys. Issues of generalization of skills across materials as well as implications for selection of strategies for addressing problem behavior are discussed.

**16. Assessing and Treating Vocal Stereotypy in a Child with Autism Using Response Interruption and Redirection Procedures.** (VRB; Applied Behavior Analysis) James C. K. Porter (Brock University), JENNIFER ELAINE WATTS (Kinark Child & Family Services)

**Abstract:** Previous research implies that stereotypic behavior may be maintained by the sensory consequences produced by engaging in the response. Ahearn, Clark, MacDonald, and Chung (2007) used verbal response interruption and redirection (RIRD) procedures to decrease vocal stereotypy in children with autism. This treatment resulted in decreased levels of vocal stereotypy, as well as increased levels of appropriate communication. Kodak and Karsten (2008) extended this research by comparing motor and verbal RIRD procedures. Their research showed that both procedures were effective in reducing levels of vocal stereotypy. The current study was designed to replicate the findings of Kodak and Karsten (2008). The purpose of the current study was to evaluate the effectiveness of using gross motor demands to reduce the frequency of vocal stereotypy in a 6 year old boy diagnosed with an autism spectrum disorder. A functional analysis was conducted and following assessment, response interruption and redirection (RIRD) was implemented in an ABAB design to determine whether vocal stereotypy could be successfully redirected. Gross motor demands were presented contingent on the occurrence of vocal stereotypy and were continuously presented until the child complied with three consecutively issued demands without emitting vocal stereotypy. Results are consistent with the findings of Kodak and Karsten (2008) that gross motor based RIRD was successful in reducing the vocal stereotypy. Results are discussed with respect to possible mechanisms associated with the reduction in stereotypy and suggestions for future research.

References:

- Ahearn, W. H., Clark, K.M., & MacDonald, P.F. (2007). Assessing and treating vocal stereotypy in children with autism. *Journal of Applied Behavior Analysis*, 40, 263-275.
- Kodak, T., & Fisher, W. (2008, October). An Evaluation of treatment procedures for reducing vocal stereotypy and increasing functional verbal behaviour. In V.M. Volkert (Chair), *Functional-based interventions: linking assessment to treatment for a variety of problem behaviours*. Symposium conducted at the Third Annual Conference of Educational and Clinical Applications of Applied Behavior Analysis, Omaha, Nebraska.
- Kodak, T., & Karsten A. (2008, May). An Evaluation of Treatment Procedures for Reducing Vocal Stereotypy and Increasing Functional Verbal Behavior. Presented at 34th Annual Applied Behavior Analysis (ABA) International Convention, Chicago, Illinois.

**17. A Comparison of Treatments Using RIRD to Reduce Hand Stereotypy.** (Applied Behavior Analysis) KRISTEN COPELAND (Spectrum Intervention Group), Jonathan R Pehleman (Spectrum Intervention Group), Lynne Thibodeau (Spectrum Intervention Group)

**Abstract:** Stereotypy behaviours can interfere with a person's ability to acquire skills, as well lead to social stigmatization. Current research suggests that response interruption and redirection (RIRD) procedures may be helpful in reducing stereotypy. The purpose of this research is to determine if RIRD will reduce stereotypy for two learners with ASD. The topography of the learners' stereotypy takes the form of inappropriate gestures with their hands (for example, hand flapping and leg rubbing). For the 8 year old learner, an RIRD procedure will be implemented throughout the entire session. Every time the learner engages in hand stereotypy, he will be directed to engage in three consecutive tasks with his hands. Preliminary rate per minute data suggests that this procedure is reducing the rate of inappropriate hand stereotypy across the session. For the 4 year old learner, a similar procedure will be used, however, the procedure will only occur in designated locations of the house for a set period of time. Preliminary data indicates that hand stereotypy has decreased in these settings. Rate per minute data will be collected to determine if the decrease has generalized to different locations throughout the therapy session.

**18. Examining Classroom Rotation Schedules for Elementary Students with Autism Spectrum Disorders.** (EDC; Applied Behavior Analysis) STEPHANIE A NORGDARD (Southern Illinois University),

Mark R. Dixon (Southern Illinois University), Sarah M. Dunkel (Southern Illinois University), Michael Bordieri (Southern Illinois University Carbondale), Susan Szekeley (Illinois Center for Autism)

**Abstract:** Transitioning between environments and activities has been a challenge for many children with autism spectrum disorders. Many schools opt to limit the number of transitions necessary for this population. The purpose of this study was to compare varying lengths of classroom rotation schedules and their effects on engagement, frequency of crisis interventions and the stress level of staff in a school for students with autism spectrum disorders. Using an A-B-A-B withdrawal design, the existing 30 minute rotation of eight elementary classrooms was compared with a less frequent 60 minute rotation schedule. The results and implications of rotation schedules on classroom set up and staff performance will be discussed.

#### **19. Using a Fading Procedure to Increase the Practicality of Response Blocking as Treatment.**

(Applied Behavior Analysis) MELISSA COCO RAYMOND (University of Houston, Clear Lake), Dorothea C. Lerman (University of Houston-Clear Lake)

**Abstract:** Response blocking has been found to be an effective treatment for various forms of problem behavior. However, few studies have examined ways to successfully fade this intervention. The purpose of this study was to assess the generality of response blocking as a treatment for self-injurious behavior (SIB) maintained by automatic reinforcement and to examine a method for fading response blocking. A 6-year-old boy diagnosed with autism participated. First, a reversal design was used to demonstrate the effects of response blocking on SIB and toy play. Next, the intervention was faded by increasing the distance between the participant and the therapist until the therapist remained 5 feet away from the participant when not blocking. Results showed that blocking produced substantial decreases in SIB and concomitant increases in toy play. Furthermore, rates of SIB remained low throughout the fading process, and the results generalized to a novel setting and novel therapist.

#### **20. Investigating the Effectiveness of Functional Communication Training To Reduce Problem Behavior Maintained by Escape-to-Attention.**

(Applied Behavior Analysis) JANA SARNO (The University of Southern Mississippi), Heather Sterling-Turner (University of Southern Mississippi), Daniel H. Tingstrom (The University of Southern Mississippi), Sara S. Jordan (University of Southern Mississippi)

**Abstract:** The goal of a functional behavior assessment (FBA) is to help build intervention plans that focus on redesigning the classroom environment and building new skills that make problem behavior ineffective, irrelevant, and inefficient (Horner & Carr, 1997). Incorporating a functional analysis into the FBA process has been found to be an effective approach for the assessment and treatment of problem behavior in the school setting (Hanley et al., 2003). With the integration of the functional analysis methodology into the school setting, questions are being raised about the utility of traditional functional analysis conditions. To address these questions, procedural variations and the need to examine idiosyncratic variables is recommended. The current study sought to replicate and extend the findings of Mueller, Sterling-Turner, and Moore (2005) and Sarno (2007) of the functional analysis condition, escape-to-attention (ETA), as an alternative for assessing for problem behavior in the classroom. A secondary aim was to investigate subsequent treatment implications for the ETA condition, specifically investigating the effects of functional communication training (FCT) on rates of problem behavior. Finally, the limitations of the present study and future directions for functional analysis research in the schools will also be discussed.

#### **21. Clinic and School-Based Evaluation and Treatment of Stereotyped Behaviors.**

(EDC; Applied Behavior Analysis) TODD G. KOPELMAN (University of Iowa - Hospitals and Clinics), Joel Eric Ringdahl (University of Iowa), Tory J. Christensen (University of Iowa), David P. Wacker (University of Iowa), Wendy K. Berg (University of Iowa), Carrie Mitchell (Lincoln Elementary School)

**Abstract:** Repetitive behaviors, such as hand-flapping, rocking, and acontextual vocalizations, can significantly interfere with a child's ability to learn and to interact with peers. This poster describes clinic and school-based evaluation and treatment of a child's stereotyped behaviors. In clinic, a functional analysis indicated that hand flapping and other repetitive behaviors were maintained by automatic reinforcement. Behavior maintained by automatic reinforcement can be difficult to successfully treat because the specific maintaining variables cannot be identified. In this case, treatment, consisting of differential reinforcement of

appropriate behavior and response cost, resulted in a substantial decrease in stereotyped behavior relative to a noncontingent reinforcement baseline. Upon completion of the clinic evaluation, the child's teachers implemented a variant of the procedures and observed a substantial decrease in stereotyped behavior. Data from both settings will be displayed. Interobserver agreement was calculated for at least 20% of all clinic sessions and averaged above 90% for all dependent measures.

**22. Decreasing Severe Unwanted Behavior Using a Comprehensive Structured Behavioral Program in a Student with Autism.** (Applied Behavior Analysis) REBECCA RUBIE (Judevine Center for Autism), John M. Guercio (Judevine Center for Autism)

**Abstract:** The prevalence of severe unwanted behavior in the autism population is high given the communication challenge present in the disorder. This project involved a 19-year-old student with autism who displayed severe unwanted behavior including aggression, property destruction, SIB, and interfering behavior in a specialized autism classroom. He had not been in a formal school setting for several years due to difficult behaviors. During baseline, reported rates for aggression occurred an average of 5 incidents/day; the rate of property destruction was 7 per day; an average of 23 reported incidents of SIB per day and an average of 44 reported incidents of interfering behaviors. A comprehensive structured behavioral program was implemented to include reinforcement schedules for appropriate behaviors, environmental restructuring, communication training, staff training related to consistency of behavioral programming, and an ultra high risk supported area. After the introduction of the various components of the treatment plan, the student's rates of severe behaviors decreased over time. After one year, the student's rates dropped to an average of less than 1 reported incident/day of property destruction; an average of 9 reported incidents of SIB per day; 2 reported incidents of aggression per day and 10 reported incidents of interfering behaviors per day.

**23. Use of Self-monitoring to Reduce Disruptive Behavior.** (Applied Behavior Analysis) STEFANIE FILLERS (May Institute), Hilary Collins (May Institute), Lara Bollinger (May Institute), Hanna C. Rue (The May Institute)

**Abstract:** The purpose of the study was to reduce disruptive behavior through training the use of a self-monitoring checklist. The participant in the study was a 19-year-old male with a diagnosis of autism enrolled in a private school for students with developmental disabilities. Sessions took place across 3 school settings: the hallway, the cafeteria, and the music room. The participant was trained to mark the occurrence or non-occurrence of a behavior in a self-monitoring book. Student earned a specific reward for nonoccurrence of behavior in the specified setting. Effectiveness of the intervention was evaluated using a multiple baseline across settings design. Data were collected on occurrence and non-occurrence of the target behaviors. Results indicate that training the use of the self-monitoring checklist was effective at reducing the target behaviors to near-zero levels.

**24. Person-Centered Transition Planning for Individuals with ASD: A Pilot Study.** (EDC; Service Delivery) XIUCHANG HUANG (Duquesne University), John J. Wheeler (Tennessee Technological University), Jie Zhang (SUNY Brockport)

**Abstract:** This research project is a pilot study. It investigates how to employ transitional supports and services to build an effective transition model through person-centered planning to help adolescents and young adults with ASD obtain competitive community-based employment, so that they are able to enjoy a rich, productive and high-quality lifestyle, reflecting their individual preferences, interests, strengths, and self-determination. This project offers the participants the following transition support and services based on individual needs: vocational assessments and vocational training, work-related social skill training, and daily functioning skills training. A total of 10 individuals with ASDs aged between 13 to 21 years old participate in this pilot study for 18 months. The researchers conduct both formative and summative assessments in order to (a) ensure training integrity during the process of implementing this project; and (b) document these individuals' progress over time using both quantitative and qualitative data. This project aims to achieve the following positive outcomes in participants: (a) improve vocational, social, and daily functioning skills; (b) decrease challenging and repetitive behaviors; (c) improve self-determination in decision making and self-advocacy; and (d) improve overall quality of life.

**25. Exploring Differential Rates of Language Acquisition in Response to Early Intensive Behavioral Intervention in Young Children with Autism.** (Applied Behavior Analysis) SARAH KURIAKOSE (UC Santa Barbara), Shannon Barnard (UC Santa Barbara), Natalie Helms (UC Santa Barbara), Lynn Kern Koegel (University of California, Santa Barbara), Robert L. Koegel (University of California, Santa Barbara)

**Abstract:** Young non-verbal children with autism have differential rates of language acquisition in response to early intensive behavioral treatment. Studying rate of treatment response provides information about treatment effectiveness as well characteristic patterns of language acquisition in this population. Twenty-two non-verbal children with autism between the ages of 20 and 45 months received 200 hours of Pivotal Response Treatment, including a parent education component. Ten minute video probes with a parent or clinician were taken once every ten hours of intervention. Independent blind observers scored probes for expressive communication used functionally by the child. These probes were scored for number of utterances, number of diverse utterances, percent of self-generated utterances, and number of self-generated diverse utterances. This study examined number of hours of intervention to standard communication milestones. Preliminary data are available on profiles of children who responded earlier and later as well as acquisition of different language skills (diverse utterances vs. self-generated utterances).

**26. Intensive Behavioural Intervention for Preschool-age Children with Autism Spectrum Disorders: Some Retrospective Analyses.** (Service Delivery) LESLIE THORNE (University of Manitoba and St. Amant), Daniela Fazzio (University of Manitoba and St. Amant), Dickie C. T. Yu (St. Amant Research Centre and The University of Ma), Angela Cornick (St. Amant)

**Abstract:** Applied behavior analysis (ABA) is considered the most effective intervention for children with Autism. The ABA Preschool Program at St. Amant provides 31 hours per week of one-to-one intensive behavioral intervention and provides training for 5 hours of parent led intervention. The service is available for up to 3 years. The ABA team consists of a Consultant, Senior Tutor, and Tutors. Prior to the start of intervention, children are assessed on measures of adaptive, cognitive, language, motor skills, as well as autism characteristics and severity. All assessments are administered at intake and repeated each year the child is receiving services. The outcome data are used by the ABA Program to evaluate service outcomes on children's abilities. We examined potential predictors of outcome for approximately 50 children. Specifically, we examined whether autism severity, age, adaptive, and cognitive skills at intake are significant predictors of personal-social skills (Battelle Developmental Inventory), communication (Preschool Language Scale 4th Edition), maladaptive behaviors (Scales of Independent Behavior Revised), and skill acquisition (Assessment of Basic Learning and Language Skills, ABLLS) after one year of intensive behavioral intervention.

**27. Longitudinal Program Outcome Evaluation of the St. Amant ABA Program.** (Applied Behavior Analysis) DUONG NGUYEN (University of Manitoba & St. Amant Research Centre), Toby L. Martin (University of Manitoba & St. Amant Research Centre), Dickie C. T. Yu (University of Manitoba & St. Amant Research Centre)

**Abstract:** The St. Amant Research Centre is conducting a 5-year longitudinal study. Participants will be 50 children with Autism Spectrum Disorders (ASDs) who have completed the St. Amant Preschool Applied Behaviour Analysis intensive behavioural intervention program (ABA program), and 35 children with ASDs who have not received ABA treatment. The primary objectives of the study are to describe the developmental trajectories of the children in cognitive, communication, social, behavioural, and academic domains; examine relations between child outcomes in the above domains and how they relate to factors such as the learning environments at school and home, diagnosis, developmental characteristics, past learning in any treatment programs they may be in, and parent stress; and compare the developmental trajectories of the two groups of children. Direct and indirect child, parent, and teacher assessment measures are administered either annually or quarterly to provide academic and instructional program information. Preliminary follow-up data of participants who have completed the St Amant Preschool ABA program suggest that gains made during treatment maintained into their school years. This project will contribute to the existing literature by providing a better understand of the long-term impact of ABA treatment and it may help to improve early intervention programs.

### **28. Effectiveness of Direct Instruction Programming with Children Diagnosed with ASD:**

**Preliminary Findings.** (Applied Behavior Analysis) DANIELLE W. BRADLEY (Marcus Autism Center), M. Alice Shillingsburg (Marcus Autism Center), Amber L. Valentino (The Marcus Autism Center), Erika James (Marcus Autism Center)

**Abstract:** Although some children diagnosed with ASD develop functional communication, difficulties with complex language and social communication may persist. Thus, the primary impairments may be seen in the use of tense, prepositions, pronouns, reciprocal conversations, and responses to the complex language of others. Language requiring inferences of causality, sequencing, abstract reasoning, and comprehension often pose an additional challenge. Given the most recent prevalence estimates by the CDC of 1 in 150 children and the dearth of trained professionals offering intervention to children with ASD, it is even more important to evaluate the effectiveness of widely accessible and easy to implement methods of intervention, particularly those requiring a relatively small amount of training time. Direct Instruction is an empirically supported curriculum designed to teach these complex language skills to children and has been used successfully with children from impoverished backgrounds and those with learning disabilities, speech and hearing impairments, and most recently with developmental disabilities. The purpose of the present study is to evaluate the effectiveness of Direct Instruction with children diagnosed with ASD.

**29. Increasing the Duration of Tooth Brushing in an Adolescent with Autism.** (TBA; Applied Behavior Analysis) NATHAN C. HAHN (BEACON Services), Joseph M. Vedora (BEACON Services)

**Abstract:** Appropriate tooth brushing habits are an essential element of oral hygiene and overall health. The American Dental Association recommends brushing thoroughly (2 minutes) at least twice daily. This study was designed to evaluate the effectiveness of using a visual/auditory cue (a timer) and contingent access to reinforcement to increase the duration of tooth brushing for a 13-year-old boy diagnosed with Autism. Training sessions involved setting the timer for a pre-determined amount of time and giving the instruction "Brush your teeth", at which point the student was required to brush continually until the timer sounded. The duration was systematically increased until the student independently brushed for two minutes. Additionally, when the duration requirement was reached a new toothbrush with an automatic run interval (i.e., the brush automatically turned off after 2 minutes) was introduced, and use of the timer was no longer required to maintain brushing for the target duration. Maintenance of the skill was assessed at one and three month intervals.

**30. Teaching a Child with Autism to Mand for Assistance: Effects of an Audiotaped Prompt.** (DDA; Applied Behavior Analysis) JAIME M. SCHILLING (Alpine Learning Group), Joanna Reyes (Alpine Learning Group), Bridget A. Taylor (Alpine Learning Group)

**Abstract:** Due to social and language deficits, individuals with autism may have difficulty learning to approach an adult to ask for help. This skill deficit may impact their ability to seek assistance when necessary. A multiple baseline design across tasks was used to assess the effects of an audiotaped prompt on the assistance seeking skills of a 10 year old girl with autism. Graduated guidance was used to teach the participant to approach an adult and an audio taped stimulus was used to prompt the participant to ask for help with the target task. Data indicated the participant did not initially seek out the adult and ask for assistance. With the introduction of the audio taped prompt and systematic prompt fading, assistance seeking skills increased for all tasks. Results indicated that after intervention the participant was more likely to approach an adult to request assistance when she was unable to complete a task. Interobserver agreement and procedural integrity data were calculated for at least 30% of sessions and was 100%.

**31. A Systematic Desensitization Intervention to Treat Hypersensitivity to Haircuts in Children with Autism.** (Applied Behavior Analysis) Daniel Adam Openden (Southwest Autism Research & Resource Center (SARRC)), Robert L. Koegel (University of California, Santa Barbara), Lynn Kern Koegel (University of California, Santa Barbara), BETHANY DEMORE CHADD (Southwest Autism Research and Resource Center)

**Abstract:** Many parents report that their children with autism exhibit extremely negative reactions in response to getting their hair cut. Previous research has shown success in decreasing negative behaviors in

response to auditory stimuli such as vacuums, blenders and toilets using systematic desensitization procedures (Koegel, Openden, & Koegel, 2004). Desensitization procedures were replicated in the current study to decrease hypersensitivity to haircuts in three children with autism and evaluated using multiple baseline and changing criterion designs. Data were collected on the mean level of anxiety in three-minute intervals, as well as the number of hierarchical steps completed at a comfortable level per probe. The data indicate that desensitization procedures were successful in reducing hypersensitivity to haircuts. These findings extend those in Koegel, Openden, & Koegel (2004) and suggest that the children's negative reactions may be more related to a phobia than to hypersensitivity with haircut stimuli.

**32. Child Safety: A Comparison of Parent and Educator Perspectives on the Safety Needs of Children with and without Autism Spectrum Disorder.** (DDA; Applied Behavior Analysis) RACHEL N STRAUB (Binghamton-SUNY), Raymond G. Romanczyk (Institute for Child Development)

**Abstract:** According to the Centers for Disease Control and Prevention, unintentional injuries are the number one cause of hospitalization and death for children over the age of one in the United States (2004). Most serious injuries for this age group occur either in the home or community, but about 10-25% of minor unintentional injuries occur at school (CDC, 2001). Previous research has focused primarily on parent report to assess safety concerns and injury rates for children in the home, but few researchers have investigated these variables through educator report in school settings. Further, there is a lack of current research concerning injury rates and safety concerns for children with ASD in both home and school settings, even though children with mental or developmental disabilities have been found to be more likely to experience nonfatal injury, with greater severity, than non-disabled peers (Xiang, et al., 2005). The purpose of this poster is to present data from a recent study conducted at the Institute for Child Development comparing the perspectives of parents and educators regarding safety needs of children with and without ASD in home and school settings. Future directions will be discussed, including methods for assessing injury risk through parent and educator report.

**33. A Case Study: An Application of Rapid Toilet Training for an Adolescent with Autism.** (Applied Behavior Analysis) SHARON E. BAXTER (The Children's Foundation), Stephanie R Price Evans (The Children's Foundation), Julia Plummer (The Children's Foundation), Richard M. Foxx (Pennsylvania State University)

**Abstract:** Incontinence can be a major quality of life issue for individuals diagnosed with Autism. The negative social impact of incontinence is exacerbated by the age of the individual and the severity of autism affecting the individual. The current case study was an application of the rapid toilet training method introduced by Azrin and Foxx (1971) with an adolescent male who demonstrated severe aggression, property destruction and self-injury. Treatment was delivered in the male's residence, an Applied Behavior Analysis Teaching Home, staffed with a one to one instructor to student ratio. The student was 15 years of age and had experienced multiple failed attempts at toilet training previous to admittance to the Teaching Home. Severe aggression towards others, property destruction and self-injurious behaviors were demonstrated by the student and had presented as obstacles to successful toilet training in the past. A systematic shaping procedure based upon the key elements of the Azrin and Foxx method which included increasing fluid intake to increase the frequency of opportunities to urinate, contingent positive reinforcement for voiding, overcorrection for accidents, extinction of aggression, property destruction and self-injury and cleanliness training were employed. Treatment resulted in a reduction of accidents to zero. Stimulus control of the underpants generalized to nighttime and a reduction of overnight accidents to zero-levels was observed. Maintenance of independent toileting behaviors were observed at more than 12 months post-treatment, after levels of reinforcement for independent toileting had been reduced to zero.

**34. A Literature Review: Teaching Sexual Awareness and Sex Education to Adolescents and Young Adults in a Group Home.** (Applied Behavior Analysis) WILLIAM J. DONLON (Eden II/ Genesis School), Hester Bekisz (The Genesis School), Mary Ellen McDonald (Hofstra University), Peter F. Gerhardt (Organization for Autism Research)

**Abstract:** "Appropriate education in sexuality is critical to the development of a person's positive self-esteem. The development of a healthy self-image may overcome potential feelings of depression and loneliness for

the person with autism." (Koller,2000) "For young people with autism spectrum disorders (ASD), social expectations are typically a mystery. This becomes a particular problem as they approach puberty. Individuals with autism typically do not model others successfully and are able to figure out what they need to do by following the example of others. They have difficulty processing auditory information and the inability to understand social rules. They need information presented in a clear, concise and simple way at their level of comprehension." (Satter, 2007) The purpose of this literature review is to examine the current literature base of sexual awareness and sex education in young adults and adolescents with autism. The review will assist in future research in the area of sex education and autism spectrum disorders.

**35. A Fluency Program Using the “Big 6+6” to Improve Toothbrushing Skills for Children with Autism.** (CBM; Applied Behavior Analysis) ERICA CHRISTINE LIDDICOAT (The Chicago School of Professional Psychology), John W. Eshleman (The Chicago School of Professional Psychology)

**Abstract:** Children with autism may experience more dental problems due to oral sensitivities around the mouth, diet, difficulty accessing dental care, and difficulty brushing. Tooth decay can attack the teeth at any age, in fact, 84% of 17-year-olds have the disease and 60% of 15-year-olds experience gingivitis, the first stage of gum disease (Nemours Foundation, 2008). Tooth decay can cause severe pain and result in tooth loss. Losing teeth affects how you look and feel about yourself as well as your ability to chew and speak. The participants were school-age students who attended a school that provides services children with autism. The students age range from 8 to 22. Fluency training of the “Big 6+6” was used to improve the fine motor movements required for toothbrushing (reach, twist, place, grasp, squeeze, release, push, pull). Data to be collected and will be presented on Standard Celeration Charts.

Keywords: fluency, “Big 6+6”, dental hygiene, autism

**36. Effect of Group Life-Adaptation Activity to Increase Self-Help Skills for Children with Autism.** (DDA; Service Delivery) JEONGIL KIM (Lotus Flowers Children Center & International Soci), Yunhee Lee (Lotus Flowers Children Center & International Society of Awareness), Jung Yeon Cho (Daegu Cyber University, Korea)

**Abstract:** This study examined the effect of group activity focusing on life-adaptation training in real situations to increase daily routine self-help skills for children with autism. Nine of children with autism, attending elementary school, participated in the study. The intervention program consisted of a packet of structured daily routine skills training, using community resources training, and recreation training in a 3 to 4 member group. The results showed that the life adaptation including self-help skills, positive behavior expression, and anger management with all the subjects.

**37. The Use of Bluetooth Technology to Promote Independence and Social Acceptance in Adolescents with Autism.** (EDC; Applied Behavior Analysis) GLORIA M. SATRIALE (PAAL), Kaori Nepo (PAAL), Louis M Chance (Chester County Intermediate Unit)

**Abstract:** Community based instruction is a complex process made more complicated by the stigma associated with overt and conspicuous levels of prompting. Historically, the use of assistive technology has been limited. A variety of modes of technology commonly utilized in society are available that can be used to increase independent responding in the community and reduce the stigma associated with instructions in community programming. The current research study investigated a method by which the stigma associated with such overt level of prompting could be reduced through the use of Bluetooth technology and a remote cell phone. The participant was 16 year-old male student diagnosed with moderate to severe autism. In the present study, the multiple baseline treatment design was used across behaviors for the purchasing sequence, including locating item, waiting in the line, and paying for the item with a credit card. Verbal prompting was implemented by utilizing a Bluetooth technology and a remote cell phone across behaviors to complete the purchasing sequence in a local drug store. Results indicated that the Bluetooth technology and a remote cell phone had positive effects on decreased level of gestural prompts, increased distance between the participant and the instructor, increased levels of social acceptance, and increased levels of independence.

**38. Implementing Peer-to-Peer Manding Sessions for Non-Vocal Preschool Children Diagnosed with Autism Spectrum Disorder.** (Applied Behavior Analysis) SUZANNE TAYLOR (Autism Concepts, Inc.), Nancy J. Champlin (Autism Concepts, Inc.)

**Abstract:** Mand Training is a set of teaching procedures that focus on altering the MO to evoke verbal behavior (Sundberg & Partington, 1998). Teaching children to mand for preferred items is most successful when taught under a variety of environmental conditions (Sundberg & Michael, 2001). This study was designed to demonstrate that non-vocal children with autism spectrum disorders can spontaneously mand to multiple peers for preferred items. Participants include 2 non-vocal boys, ages 4.3-5.5, diagnosed with autism spectrum disorders. The boys are enrolled in an Applied Verbal Behavior center-based program. Participants were taught signs for preferred food items prior to the initiation of peer to peer manding. Training was conducted throughout their daily one-on-one direct instruction sessions. Peers on the autism spectrum were trained to respond and provide the requested edible reinforcer when the target child used the appropriate sign and/or vocal approximation during the timed sessions. Results of the study demonstrate that non-vocal children can independently mand to multiple peers for edible reinforcers using signs and/or vocal approximations.

**39. An Evaluation of Total Communication vs Vocal Alone for Teaching Vocal Labels and Improving Vocal Articulation in a Boy with Autism.** (VRB; Applied Behavior Analysis) BEVERLEY JONES (Bangor University)

**Abstract:** Total Communication (TC) and Vocal Alone (VA) are two teaching approaches used to facilitate vocal responding with children with language delays and autism. TC involves the simultaneous use of the manual sign and the spoken word; VA involves the use of the spoken word only.

This single subject study aimed to compare the two approaches using an alternating treatment design to find which condition produced the fastest and most effective acquisition rate of vocal tacts to a minimally verbal echolalic child with autism. Additionally, an evaluation of the collateral effects of both conditions on articulation of speech was also conducted. Likert scales were used to measure articulation, with transcription of the spoken word conducted by a trained Speech and Language Therapist (SALT). An errorless teaching procedure was implemented throughout the study, with a token system signalling the availability of reinforcement to decrease the probability of stress for the participant. Results indicated that the TC condition produced six times as many more vocal tacts than the VA condition; this is considered to be due largely to the additional use of the manual sign. Following analysis of the results in the articulation phase of the study; outcomes from the Likert scale and SALT assessment proved inconclusive.

**40. A Comparison of the Instructional Time for Two Tact Instruction Procedures with Adolescents with Autism.** (VRB; Applied Behavior Analysis) LESLIE MARGARET CANHAM (The Chicago School of Professional Psychology), Charles Merbitz (Chicago School of Professional Psychology), Denise E. Ross (Chicago School of Professional Psychology)

**Abstract:** This study investigated the instructional time required for adolescents with autism to acquire tacts using two different instructional procedures. The experiment compared the Accelerated Independent Learner (AIL) model used in the Comprehensive Application of Behavior Analysis (CABAS) educational model and the AIL model with Precision Teaching components. Intensive Tact Instruction (ITI) was used in the AIL alone condition. A yoked control comparison, over 5 sets of curricular materials counterbalanced for difficulty, was used to measure AIL/ITI procedures against AIL with Precision Teaching components. Data were collected on the number of correct and incorrect responses to probe trials and the teaching time required for mastery using the AIL/ITI method, and the frequency of correct and incorrect responses to timed probe trials using the AIL model with Precision Teaching components. Results will be discussed in terms of the number of tacts acquired and the rate of responding, when instructional time was held constant, using the AIL/ITI method and the AIL model with Precision Teaching components.

**41. Teaching "Social Referencing" in Children with Autistic Disorders.** (EDC; Applied Behavior Analysis) HITOMI KUMA (Keio University, Japan), Yoshiko Hara (Keio University), Yuno Takeuchi (Keio University), Nozomi Naoi (Keio University), Hiroshi Sugawara (Keio University), Jun'ichi Yamamoto (Keio University, Japan)

**Abstract:** Social referencing, a form of nonverbal communication, involves looking for stimulus produced by other person in an ambiguous situation in order to respond in a way that produces reinforcement. In this study, we taught “social referencing” to three young children with autistic disorders by prompt and deferential reinforcement. They were 4–5 years old. In intervention, we made ambiguous situation by using 3 un-transparent plastic jars. Only one jar had a snack or toy and others were empty. Subjects were required to select a jar by observing a facial expression (a smile and frown) presented by adult, when they didn’t know which jar had reinforcement. When they selected the jar with an adult smile face, they found reinforcement in that jar. When they selected the jar with a adult frown, they found that the jar was empty. Target behavior was spontaneous social referencing and behavior shift as to facial expression (for example, the jar with a smile/open / the jar with a frown? shift to other jars). As result, they learned spontaneous social referencing and behavior shift. And all skills were generalized to untrained facial expression and situations.

**42. Social Stories and Students with ASD: A Review of the Literature.** (DDA; Theory) NANCY PHILLIPS (The Genesis School), Mary Ellen McDonald (Hofstra University), Erin Sparacio (Eden II Programs/ The Genesis School), Geoffrey D. DeBery (The Eden II School)

**Abstract:** Social stories (originally developed by Carol Gray) have been used to promote a variety of skills in students with autism spectrum disorders. Specific areas that have been targeted include: pro-social behavior (Delano & Snell, 2006), self-help skills and maladaptive behaviors. In addition to being used to increase social competence in students with autism spectrum disorders they have also been used to decrease problem behavior and increase appropriate behavior (Kutter, Myles & Carlson, 1998). As social stories are becoming more widely used in clinical settings with individuals with autism spectrum disorders, it is important to assess the efficacy of the treatment through rigorous research. The purpose of this literature review is to examine the current literature base of social stories and determine the efficacy of their use thus far as well as the parameters that may play a role in their effectiveness for students with autism. The current literature review will provide ideas for possible future research in the area of social stories and autism spectrum disorders.

**43. Comparison of Effects Using Picture and Video Prompting on Task Performance by Students With Autism.** (Applied Behavior Analysis) LINDA MECHLING (University of North Carolina, Wilmington)

**Abstract:** Although static pictures and video technology have each been demonstrated to be effective in teaching skills to students with autism and prompting task completion, the question remains whether one system is more effective for some learners. Whereas only a small number of studies have compared the effectiveness of the two strategies, the purpose of the study presented in this International Poster Session was to compare the effectiveness of static photographs and video prompts on the task performance of six young men with autism. An adapted alternating treatment design with baseline, comparison, withdrawal, and final treatment conditions was used to measure the percentage of tasks completed independently by each participant across the two treatments. Results indicated that both procedures were effective in increasing correct performance of tasks for each student when compared to baseline levels (verbal task directions). Results further indicated that each participant correctly completed a greater number of tasks when using video prompting compared to static pictures and increased his level of performance during the final treatment phase when using video prompting with sets of tasks receiving static picture prompts during the comparison phase. Overall results support video technology as a means for providing visual supports to students with autism.

**44. Facilitating Video Modeling via a Portable Handheld Device.** (DDA; Service Delivery) D. REED BECHTEL (Bechtel Behavioral Services), Sue Heatter (Sue Heatter & Associates)

**Abstract:** “Visual learners” is a term often used to describe the learning style of individuals on the autism spectrum. One methodology that specifically utilizes this strength is visual modeling. A recent review and meta-analysis (Bellini & Akullian, 2007) has indicated video modeling is an efficient and effective approach to teach a wide variety of skills to individuals on the spectrum. In addition, it has been used to teach alternatives to inappropriate behavior and to assist in the reduction of behavioral excesses.

This poster provides information regarding the use of an iPod© to facilitate video modeling and prompting in the natural environment. A three stage acquisition program is described in which a 16 year old male with autism learned to imitate in response to a variety of modeled responses presented on a computer. The scenes were transferred to an iPod and the student again responded until mastery was achieved in the training environment. The iPod then was used to prompt the student to imitate the model while in the actual community environment in which the behaviors were to occur. Discussion of issues in the application of the technology in social, recreational and vocational environments is provided.

**45. Video Self-Modeling to Teach Classroom Rules to Two Students with Asperger's.** (EDC; Service Delivery) SONIA DENISE BAKER (The University of Texas at Austin), Russell Lang (University of Texas at Austin), Mark F. O'Reilly (University of Texas at Austin), Karrie Shogren (The University of Texas at Austin)

**Abstract:** Classroom rules are an integral part of classroom management. Children with Asperger's may require systematic instruction to learn classroom rules, but may be placed in classrooms in which the rules are not explicitly taught. A multiple baseline design across students with probes for maintenance after the intervention ceased was used to evaluate the effectiveness of a video self-modeling (VSM) intervention to teach classroom rules to two children with Asperger's. Results indicated that each of the children improved in their ability to recite classroom rules following the VSM intervention. These results were maintained for both students at 12 weeks post-intervention. The findings of this study suggest that VSM is an effective tool for teaching children with Asperger's classroom rules.

**46. Using Embedded Rules to Enhance Videotaped Modeling to Teach Vocational Skills to Young Adults with Autism Spectrum Disorders.** (DDA; Applied Behavior Analysis) KEITH D. ALLEN (Munroe-Meyer Institute), Diana Renes (University of Nebraska - Omaha), Dustin Wallace (Mayo Clinic), Raymond V. Burke (The Prevention Group)

**Abstract:** Individuals with Autism Spectrum Disorders experience unemployment and underemployment because of difficulties responding appropriately to the social and environmental demands of the workplace. An initial investigation suggested that videotaped modeling can teach some vocational skills to individuals with Autism. This investigation extended that research by evaluating whether embedded rules could enhance the effects of video modeling to teach vocational skills. Participants were 3 young adults, ages 18-22, diagnosed with Autism Spectrum Disorders. Participants were asked to wear an inflatable costume as a part of the event to promote sales and new products in a large discount retail store. In a multiple baseline design across subjects each participant was directly observed before and after watching a 6 minute videotape showing both scripted and naturalistic models of the vocational skills required of individuals wearing the costumes (e.g. waving, shaking hands, giving "hi fives", jumping, and wiggling various body parts such as ears, eyes, tail, and tongue). The embedded rule "In this situation, you should do the same" was paired with the naturalistic models. Results revealed that the participants quickly acquired the targeted vocational skills after watching the videotaped model, that the participants and parents found the "job" to be highly rewarding, and that the employers rated the participant performances as competent. Implications are discussed.

**47. Teaching Self-Help Skills: A Comparison of Video Modeling and In-Vivo Prompting.** (EDC; Applied Behavior Analysis) SOLIDA H. MEKPONGSATORN HOUL(California State University, Los Angeles), Shane To (SEEK Education, Inc.), Hank Schlinger (California State University, Los Angeles)

**Abstract:** The purpose of this study is to compare the effectiveness of video modeling and in-vivo prompting in teaching self-help skills to three children with autism. In particular, speed of acquisition and generalization across persons and stimuli will be examined. The time and cost efficiency of both teaching techniques will also be considered. The participants will be two males and one female, six to seven years of age, with a diagnosis of Autistic Spectrum Disorder. Each child will be presented with two tasks (making a peanut-butter and jelly sandwich and making a bed), and the effectiveness of teaching these tasks by video modeling and in-vivo prompting will be assessed within a multi-element design. The participants will be shown a video of a typical developing peer performing each task. All three children will also be exposed to in-vivo

prompting of both tasks by the experimenters or an Applied Behavior Analysis trained technician. The number of presentations of each task and acquisition data will be collected.

**48. The Comparison of Video Self-Modeling and Video Peer-Modeling and their Effects on Skill Acquisition and the Duration of Viewing the Videos.** (EDC; Applied Behavior Analysis) KATIA PULLENAYEGAM (SEEK Education, Inc.), Allegra C Turner (SEEK Education, Inc)

**Abstract:** The purpose of this study is to compare two prompting techniques: video self-modeling (VSM) and video peer-modeling (VPM) and their effects on rate of skill acquisition of two self-help tasks as well as duration of viewing of the videos by the participants. This study will implement an alternating treatments design. There are three male participants in this study, with the age range from 5 to 8 years old, who are performing two self-help tasks (i.e., making a cup of noodles, and packing the backpack). Each participant will be shown a video of the VSM performing the tasks as well as a VPM consisting of a typically developing peer performing the same tasks. The mastery criteria for these tasks are established at 80% independence, for three consecutive days. In addition, frequency and duration data will be collected during the observation to determine the length of time each participant is looking at the screen. Furthermore, the VPM footage will be shot with a typical-developing child similar to the participants' age range. All of the participants are diagnosed with Autism Spectrum Disorder and have fulfilled the prerequisite skill criteria for the self-help tasks in the Assessment of Basic Language and Learning Skills-Revised (ABLLS-R) categories.

**49. Scene Video Modeling versus Point of View Video Modeling: A Direct Comparison.** (TBA; Applied Behavior Analysis) ERIN MANGINI (BEACON Services), Robert K. Ross (BEACON Services)

**Abstract:** Video modeling involves videotaping an individual perform a target skill and then having the participant view the video and perform what was viewed. Research shows that video modeling may be more effective than in-vivo modeling for teaching a variety of skills. (Charlop-Christy, Le & Freeman, 2000). One form of video modeling, point of view video modeling (POV) , involves the experimenter carrying the video camera at eye level to show the participant how the skill is performed, as though they were completing the target skill. Another variation of video modeling is Scene Video Modeling (SVM), which involves videotaping the experimenter or other model completing a task from a distance that enables the entire condition to be observed. Little data exists comparing the relative effectiveness of the two procedures. In this study a play skill routine was videotaped using both VM formats. Subjects were assessed for baseline performances with the play materials and then shown one of the two versions of video modeling. Immediately after viewing the video; play routine performances were assessed. Data on the performances of over 20 students ages 3-5 and diagnosed with autism are presented.

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**#412 International Poster Session**

5/25/2009  
12:00 p.m. - 1:30 p.m.  
North Hall A  
BPH

**50. Incremental Repeated Acquisition: Forward Chaining and d Amphetamine.** (Experimental Analysis) JORDAN M BAILEY (Auburn University), Joshua Johnson (Auburn University), M. Christopher Newland (Auburn University)

**Abstract:** With an incremental repeated acquisition (IRA) procedure, a new response sequence is acquired within a single session. It begins with a one-link "chain" (single response) and new links are added when accuracy meets the preset criterion. Typically, accuracy on a new chain ("learning condition") is compared with a "performance condition" in which the same chain is used repeatedly. However, a comparison of the training strategy used to build chains has not been examined. Therefore, forward and backward training strategies were used to build chains in an IRA procedure. When behavior stabilized, a broad range of d amphetamine doses (0.01 to 3.0 mg/kg) was administered. While there was no effect of training procedure on the learning condition, forward chaining significantly improved accuracy during the performance

component, and this benefit was sustained across all doses of d amphetamine. Thus, the training strategy influences the accuracy and robustness of behavioral chains that have already been learned.

**51. Temporal Context Affects Preference for Alcohol-Associated Conditioned Reinforcement on Concurrent-Chains Schedules.** (EAB; Experimental Analysis) CORINA JIMENEZ-GOMEZ (University of Michigan Medical School), Timothy A. Shahan (Utah State University)

**Abstract:** Contextual cues associated with drugs become conditioned reinforcers and play an important role in drug taking. Extensive work has been conducted using concurrent-chains procedures to study the role of contextual variables on preference between different reinforcement contexts. The present experiments attempted to extend these findings by using a concurrent-chains procedure to examine whether the value of alcohol-associated contexts can be modulated by changes in temporal context. In Experiment 1, rats responded on concurrent chains with equal initial-link variable-interval (VI) 10-s schedules. Across conditions, terminal-link fixed-interval schedules were varied to yield 1:1, 9:1, and 1:9 reinforcement ratios of alcohol delivery. Initial-link response rates reflected changes in terminal-link schedules, with indifference in the 1:1 condition and preference for the rich terminal link in other conditions. In Experiment 2, terminal-link schedules remained constant with a nine-fold reinforcement ratio while initial-link schedules were changed to VI 60 s, 10 s, and 60 s. Preference for the rich terminal link was less extreme when initial links were longer. These findings suggest that the concurrent-chains procedure could be a useful animal model for the study of alcohol-associated conditioned reinforcers and the evaluation of behavioral and pharmacological treatments aimed at decreasing the value of drug-associated contexts.

**52. d-Amphetamine Improves Accuracy for Some Chain Types in an Incremental Repeated Acquisition Procedure.** (Experimental Analysis) JORDAN M BAILEY (Auburn University), Joshua Johnson (Auburn University), M. Christopher Newland (Auburn University)

**Abstract:** In the incremental repeated acquisition procedure, the structure of the chain is often overlooked as an important variable. Chain structure may interact with other experimental variables, including training strategy and drug effects. Two chain structures were examined using an incremental repeated acquisition (IRA) procedure, in which chain length progressively incremented from one to four in a single session. Three levers (R, L, B) were used. In “repeating” chains, a particular lever was repeated (e.g., RLLB) during the chain. In a “non-repeating” chain (e.g., RLBL) no consecutive repeats occurred. For one group, chains were built using forward chaining and for the other, backward chaining was used. An extremely broad range of d amphetamine doses was administered (0.01 to 3 mg/kg). Very low doses of d amphetamine increased accuracy in “repeating” chains, when trained using backward chaining. This drug-induced improvement in accuracy may reflect a tendency to repeat a previously reinforced response after low-doses d amphetamine.

**53. Effects of Chronic MDMA on Sensitivity to Reinforcement.** (EAB; Experimental Analysis) Celia Lie (Victoria University of Wellington), Maree J. Hunt (Victoria University of Wellington), DAVID N. HARPER (Victoria University of Wellington, NZ)

**Abstract:** Long-term use of 3,4-methylenedioxymethamphetamine (MDMA) is associated with impairments in behavioral tasks such as decision making and self-control (see Kalant, 2001). However, the mechanism by which MDMA decreases performance in these tasks is not clear. One possibility is that MDMA influences choice behavior generally via an alteration in reinforcer sensitivity. The present experiment assessed the effects of chronic MDMA exposure on sensitivity to reinforcement in rats using an established operant choice paradigm (Davison & Baum, 2000). The relative rates of reinforcement for pressing the two levers were varied across five conditions (15:1, 5:1, 1:1, 1:5, 1:15) within each session. Following extensive pre-drug training, rats were exposed to a chronic MDMA exposure regime administered post-session five days a week. Results indicated that although ongoing MDMA exposure reduced overall response rates, there were no systematic changes in reinforcer sensitivity. These results suggest that changes in reinforcer sensitivity across concurrently available response options may not underlie the performance impairments found in other behavioral tasks with long-term use of MDMA.

**54. Differential Effects of Haloperidol on Operant versus Locomotor Tasks in BALB/c and C57BL/6 Mice.** (Experimental Analysis) JOSHUA JOHNSON (Auburn University), Jordan M Bailey (Auburn University), M. Christopher Newland (Auburn University)

**Abstract:** Inbred mouse strains, specifically BALB/c and C57BL/6, mice provide an excellent template for assessing behavioral and physiological differences. The current literature is at odds over which strain is more sensitive to the rate depressing effects of haloperidol. The current study investigated the difference in sensitivity to the rate suppressing effects of haloperidol between BALB/c and C57BL/6 mice across two different responses (nose poking, wheel running). In addition, a recent quantitative model was used to partition bouts of nose poking into three composite measures (within-bout response rate, bout initiation rate, bout length). Haloperidol decreased nose poking in a dose-dependent fashion with BALB/c mice being more sensitive to the rate depressing effects. The bout parameter most affected by haloperidol administration was bout initiation rate, which mirrored the decrease of overall nose poking. However, the same strain difference did not exist for wheel running. Wheel running was relatively unaffected by haloperidol administration for both strains. Only at its highest dose (0.56mg/kg), and for C57BL/6 mice exclusively, did haloperidol significantly decrease wheel running. The present study provides more support for the differential or task-dependent nature of drug sensitivities for C57BL/6 and BALB/c mice.

**55. Effects of Pramipexole on Choice for Differential Rewards Using a Within-Session Increasing-Delay Procedure.** (EAB; Experimental Analysis) PATRICK S. JOHNSON (University of Kansas), Adam T. Brewer (University of Kansas), Jeff S. Stein (University of Kansas), Monica T. Francisco (University of Kansas), Gregory J. Madden (University of Kansas)

**Abstract:** In recent years, a number of clinical reports have implicated pramipexole, a common component of dopamine replacement therapy for Parkinson's disease (PD), in the development of a range of impulse control disorders in patients with PD (Dodd, Klos, Bower, Geda, Josephs, & Ahlskog, 2005; Driver-Dunckley, Samanta, Stacy, 2003). Pramipexole is a dopamine agonist with preferential affinity for D3 receptors, which are predominantly localized in and around the limbic system (Sokoloff, Giros, Martres, Bouthenet, & Schwartz, 1990), an area thought to be linked to 'reward pathways' (Esch & Stefano, 2004). A recent study from our laboratory showed pramipexole administered prior to session dose-dependently increased percent choice for a smaller, immediate reward relative to a larger, delayed reward (Madden, Brewer, Pinkston, Johnson, Fowler, & Woods, in preparation). The present study attempted to further investigate these drug effects using a procedure in which delays to the larger reward were changed within (Evenden & Ryan, 1996) rather than between sessions (as in Madden et al.). Initial results suggest unsystematic changes in percent choice for the smaller, immediate reward across drug doses; however, data collection is still ongoing. Findings will likely be discussed with respect to procedural differences between the two studies.

**56. Behavioral Effects of Cholinergic and Gabaergic Drugs on Serial Recall in Long Evans Rats.** (Experimental Analysis) Benjamin Melchor-Hipolito (UNAM FES Iztacala), Edith Juarez-Maldonado (UNAM FES Iztacala), Guadalupe Ortega-Saavedra (UNAM FES Iztacala), Sara E. Cruz-Morales (UNAM FES Iztacala), J C PEDRO ARRIAGA-RAMIREZ (UNAM FES Iztacala)

**Abstract:** Studies in social transmission of food preference have shown reliable serial position functions in Long Evans rats. Functions may show primacy or recency depending of different parameter values. In these studies, a demonstrator rat that has consumed flavored food will increase preference for that flavor in naive observer rats. Studies in behavioral pharmacology have shown that cholinergic antagonists may produce deficits in acquisition and recall in different tasks. In contrast, GABA b antagonists have shown improved acquisition and recall. These effects depend on different factors. In this study scopolamine (8 mg/ 2ml/ kg, ip), a cholinergic antagonist, CGP 35348 (50 mg/ 2 ml/ kg, ip) a GABA b antagonist, and isotonic saline (2 ml/ kg, ip) were administrated to observer rats (n=12) before interacting with a list of three demonstrators that had eaten one of three different flavored foods. These groups were compared with a control group. Repeated measures ANOVA showed no difference between the control and saline groups, so saline group was compared with the drug groups. Between groups comparisons showed a reliable difference between saline, scopolamine, and CGP 35348 groups. Scopolamine showed impaired acquisition and recall whereas CGP 35348 showed an increase in the first item recall.

**57. Differential Effects of Morphine and Naloxone on Escape and Reflex Responses to Nociceptive Thermal Stimuli in the Rat.** (Experimental Analysis) JILL MCDANIEL (Vanderbilt University), Robert Kline (Veterans Administration Hospital), Craig H. Kennedy (Vanderbilt University), Ronald G. Wiley (Vanderbilt University)

**Abstract:** Traditionally, assessment of the analgesic-like effects of opiates has been conducted in animals using withdrawal reflexes as the dependent variable. Recently, assessment of pain-related behaviors via an operant escape task has provided an experimental approach for measuring motivational and affective components of pain. In the present study, a time-course analysis of operant and reflex tests was used to measure pain-related behavior. We sought to determine if endogenous opioidergic controls modulate pain-related behaviors by comparing the effects of either systemic morphine or naloxone in rats. Low dose systemic morphine attenuated operant escape from noxious heat at 44°C compared to saline, while low dose systemic naloxone enhanced escape from 44°C. In contrast, a separate group of rats exhibited hyper-reflexia during thermal plate testing with no escape option after morphine or naloxone. Time-course analysis of pain-related behavior illustrates the differences between reflex and operant behaviors. These results indicate endogenous opioidergic controls function to modulate escape behavior from nociceptive thermal stimuli in naïve animals.

**58. Effects of Acute and Repeated Administration of d-amphetamine on Delay Discounting in Lewis and Fischer 344 Rats.** (Experimental Analysis) CHRISTOPHER KREBS (West Virginia University), Sally Huskinson (West Virginia University), Karen G. Anderson (West Virginia University)

**Abstract:** Delay-discounting tasks involve choosing between smaller, more immediate reinforcers (impulsive choice) and larger, delayed reinforcers (self-controlled choice). Previous research (Anderson & Woolverton, 2005) has reported that Lewis rats have steeper rates of delay discounting (indicating more impulsive choices) than Fischer 344 rats. The present experiment was designed to further investigate strain differences and effects of acute and repeated administration of d-amphetamine on delay discounting. Lewis (n=8) and Fischer 344 (n=8) rats were given the choice between one food pellet delivered immediately and three food pellets delivered after a varying delay. Delay to the larger reinforcer was systematically increased across five blocks of trials during daily sessions. All subjects demonstrated a decreased preference for the larger reinforcer as its delay to presentation increased. At pre-drug baseline, Lewis rats had lower indifference points, indicating greater delay discounting, than Fischer 344 rats. Low doses of d-amphetamine (0.1-0.3 mg/kg) generally increased larger-reinforcer choice in both strains. Following repeated exposure (chronic administration) of d-amphetamine, choice for the larger reinforcer returned to approximate baseline levels for both strains. This research has implications for better understanding the biological and behavioral determinants of impulsive choice.

**59. Training Discrimination of Blood Alcohol Level following Oral Ethanol Self-Administration in College Students.** (EAB; Experimental Analysis) THERESA E. EGAN (James Madison University), Leah F Power (James Madison University), Sherry L. Serdikoff (James Madison University)

**Abstract:** Research on blood alcohol level (BAL) discrimination suggests that individuals can be trained to discriminate their BAL under some circumstances. The current study is an ABA multiple baseline design to determine if college students can be trained to discriminate whether their BAL is above or below the legal limit for driving. During each session, each participant consumes a priming dose of .75g/kg body weight of 80-proof vodka and juice, followed by a maintenance dose of .31g/kg every fifteen minutes for two hours; a rate of administration that matches that of a normal social drinker. Fifteen minutes after each drink and every fifteen minutes after the last drink participants report whether they think their BAL is above or below the legal limit and a Breathalyzer is used to determine the participant's actual BAL after each self-report. During baseline phases, the participants are paid per hour for participating, with no contingency for accurate BAL self-reports while during training sessions, the participants receive monetary reinforcement contingent upon accurate BAL self-reports. The data are compared to earlier studies using accuracy feedback as opposed to monetary consequences during training and implications for designing programs to improve individuals' accuracy in estimating their intoxication levels are reviewed.

**60. College Students' Discrimination of Blood Alcohol Concentration Following Oral Ethanol Self-Administration.** (EAB; Experimental Analysis) LEAH F POWER (James Madison University), Theresa E. Egan (James Madison University), Sherry L. Serdikoff (James Madison University)

**Abstract:** Previous studies have involved training alcoholics to discriminate blood alcohol concentration (BAC) at high and low doses of alcohol and have shown that high doses of alcohol disrupted accurate BAC discrimination. The current study involves training college students to discriminate whether their current BAC is above or below the legal limit for driving. Each session begins with administration of a priming dose of .75 g/kg of ethanol served in juice, followed by .62 g/kg administered every 15 min for 2 hours; a rate of consumption intended to mimic the high consumption rate that characterizes binge drinking. Fifteen minutes after each drink and every fifteen minutes thereafter, participants provide a self-report regarding their BAC. During the training phases of this ABA multiple-baseline study, participants earn \$5 per hour and \$2.50 for each correct BAC self-report while only hourly pay is provided during baseline phases. The data are compared to previous research examining the use of feedback in training accurate BAC discrimination. Additionally, they provide valuable information regarding the extent to which individuals can accurately discriminate intoxication levels during and following high-rate alcohol consumption.

**61. Employment-based Reinforcement of Acceptance of Depot Naltrexone Injections in Opioid-dependent Adults.** (CBM; Applied Behavior Analysis) JEFFREY J. EVERLY (Johns Hopkins University School of Medicine), Annie Umbricht (Johns Hopkins University School of Medicine), Michael Fingerhood (Johns Hopkins University School of Medicine), George Bigelow (Johns Hopkins University School of Medicine), Kenneth Silverman (Johns Hopkins University)

**Abstract:** Naltrexone is an opiate antagonist that could be an effective treatment for opiate addiction. Extended-release depot naltrexone injections provide antagonism for up to four weeks. Concurrent behavioral treatment may be needed to ensure adherence to the depot treatment given that patients typically reject orally-administered naltrexone. This study used employment-based reinforcement in an attempt to increase acceptance of depot naltrexone injections. Participants were unemployed heroin-dependent adults who were randomly assigned to either the Naltrexone Contingency (n = 18) or Naltrexone Offered (n = 17) group. Both groups could attend a therapeutic workplace where they could work and earn vouchers each weekday. Both groups were prescribed depot naltrexone injections every 3 weeks. Participants in the Contingency group could only work if they accepted the depot injections. Participants in the Offered group could work independent of whether or not they received the injections. Eighty-one percent of the scheduled injections were accepted by participants in the Contingency group, whereas 42% of the injections were received by participants in the Offered group. The difference between the groups was statistically significant ( $p=.008$ ; OR = 5.68; 95% CI = 1.61-20.02). The study shows that employment-based reinforcement can increase acceptance of depot naltrexone injections.

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#### #413 International Poster Session

5/25/2009  
12:00 p.m. - 1:30 p.m.  
North Hall A  
CBM

**62. When the Old Responding Turns a New Behavior: Describing a Clinical Change Process.** (IPC; Applied Behavior Analysis) Francielly - Perón (Federal University of Paraná), Maura Alves Gongora (State University of Londrina), JOCELAINE MARTINS SILVEIRA (Federal University of Paraná (Brazil))

**Abstract:** The response class notion is crucial to the assessment and the conceptualization of clinically relevant behaviors. The main assumption of this study was that the clinical change is related to a response class that lacks strength while another gains it, according to the Functional Analytic Psychotherapy (FAP). The concepts of shaping, differentiation and induction were used to analyses and to discuss a clinical change process. The aim of this study was to describe a clinical change process in which the so called problematic response turns to a response related to improvement. The method consisted in recording fifteen sessions of therapeutic treatment of a woman with interpersonal difficulties. The treatment was conducted in a Brazilian

training clinic. Clinical relevant behaviors (CRB) were registered in protocols, filled in during each session by the therapist and by a trained observer. Then, CRB was examined in order to identify the dimensions that were being selected within sessions until a new operant class had been installed. The results show four dimensions that were being differentiated during the therapy. Clinical change process was discussed considering the dimensions that suffered differentiation and the relevance of the client/therapist relationship in such change.

**63. Co-occurring PTSD and Chronic Pain: Acceptance and Commitment Therapy to Treat Avoidance and Psychological Inflexibility.** (EAB; Service Delivery) KIMBERLY LATRICE SANDERS (Family Counseling Center), Michael Mecozzi (Trinity Services, Inc.), Daniel J. Moran (Trinity Services)

**Abstract:** The co-occurrence of PTSD and chronic pain are well documented in scientific literature (Asmundson et al., 2002). It is estimated that approximately 15-35% of chronic pain patients also have a diagnosis of PTSD (Snipes, 2008). Between 20-30% of community mental health outpatient clients report the co-occurrence of PTSD and pain (Amir et al., 1997). While much PTSD research has centered on war veterans and pain research on biological disorders, this case study will focus on the co-occurrence of PTSD and chronic pain in an individual who experienced a traumatic car accident. It has been found that one of the most common causes of PTSD is vehicle accidents (Norris, 1992) with an estimated 9% of survivors of serious accidents developing signs of PTSD (Kessler et al., 1995). Acceptance based treatments (ACT) have been shown to be effective in both PTSD (Braekkan, 2007) and chronic pain (Vowles, McCracken, 2008). This case study concerns a client who exhibits excessive fusion to negative thoughts and has an extensive avoidance repertoire of stimuli related to the traumatic event. ACT will serve as the independent measure. The Acceptance and Action Questionnaire and The Chronic Pain Acceptance Questionnaire will serve as dependent measures.

**64. Mediators of Psychological Flexibility in a Modern Application of Clinical Behavior Analysis.** (VRB; Applied Behavior Analysis) BROOKE M BERRY (University of Nevada, Reno), Jennifer Boulanger (University of Nevada, Reno), Steven C. Hayes (University of Nevada, Reno)

**Abstract:** Acceptance and Commitment Therapy (ACT) is a behavioral and cognitive treatment intended to reduce psychological inflexibility, or the way that language and cognition interact with direct contingencies to produce an inability to persist or alter behavior in the service of long-term valued goals. ACT aims to decrease psychological inflexibility by targeting the following six processes: increasing acceptance of aversive private events, reducing the dominance of verbal stimuli, increasing contact with direct contingencies, facilitating a transcendent sense of self, identifying and clarifying values, and promoting committed action toward valued ends. Analogue and component studies have demonstrated that each of these processes contribute to ACT treatment outcomes, but it is unknown how the individual elements interact with one another and to what degree each affects psychological inflexibility. The present study utilizes a repeated measures design and multi-level modeling to examine how these processes of change mediate psychological inflexibility and to what degree each is correlated with one another over time. This question has implications for the development of increasingly effective and efficient treatments, not only within ACT, but also for those treatments that utilize similar processes of change such as mindfulness and exposure techniques.

**65. Augmenting Mandated Parenting Classes with Acceptance and Commitment Therapy (ACT).** (Service Delivery) JENNIFER LYNN PATTERSON (Illinois School of Professional Psychology), Laura Ely (University of Mississippi), Daniel J. Moran (Trinity Services)

**Abstract:** In this project Acceptance and Commitment Therapy components are inserted into an existing parent training class, Project Protect. This four hour class is mandated by Illinois courts for parents involved in divorce, custody, visitation, or paternity disputes, where minor children are involved. One hour of the class is replaced with ACT training in parenting with respect to values, mindfulness, and defusion/acceptance. The training consists of scripted didactics and exercises. Measures of mindfulness and psychological flexibility are taken at pre, post, and 3-month follow-up. The Kentucky Inventory of Mindfulness Skills (KIMS; Baer, Smith, & Allen, 2004) is used to assess mindfulness, and the Acceptance and Action Questionnaire-II (AAQ-

II; Bond, et.al., Submitted) is used to assess psychological flexibility. Parenting measures are used to assess changes in parenting attitudes and behaviors.

**66. Functional Assessment of Maintaining Variables of Obesity.** (Applied Behavior Analysis) LINDSAY BETH VICK (Southern Illinois University), Mark R. Dixon (Southern Illinois University), Michael Bordieri (Southern Illinois University Carbondale), Adam D. Hahs (Southern Illinois University), Nicholas Mui Ker Lik (Southern Illinois University), Becky L. Nastally (Southern Illinois University)

**Abstract:** The present investigation involved the creation of a written assessment tool, similar in form to the QABF, which could identify maintaining variables of eating behavior (i.e. attention, escape, etc.). The questionnaire was administered to both obese and normal weight participants. A factor analysis was conducted to assess the validity of potential functions. In addition, weight, body mass index (BMI), and gender were evaluated as possible moderators in both factor loadings and magnitude of responses. Finally psychometric properties of the instrument were assessed. Results and implications for function informed treatments of obesity will be discussed.

**67. Behavioral Activation of a Breast Cancer Patient with Co-existent Major Depression and General Anxiety Disorder.** (CSE; Service Delivery) MARIA E. A. ARMENTO (University of Tennessee), Derek Hopko (University of Tennessee)

**Abstract:** Recently developed behavioral activation interventions have shown promise in effectively treating depression through increasing value-based activity levels that elicit response-contingent reinforcement. This case study highlights the implementation of behavioral activation to a breast cancer patient with major depression and generalized anxiety disorder, applied within the context of a medical oncology clinic. Following an 8-session behavioral activation protocol, the patient demonstrated notable decreases in self-reported depressive and anxious symptoms and an overall increase in quality of life and medical functioning measured via questionnaires administered weekly. These treatment gains were maintained through 6-month follow-up. Consistent with accumulating literature, these data support behavioral activation as an effective and parsimonious intervention for individuals with depression and concurrent medical problems such as breast cancer. There is a pressing need for quality improvement with an emphasis on treatment efficacy and cost-effectiveness for depression treatments within medical care settings. The use of a behavioral activation protocol, as demonstrated in this case study, may be helpful for clinicians and students looking to implement a time-efficient treatment that can be individualized to patients experiencing significant and co-existent Axis I and III diagnoses while also respecting the infrastructure and operating procedures of medical care settings.

**68. Self-management Techniques in Home Blood Pressure Monitoring with Pre-hypertensive Participants.** (EAB; Applied Behavior Analysis) EMILY MARTIN (Virginia Tech), Ashley Dorrough (Virginia Tech), Richard Winnett (Virginia Tech), Eileen Anderson (Virginia Tech), Brenda Davy (Virginia Tech), Sarah Kelleher (Virginia Tech)

**Abstract:** Studies evaluating self blood pressure monitoring (SBPM) behaviors have found that consistent practice can result in significant improvements in blood pressure. However, little data can be found regarding the distinct self-management practices that may lead to monitoring compliance. Participants were selected from a nutritional and physical activity intervention trial, and had high-normal blood pressure (a systolic pressure from 115-119MMHG or diastolic 75-79 MMHG) or were prehypertensive (a systolic pressure from 120-139MMHG or a diastolic 80-89MMHG). Participants (N=11) were males and females, ages 45- 65, and were overweight to obese. Participants were provided training for monitor use and instructed to monitoring their blood pressure in the morning and evening. Participants then recorded their measures for the intervention period of 10-weeks. Interviews were conducted with participants at the conclusion of the intervention in order to assess behavioral techniques employed by participants to consistently monitor their blood pressure at home. These qualitative interviews were then coded for inter-rater agreement and reliability. Analysis in progress will examine frequency and consistency of behaviors, degree of association between reported behavioral techniques and adherence to monitoring, and degree of association between reported behavioral techniques and blood pressure reduction. Future results will be provided.

**69. Behavioral Intervention Based on Functional Analysis For the Habitual Scratching Of Patients with Atopic Dermatitis.** (BPH; Service Delivery) YUKIHIRO OHYA (National Center for Child Health and Development)

**Abstract:** It is critical for the successful treatment of atopic dermatitis to stop itch-scratch vicious cycle, but only pharmacological treatment is not enough to accomplish it for the patients with habitual scratching. The aim of this study is to verify the effectiveness of our behavioral intervention based on functional analysis for the patients.

Nineteen children had habitual scratching among 95 patients who had admitted to our division during 2007 fiscal year. Although their skin conditions were fairly improved after admission because of application of topical steroids, their scratching behaviors persisted. Functional analysis revealed that most of their scratching behaviors were reinforced by the operant conditioning such as a caregiver's pay-attention. After starting behavioral intervention, most of the patients stopped habitual scratching in a few weeks and got normal skin without eczema. In some adolescent cases, habitual scratching was maintained not only by the operant conditioning but also by the respondent conditioning with their emotional distress. Relaxation training and desensitization therapy were carried out to erase the respondent conditioning and they overcame their scratching.

Behavioral intervention synchronized with pharmacotherapy is a strong method to overcome intractable itch-scratch cycle of patients with atopic dermatitis.

**70. Increasing Weekly Exercise Through Behavioral Contracting and Feedback.** (Applied Behavior Analysis) KATHARINE GUTSHALL (Center for Autism and Related Disorders), Taira Lanagan (Center for Autism and Related Disorders)

**Abstract:** The lack of exercise by citizens of our country has become such an overwhelming problem both medically and financially that the federal government has instituted several groups to propose solutions (The President's Council on Physical Fitness and Sports, 2008; President's Challenge, 2008). The use of behavioral contracting has been shown to be effective for multiple behaviors and in multiple populations (Wysocki, et al 1979, Mann, 1972, Miller and Kelley, 1994). This assessment was a pilot study targeting participation in physical exercise (cardiovascular and weight training) using contracting and feedback in a typically developing adult within a changing criterion design. Results indicate adherence to contracts signed with resulted in an increase to both cardiovascular and strength training exercise.

**71. The Utility of Operant Choice using Patient-Controlled Break Cards during an Invasive Medical Procedure.** (Applied Behavior Analysis) FAYE O. KIM (Kennedy Krieger Institute), Keith J. Slifer (The Kennedy Krieger Institute/ Johns Hopkins University), Adrianna M. Amari (The Kennedy Krieger Institute), Leanna J Herman (Kennedy Krieger Institute), Melissa Ann DeMore (Kennedy Krieger Institute / Johns Hopkins School o)

**Abstract:** The benefits of response-independent, "scheduled" breaks during aversive medical and dental procedures have been documented. This case demonstrates the use of operant choice via patient controlled breaks to decrease anxious and delay behaviors during an invasive medical procedure. We hypothesized that distress delayed and terminated aversive procedure-related stimulation and that presentation of a card to request a break could be differentially negatively reinforced by temporary delay or escape from the aversive stimulation. The participant was an adolescent male with Spinal Muscular Atrophy and anxious behavior during wound Vacuum Assisted Closure (VAC) procedures after spinal fusion surgery. During initial VAC changes, his procedures were delayed and prolonged by distress behavior. Treatment involved (1) providing break cards that the boy could present to delay or interrupt the VAC procedure for 1 minute, and (2) putting distress and delay behavior on extinction. Providing the patient with choice of when to exercise limited control over aversive stimulation and extinguishing delay behaviors decreased the duration of VAC procedures from 2.5 hours to 20 minutes. Results will be discussed in relation to operant choice, reinforcement contingencies and schedules for both approach and delay behavior.

**72. Negative Reinforcement of Effort: Effects of a Heart Rate Alarm on Running Speed.** (CSE; Applied Behavior Analysis) STEPHEN RAY FLORA (Youngstown State University)

**Abstract:** In addition to displaying heart rate (HR), many Heart Rate Monitors (HRM) have an “out of zone alarm” that beeps when the wearer’s HR goes below, or exceeds, a preselected range. To terminate the alarm, activity is increased if the HR is below the preselected range. If the HR is too high, to terminate the alarm activity is decreased. Thus, a predetermined activity level is increased, negatively reinforced, by the termination and avoidance of the alarm. Typically, a range is selected based on an individual’s calculated “maximum heart rate” and one’s work out goals. For examples a range between 65% and 75% may guide a moderate level of activity; to increase moderate distance (5-15k), top-end running speed a training range between 85% and 95% max HR may be selected. Although widely used, there is scant objective data on the effects of HRM training and no data on the zone alarm. The current study demonstrates the effectiveness of HR contingent negative reinforcement (alarm) on running speed, compared to mile pace feedback only, and to HR feedback without alarm (without negative reinforcement) in a reversal-replication design. Possible applications with diverse populations and objectives are discussed.

**73. The Use of Behavior Analysis to Guide Intervention for “Sympathetic Storming” during Rehabilitation from Brain Injury: A Case Study.** (DDA; Applied Behavior Analysis) MELISSA HENDRICKS (Kennedy Krieger Institute), Adrianna Amari (The Kennedy Krieger Institute), Keith J. Slifer (The Kennedy Krieger Institute/ Johns Hopkins University)

**Abstract:** Traumatic brain injury (TBI) recovery involves variable mental status and behavior and often is accompanied by medical complications such as dysautonomia (a.k.a. “sympathetic storming,”), a type of sympathetic nervous system dysregulation occurring in up to 30 percent of severe TBI patients. Instability of vital signs along with agitation, vocalization, sweating, and posturing characterize dysautonomia. Management of dysautonomia is treated with medical and environmental intervention, although little research exists regarding optimal treatment. In this case study, applied behavior analysis (ABA) methods were used to guide the interdisciplinary rehabilitation team with systematic data collection, analysis of potential environmental antecedents, and evaluation of medical and environmental intervention effectiveness for a 17-year-old female with post-TBI dysautonomia. Behavioral data were collected via interviews, review of medical records and direct observation, and analyzed using single subject design. No consistent environmental antecedents of dysautonomia were identified but Valium administered at the onset of “storming” was effective in reducing duration and frequency of dysautonomic episodes without impairing patient alertness during rehabilitation therapy. Thus, ABA techniques provided data to guide the interdisciplinary team in caring for a medically and behaviorally complicated post-TBI patient, by clarifying the clinical conceptualization and differentiating between effective and ineffective interventions.

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#### #414 International Poster Session

5/25/2009  
12:00 p.m. - 1:30 p.m.  
North Hall A  
DDA

**74. A Comparison of the Effectiveness of Prompting Strategies in Teaching Self-Help Skills to an Adolescent With Developmental Disabilities.** (Applied Behavior Analysis) SANDRA F KOKOLIS (Bancroft NeuroHealth), Denise Marzullo (Bancroft Neurohealth), Frances A. Perrin (Bancroft NeuroHealth)

**Abstract:** The purpose of this study was to compare the effectiveness of least-to-most prompting strategies and most-to-least prompting strategies in teaching self-help skills to an adolescent with developmental disabilities. Least-to-most prompting strategies included hierarchical prompting with a verbal, model, and physical prompt. Most-to-least prompting strategies included graduated guidance of physical prompts and spatial fading. The participant was an adolescent with developmental disabilities living in an inpatient behavioral stabilization program. A multiple baseline across skills treatments was used. Baseline data have been collected for this participant using least-to-most prompting strategies for tooth brushing. Data collected during the treatment phase using most-to-least prompting strategies have yielded increased independence with tooth brushing. Data collection is ongoing. Results indicate most-to-least prompting strategies reduced errors and promoted faster skill acquisition. Future research will attempt to replicate the effectiveness of

most-to-least prompting strategies. This will allow caregivers to use more effective techniques when teaching self-help skills.

**75. Generating Rapid Demand Curves in Children with Developmental Disabilities: An Evaluation of Session Duration.** (AUT; Applied Behavior Analysis) JENNIFER L. BREDTHAUER (Auburn University), James M. Johnston (Auburn University), M. Christopher Newland (Auburn University)

**Abstract:** Behavioral economic concepts provide new research methods and data analysis techniques in applied behavior analysis. Specifically, demand curve analysis can be used to evaluate the effectiveness of reinforcement or behavioral interventions in person with developmental disabilities (Tustin, 1994; Roane et al., 2001; Roane et al., 2005). However, a standard method for generating demand curves using this population has not been established. Key elements such as the reinforcement schedule, session length, and experimental context often vary considerably among behavioral economic studies in developmental disabilities. The present study compared three different session durations for generating rapid demand curves for edible and tangible reinforcers in children with autism and developmental disabilities. Sessions were 15, 30, and 45 minutes with a fixed ratio schedule increasing across sessions with a 1.5 step size. The response requirement was dropping blocks into a slotted box for 30 second access to the preferred edible or tangible. The efficiency of generating behavioral economic demand curves was evaluated. Results indicated that shorter sessions produced similar demand curves to those from longer sessions, IRT data showed that ratio strain (a measure comparable to ratio breakpoints on progressive ratio schedules) criteria could be lowered, and session termination criteria could be shortened.

**76. Effects of Meal Presentation on Food Consumption.** (AUT; Applied Behavior Analysis) THEODEN PROCYSON (Bancroft NeuroHealth), Denise Marzullo (Bancroft NeuroHealth), Jennifer Hettenbach (Bancroft NeuroHealth)

**Abstract:** Individuals with autism and other developmental disabilities often display feeding problems, including food selectivity (Schreck, Williams, and Smith, 2004). Research has demonstrated that consequent-based behavioral interventions such as positive reinforcement and escape extinction are effective at increasing food acceptance and at reducing problem behavior associated with food selectivity (Coe, Babbitt, Williams, Hajimihalis, Snyder, Ballard, and Efron, 1997; Kern and Marder, 1996; Piazza, Patel, Gulotta, Sevin and Layer, 2003). Some research has suggested that antecedent-based behavioral interventions, such as noncontingent play (Cooper et al., 1995) and simultaneous presentation of condiments (Ahern, 2003) can also effectively increase food acceptance. The present study compared the effects of two antecedent-based interventions on food consumption in an adolescent diagnosed with autism. An alternating treatments design compared meal choice with simultaneous meal presentation across breakfast and lunch daily. Results indicate that mean percentage of meal consumption and number of foods consumed both increased when a pre-meal choice was presented.

**77. The Evaluation of Functional Communication Training in the Treatment of Escape-maintained Behavior.** (EDC; Applied Behavior Analysis) NICOLE H LUSTIG (Gonzaga University), Anjali Barretto (Gonzaga University), K. Mark Derby (Gonzaga University)

**Abstract:** The goal of this study was to reduce the aggression, destruction, and elopement of a 3 year-old male diagnosed with attention-deficit/hyper-activity disorder and head trauma. Two functional analyses were conducted across clinical and home settings. In the clinic, the functional analysis revealed his aberrant behavior was maintained by escape from demand. The home functional analysis showed multiple social functions for his aberrant behavior (i.e. to gain attention, access to a tangible, and possibly automatic reinforcement). A secondary goal of the investigation was to increase task completion. The purpose of the current investigation was to evaluate an addition component with functional communication training for manding appropriately for a break versus working for a preferred tangible to improve task engagement.

**78. A Comparison of Stimulus Avoidance Assessments Conducted in Natural Environment and Analog Settings.** (Applied Behavior Analysis) ANDREW A FULTON (The Marcus Institute), Joanna Lomas (Marcus Institute), Robert R. Pabico (Marcus Institute), M. Alice Shillingsburg (Marcus Institute), Nathan A. Call (Marcus Autism Center and Emory University School of Medicine)

**Abstract:** Reinforcement-based procedures are often prescribed based on results from functional assessments (Iwata, 1994). However, in some cases functional assessments may yield undifferentiated results, which may make it difficult to implement a reinforcement-based procedure that will decrease problem behavior to clinically acceptable levels. In cases where punishment-based procedures are prescribed, a common method used to identify a procedure that is most likely to function as a punisher is a stimulus avoidance assessment (Fisher, Piazza, Bowman, Hagopian, & Langdon, 1994). These procedures are designed to be implemented in an analog setting for subsequent use in the natural environment (e.g., classroom, home). Given the distinct differences between an analogue setting and the natural environment selection of a potential punishment procedure assessed in the analogue setting may not be appropriate. In the current investigation, we conducted a stimulus avoidance assessment in both analogue and natural settings with 2 participants to determine consistency of results. The results of the assessment in the two settings differed, suggesting that the setting in which the assessment is conducted may be an important variable to consider when selected punishment-based procedures.

**79. Interaction Between Positive and Negative Reinforcers During the Escape Condition of a Functional Analysis.** (AUT; Applied Behavior Analysis) BRIANA R. LOPEZ (Marcus Autism Center), Nathan A. Call (Marcus Autism Center and Emory University School of Medicine), Robert R. Pabico (Marcus Autism Center), Joanna Lomas (Marcus Autism Center), Kelly McKnight (Marcus Autism Center)

**Abstract:** The functional analysis methodology developed by Iwata et al. (1982/1994) has aided clinicians and researchers in identifying the operant mechanisms that maintain problem behavior. Functional analyses have been most useful in the development of function-based interventions for problem behavior. However, the results of a functional analysis and future treatment development could be compromised if results falsely indicate a relationship between problem behavior and environmental events. The purpose of the current study was to evaluate whether two participants' problem behavior that occurred during the escape condition of a functional analysis was also influenced by positive reinforcement. Specifically, the rate of problem behavior that occurred during the reinforcement interval of the escape condition was examined to determine whether it was attenuated when breaks included access to positive reinforcers (e.g., social attention, preferred leisure items). When compared to breaks from demands that did not include positive reinforcement, both participants displayed patterns that raise the possibility that the escape function was a false result.

**80. Developing The TOOL: A Measure of Contextual Fit and Impact of Challenging Behavior on Families.** (CSE; Service Delivery) AMANDA L. LITTLE (University of Texas-Austin)

**Abstract:** The TOOL is an instrument developed to provide a way to study how challenging behavior exhibited by children affects families. This presentation will describe the initial and more recent validation processes conducted. It was important to determine if the items were socially valid and meaningful (Wolf, 1978). A total of 60 individuals, 40 professionals and 20 parents, returned the draft of The TOOL with comments regarding the items as well as a ranking of importance of each of the 20 items. Statistically significant differences were found on one item among the two groups. A revised version of The TOOL was developed based on these comments. The TOOL is intended to measure the construct of "contextual fit" in relation to providing services for children with challenging behavior and their families. The TOOL was then further validated by dispersing it to families of children who exhibit challenging behavior and families of children who do not exhibit challenging behavior. Results of this content validation process including statistical measures will be discussed with those participating in the presentation. In the future, additional validation will take place utilizing the revised tool with families for behavior intervention planning and as part of a pre-/post-intervention measure.

**81. Big 6+6 Instruction with a Student with Severe Physical Impairment.** (EDC; Service Delivery) PATRICE L HENDERSON (The Chicago School of Professional Psychology/The Hope Institute)

**Abstract:** Students with severe physical impairments and limited physical mobility have difficulty completing tasks that require the use of fine motor skills. Because of their limited mobility and limited ability in fine motor skill applications participation in everyday school activities is slower and less independent. These students often require full hand on hand physical prompting and one-on-one assistance because component

skills are not at fluent levels. Precision Teaching (PT) literature has shown that when component skills reach fluent levels then the performance of a composite skill is improved. This study will evaluate the effects of the timed practice of component motor skills on the completion of a composite skill with a student with severe physical impairment. The participant in this study is a 14-year-old male with severe physical impairment and moderate cognitive impairment. He is unable to perform independently in school activities. The goal of the study is for the participant to improve component skills in order to perform a composite skill at his individual aim.

**82. Evaluation of Instructional Formats to Train Caregivers in the Implementation of a Graduated Prompting Procedure.** (CBM; Applied Behavior Analysis) AMY BEASLEY (Munroe-Meyer Institute, University of Nebraska Medical Center), Todd M Owen (UNMC), Henry S. Roane (University of Nebraska Medical Center & Munroe-Meyer Institute), Rebecca A. Veenstra (Munroe-Meyer Institute, University of Nebraska Medical Center), Kasey Stephenson (Munroe-Meyer Institute / UNMC)

**Abstract:** Previous research has shown that caregivers can be trained to implement a variety of behavioral interventions using relatively low-cost instructional methods (e.g., written instructions; O'Dell et al., 1982). Still other investigations have demonstrated that multi-component procedures are effective in promoting caregiver acquisition of behavioral protocols (e.g., Wilder et al., in press). The current investigation conducted a systematic analysis to determine which types of instructional format were sufficient for training caregivers to implement a graduated prompting procedure, which is commonly used to increase child compliance (Wilder & Atwell, 2006). Using a multiple baseline design across caregivers, several different training procedures were evaluated separately (i.e., written instructions, immediate feedback, delayed feedback, role play) and together (i.e., all components combined). Across participants, the most effective procedure appeared to be immediate feedback, whereas written instructions alone were the least effective instructional format. Interobserver agreement data was collected on at least 25% of sessions and the mean agreement was 80% or higher for all participants. Results will be discussed in terms of the effectiveness of each training component in promoting caregiver acquisition of behavioral interventions.

**83. Training Teachers to Develop and Implement Self-Monitoring Interventions for Young Children with Developmental Disabilities.** (AUT; Applied Behavior Analysis) BERENICE DE LA CRUZ (The University of Texas at Austin), Jeffrey S. Sigafos (Victoria University of Wellington), David P. Wacker (University of Iowa), Herbert Rieth (The University of Texas at Austin)

**Abstract:** Several empirical studies have suggested that self-monitoring can be an effective strategy for increasing appropriate behavior in children and adults with developmental disabilities. Results of a comprehensive review of self-monitoring research with people who have developmental disabilities revealed that 71% of the participants were trained by researchers. However, researchers are not typical intervention agents. To ensure that people who are typically in the participant's environment (e.g., teachers, parents, caregivers) can effectively teach people with developmental disabilities to self-monitor and that this in turn will change the participant's behavior, it is important that research examine the effectiveness of self-monitoring when the training is provided by typical intervention agents. Thus, the purpose of this study was to investigate whether teachers can learn to effectively implement a self-monitoring program via a brief teacher-training program and supervision. The proposed study evaluates the effects of the training program and supervision on teacher and student behavior using a multiple-probe across teachers design. Results of the self-monitoring intervention, the social validity of the intervention, generalization and maintenance of skills, and implications for practice and research will be discussed.

**84. Further Validation of the All-day Functional Analysis for Assessment of Low Rate High Intensity Behavior.** (Applied Behavior Analysis) BARBARA TOMLIAN (Kennedy Krieger Institute), Eric Boelter (Kennedy Krieger Institute), Lynn G. Bowman (Kennedy Krieger Institute), Alexa Garcia (Kennedy Krieger Institute)

**Abstract:** For children with severe problem behavior which occurs at low rates, the standard functional analysis often may not yield conclusive results (Tarbox, Wallace, Tarbox, Landaburu, & Williams, 2004). The current literature provides few suggestions for modifications to the standard functional analysis in this case. Kahng, Abt, and Schonbachler (2001) demonstrated the utility of extending the standard conditions of a

functional analysis to an all day format, thereby substantially increasing the amount of time the child was exposed to environmental variables hypothesized to be establishing operations for positive and negative reinforcement. In the current study, we replicated the procedures of Kahng et al. (2001) with two children admitted to an inpatient hospital for the treatment of severe disruptive behavior that was reported to be high intensity but low rate. Results of initial functional analyses based on Iwata et al., (1982/1994) were inconclusive for both children. Following the standard functional analyses all day functional analyses (Kahng et al.) were conducted and yielded conclusive results for both participants and allowed for the development of treatment. These results provide further validation of the all day functional analysis procedures described by Kahng et al. to identify environmental variables which maintain low-rate, high intensity problem behavior.

**85. An Evaluation of Performance Feedback for Improving Behavioral Data Collection.** (Applied Behavior Analysis) JENNA TAYLOR (Bancroft NeuroHealth), Rachel E. Sari (Bancroft NeuroHealth), Christina M. Vorndran (Bancroft NeuroHealth)

**Abstract:** Recording accurate and complete behavioral data is vital to effective behavior management for individuals with developmental disabilities. Behavioral data allow clinicians to evaluate the effectiveness of an intervention. When data are not recorded accurately and continuously across observation periods, instances of a target behavior may go unreported, resulting in skewed data and inaccurate evaluations of an intervention's efficacy. The purpose of this study was to examine the effects of performance feedback on the completeness of continuous data collection in a residential program for children diagnosed with developmental disabilities over one year. Data errors were defined as the absence of recorded data for any 30-minute interval. Performance feedback was delivered indirectly to management staff and the frequency of the feedback was systematically manipulated (i.e., weekly, daily) and evaluated using an ABCACAD reversal design. Results indicated that daily feedback was more effective than both baseline and weekly feedback. Data on remaining phases to come.

**86. Preschool Teachers' Opinions on Play Skills.** (EDC; Service Delivery) YASEMIN ERGENEKON (Assistant Professor), Arzu Ozen (Anadolu Universitesi, Turkey), Burcu Ulke-Kurkcuoglu (Anadolu University), Derya Genc (Research Assistant)

**Abstract:** Play is the most important activity in the exceptional preschool children's lives for learning social skills and being included among their normally developing peers. At the same time, games offer them the chance of acquiring concepts and skills often used in daily life. This study aims to determine the opinions of preschool teachers-working at state preschools where there are included exceptional students in Eskisehir-regarding play activities loaded in their daily schedule. Therefore, semi-structured interviews were held with the participants and the findings have been analyzed qualitatively. 10 teachers participated in this study. An interview form containing 11 questions was prepared and applied in order to figure out participants' opinions on play activities. The interview form was sent to 6 different field experts, and any necessary change recommended by the experts was made prior to its use. Two pilot interviews had been held before the study in order to determine how valid the questions were. Participants were asked to state their opinions on activities in their daily program especially for the included students; on different concepts and skills they included into their daily schedule in order to support various developmental areas of both normally developing children and also children with special needs; on the materials they used in order to teach these concepts and skills; on play activities in their daily program; on how they chose the games; on types of tools used for play activities; and on the influence of play activities over the development of their students. Findings will be discussed during the presentation.

**87. Special Education Teachers' Opinions on Play Skills.** (EDC; Service Delivery) ARZU OZEN (Anadolu Universitesi, Turkey), Yasemin Ergenekon (Assistant Professor), Derya Genc (Research Assistant), Burcu Ulke-Kurkcuoglu (Anadolu University)

**Abstract:** Play skills are critical in supporting various developmental areas for both normally developing children and for the ones affected by any kind of insufficiency. Through games, children have the opportunity of experiencing real-life conditions, exploring themselves, their physical and social environments, and learning cause-and-effect relations. At the same time, games offer them the chance of acquiring concepts and skills often used in daily life. This study aims to determine the opinions of teachers-working at state special

education schools for the mentally retarded, and also at private special education and rehabilitation centers in Eskisehir-regarding play activities loaded in their daily schedule. Therefore, semi-structured interviews were held with the participants and the findings have been analyzed qualitatively. 10 teachers participated in this study. An interview form containing 9 questions was prepared and applied in order to figure out participants' opinions on play activities. The interview form was sent to 6 different field experts, and any necessary change recommended by the experts was made prior to its use. Two pilot interviews had been held before the study in order to determine how valid the questions were. Participants were asked to state their opinions on activities in their daily program; on different concepts and skills they included into their daily schedule in order to support various developmental areas; on things they conducted to teach these concepts and skills; on play activities in their daily program; on how they chose the games; on types of tools used for play activities; and on the influence of play activities over the development of their students. Findings will be discussed during the presentation.

**88. Increasing Academic and Leisure Activities Using Self-Management Procedures for Students with Developmental Disabilities.** (EDC; Applied Behavior Analysis) ANGELA LYNN ZAZZA (Evergreen Center), Gordon A. DeFalco (Evergreen Center)

**Abstract:** Independent engagement in daily academic and leisure activities in the classroom is critical to student educational progress. The purpose of this study was to increase academic and leisure activity engagement through a self management procedure in which adolescent students with developmental disabilities arranged their daily picture activity schedules. A reversal design was used to assess the extent to which students self management of their daily picture activity schedules facilitated academic and leisure engagement. Data was collected using a momentary time sampling procedure on the percent of engagement throughout the school day. Results of the study indicated that participant engagement in academic and leisure activities increased to over 80% for all study participants when self-management procedures were in place. In addition, the frequency in which students achieved their daily academic goals increased during intervention. Contingent self-reinforcement was also used with 1 student resulting in reduced variability in his level of engagement.

**89. Change in Behavioral Function over Time.** (AUT; Applied Behavior Analysis) PAUL A. NIESEN (Kennedy Krieger Institute), SungWoo Kahng (Kennedy Krieger Institute), Nicole Lynn Hausman (Kennedy Krieger Institute), Katherine Campbell (Kennedy Krieger Institute), Jessica Becraft (Kennedy Krieger Institute)

**Abstract:** Identification of behavioral function is critical in the development of effective treatment of severe problem behavior displayed by some individuals with developmental disabilities (Iwata, Dorsey, Slifer, Bauman, & Richman, 1982/1994). Changes in the environment such as reinforcement history or medication manipulations may result in shifts in behavioral function over time. Therefore, it may be beneficial to assess possible changes in behavioral function for certain individuals, especially in instances where treatments become ineffective. In the current case study, a 21-year-old female diagnosed with autism was re-admitted to an inpatient unit for the treatment of self-injurious behavior (SIB). During her initial hospitalization 4 years prior, results of a functional analysis suggested that SIB was maintained by access to tangible items (i.e., a ball) as well as compliance with mands. In the most recent functional analysis, an edible tangible function was demonstrated. Interobserver agreement (IOA) data were collected for at least 33% sessions and averaged above 80% for all responses across assessments.

**90. Treatment Technologies for Escape-Maintained Behavior: A Qualitative Analysis.** (Applied Behavior Analysis) JESSICA L. THOMASON (New England Center for Children), Brian A. Iwata (University of Florida)

**Abstract:** Results from a number of large-scale studies indicate that a significant proportion of problem behavior is maintained by negative reinforcement; thus, it is a problem with which clinicians and researchers are frequently presented. The literature contains many innovative studies on the treatment of escape-maintained behavior. This paper includes a review of the approaches to the treatment of escape-maintained behavior, including both reinforcement-based interventions (which may be roughly categorized as antecedent-based, extinction, and differential reinforcement), and punishment-based interventions. Although much

expansion in treatment technology is reflected in the literature, there are still many unexplored treatment options. Further, it is not always clear what behavioral processes are responsible for behavior change during these interventions. The discussion focuses on the various processes that likely influence behavior change and presents some directions for future research.

**91. Assessment and Treatment of Attention Maintained Problem Behavior: A Comparison of Punishment With and Without Extinction.** (Applied Behavior Analysis) BARBARA TOMLIAN (Kennedy Krieger Institute), Anna E. Chirighin (Kennedy Krieger Institute), SungWoo Kahng (Kennedy Krieger Institute), Nicole Lynn Hausman (Kennedy Krieger Institute), Nicole M. Rodriguez (New England Center for Children - West. New England College)

**Abstract:** Punishment may be a necessary component when reinforcement-based interventions are not effective in reducing disruptive behavior (Wacker et al., 1990). However, concurrent reinforcement for target behaviors may reduce the effectiveness of punishment (Spradlin, 2002). The current study evaluated the effects of punishment when the functional reinforcer for the target behavior was delivered simultaneously (without extinction) in comparison to withholding the same reinforcer (with extinction). Two children whose disruptive behavior was maintained by social reinforcement in the form of access to adult attention participated in the study. Experimental control was demonstrated using a reversal design. Previously determined ineffective reinforcement-based interventions were combined with a punishment procedure contingent upon disruptive behavior (e.g., time out, basket hold time out) and a verbal reprimand (e.g., "There is no hitting") in the without extinction condition or no verbal reprimand in the with extinction condition. Results were dissimilar, demonstrating punishment with extinction was more effective for one participant and punishment without extinction for the second. These results indicate the effects of concurrent reinforcement for target behaviors on the effectiveness of punishment procedures may vary on an individual basis. Interobserver agreement was calculated during at least 30% of sessions and averaged above 90% for both participants.

**92. Long-term Effects of Functional Communication Training.** (Applied Behavior Analysis) KELLY M. SCHIELTZ (University of Iowa), Jay W. Harding (University of Iowa), David P. Wacker (University of Iowa), Wendy K. Berg (University of Iowa), John F. Lee (University of Iowa)

**Abstract:** The purpose of this study was to evaluate the long term effects of functional communication training (FCT). Eight children with developmental disabilities participated in this study, and all procedures were conducted in their homes by their parent with investigator coaching. Inter-observer agreement was assessed across 30% of all sessions and averaged 97%. Prior to maintenance, an FCT phase was conducted within a reversal design. All 8 children showed a decrease in destructive behavior and an increase in adaptive behavior. Baseline probes were repeated throughout the FCT phase, and two patterns emerged among the 8 children: (a) destructive behavior decreased to zero levels under baseline conditions, or (b) destructive behavior continued to occur at higher levels than during FCT. During the maintenance phase, the persistence of destructive and adaptive behavior was challenged by changes in reinforcement schedules, establishing operations, and discriminative stimuli. The maintenance phase was conducted within a multielement design, and for the 7 children for whom destructive behavior remained low during the return to baseline, destructive behavior continued to remain low during all challenges. For the child whose destructive behavior continued to occur during baseline probes, destructive behavior continued to occur during all challenges.

**93. Intervention in Children with Down's Syndrome.** (EDC; Applied Behavior Analysis) MILAGROS DAMIÁN DÍAZ (University of México)

**Abstract:** One characteristic of children with Down's Syndrome is the lack of behaviors cognitive This work describes the psychological treatment with three Down's Syndrome children. The goal of this study is to show the data cognitive abilities development before and after the treatment. Participants were two boys, and one girl. The ages of children were: 28, 56 and 68 months respectably, at the beginning of treatment and low socioeconomic status. Material used was appropriate for cognitive skills. Treatment: a) First Evaluation Phase b) Intervention Phase, consisted in training cognitive skills by games and activities with physical, verbal, sensorial, and tactile aids, based on imitation and performing tasks from

easy to difficult complexity, and c) Second Evaluation. Data showed important quantitative and qualitative advances in the cognitive area in both children, after the intervention.

**94. Teaching Social Skills to Individuals with Developmental Disabilities in the Community.**

(Applied Behavior Analysis) ALONNA MARCUS (AdvoServ), Maynard Caulk (Advoserv), Daniel Davis (Advoserv), Terry J. Page (AdvoServ)

**Abstract:** Teaching social skills to adolescence is vital for improving interactions with individuals in the community. With deficits in social skills, maintaining a job and accessing community resources will be difficult. For this study, we focused on teaching three skills: saying thank you after receiving an item or directions from another individual, using excuse me when interrupting two individuals talking, and responding to greetings appropriately. Individuals ranged from ages fifteen to twenty. All individuals had a diagnosis of mental retardation. Modeling and role playing are used to teach these skills. The design used is a multiple baseline across behaviors. Data is to be collected.

**95. Teaching Visual-visual Non-identity Matching Tasks using Fading Procedures to Persons with Developmental Delay.** (EAB; Applied Behavior Analysis) COLLEEN MARGARET ANNE MURPHY

(University of Manitoba and St. Amant Research Centre), Garry L. Martin (University of Manitoba), Maria Figueroa (St. Amant Research Centre), Dickie C. T. Yu (U. of Manitoba & St. Amant Research Centre)

**Abstract:** The Assessment of Basic Learning Abilities (ABLA) test assesses an individual's ability to learn six visual and auditory discrimination tasks. These tasks, called levels, are hierarchically ordered in terms of difficulty. ABLA level 5, an auditory-visual discrimination, has been found to be uninformative because most participants who pass level 5 also pass level 6. However, a visual-visual non-identity matching (VVNM) prototype task has been found to fall between ABLA levels 4 and 6. In this study, I identified two adults with developmental delay who initially failed a VVNM discrimination. Then, using a single-subject alternating-treatments design, I attempted to teach one VVNM training task using standard prompting and reinforcement (SPR) and a second VVNM training task using within-stimulus prompt fading. Results indicate that both participants had difficulty learning the VVNM training tasks using SPR and sequential fading (in which the first stimulus was faded, followed by the second stimulus). Additional probing suggests the participants were responding by exclusion. As a result, we began using simultaneous fading, in which both stimuli were faded at the same time and rate. The participants learned VVNM training tasks using simultaneous fading, indicating that this fading method has considerable potential for teaching VVNM tasks.

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**#415 International Poster Session**

5/25/2009

12:00 p.m. - 1:30 p.m.

North Hall A

EAB

**96. Contingency Sensitivity and the Sunk-Cost Fallacy in Pigeons.** (Experimental Analysis) ANNE C. MACASKILL (University of Florida), Timothy D. Hackenberg (University of Florida)

**Abstract:** The sunk-cost error occurs when subjects persist in a course of action in which they have already invested time, effort, or resources, despite the negative utility of this choice. Recent laboratory studies have examined the sunk-cost effect in relation to repeated choices between persisting in a non-optimal course of action and quitting in favor of a new choice alternative. The current study examined the disparity between these two alternatives in a sunk-cost procedure. Pigeons chose repeatedly between responding on the schedule key on which one of 4 fixed-ratio (FR) schedules was programmed on each trial, and the reset key, which began a new trial and re-determined the FR parameter. These FR sizes, and the probabilities with which they occurred, were varied across conditions, which, in turn, varied the relative payoffs for resetting versus persisting (defined as completing one of the larger three ratios on the schedule key). The pigeons generally chose optimally when the two payoffs differed markedly, but often committed the sunk-cost error in conditions where the difference only slightly favored resetting. These results were consistent with recent suggestions that the sunk-cost effect is at least partly due to discriminative factors.

**97. Uncertainty and Stimulus Control in a Sunk Cost Procedure.** (TBA; Experimental Analysis) RAUL AVILA (National University of Mexico)

**Abstract:** Using pigeons as subjects, the effects of uncertainty on the persistence in a sunk-cost situation were studied. In each trial a FR 10, FR 40, FR 80 or FR 160 was in effect on the center key, according to a predetermined probability. In successive conditions, the probabilities were .5, .25, .125 or .125; .125, .50, .25 or .125, and .0625, .0625, .50 or .375, from the shortest to the longest FR, respectively. Throughout every trial a key peck on the left key cancelled the current trial. In two consecutive experimental phases the changes between FR requirements were signaled or were not signaled by changes in the color of the center key. Persistence, the main dependent variable, was defined as the percentage of trials in which any of the fixed ratios higher than FR 10 was completed. It was found that, regardless of the presence or absence of a stimulus signaling the FR changes, the subjects showed optimal escape or persistence behavior. These findings suggested that we still do not know the parameters to enhance the control that a stimulus has on the persistence or escape behavior in this kind of procedures.

**98. Effects of Effort, Delay, and Stimulus Changes on the Sunk-Cost Effect.** (Experimental Analysis) JAMES W. DILLER (Eastern Connecticut State University), Karen G. Anderson (West Virginia University)

**Abstract:** The sunk-cost effect is a decision-making fallacy that has its origins in economics. Sunk-cost situations are typified by the presence of an initial investment that is followed by behavioral persistence, especially in the face of progressively worsening outcomes. This fallacy occurs when past expenditures, (i.e., sunk costs) rather than future costs, guide decisions. The present experiments examined effects of effort, delay, and stimulus changes on the sunk-cost effect in an animal model. Pigeons responded on increasing ratio schedules of food reinforcement. In some conditions, the center keylight changed as the ratio increased (i.e., the increase was signaled). Responses on another key reset the ratio requirement to the lowest value, serving as an escape from the increasing ratios. In this procedure, escaping was more optimal than persisting in that it resulted in a lower mean response requirement per reinforcer. In general, persistence, i.e., engaging in the sunk-cost effect, was more likely to occur in the absence of the signals and when delay to the next trial was relatively long or when the escape response requirement was relatively high. These data suggest that the likelihood of this maladaptive pattern of behavior could be decreased using signals, making escape easier, or mediating delays.

**99. Effects of Varying the Reinforcement Probability and Availability in a Temporally-Defined Schedule.** (BPH; Experimental Analysis) CARLOS TORRES (Universidad de Guadalajara), Carlos Wilcen Villamil Barriga (Universidad de Guadalajara), Karla Karina Vargas Calleros (Universidad de Guadalajara)

**Abstract:** One study was conducted to evaluate the effect of varying the reinforcement probability and availability in a temporally-defined schedule. Twelve male albino Wistar rats were divided into three groups. Each group were exposed to a three experimental phases with reinforcement probability ( $p$ ) set at 1.0, 0.5 and 0.1. Into every experimental phase, there were set four blocks of different reinforcement availability values ( $T = 1.0, 0.5, 0.3, 0.1$ ). The results confirm that probability of reinforcement had a systematic effect on response frequency. On the other hand, data shows a decrement function in percentages of water deliveries associated to decrements in  $T$ . These results are examined in relation to properties of temporally-defined schedules and the local distribution of water deliveries and responses.

**100. Prevention of Activity Anorexia: Manipulation of Food Palatability and Satiety Using a Liquid Diet.** (Experimental Analysis) MICHELLE FOISY (University of Alberta), Donald C Heth (University of Alberta), W. David Pierce (University of Alberta)

**Abstract:** Activity anorexia (AA) is procedure that involves giving rats 22.5 hours in wheels followed by a 1.5 h feeding period (FP). Animals show excessive exercise, suppressed food intake, and extreme weight loss leading to death. Our study is based on evidence that liquid food (Ensure™) increases food palatability, decrease satiety signals, and reduce the response competition between food and water during the meal. Compared with rats on standard chow, we predicted greater food intake for rats on a liquid diet and less activity anorexia. To test this hypothesis, rats were randomly assigned to one of three conditions: dry food,

liquid food, or both. All rats were then exposed to the AA procedure for ten days. Body weight, food intake, water intake and wheel turns were recorded daily. Results showed that animals consumed more calories ( $p = 0.005$ ) and survived longer in the AA procedure ( $p < 0.01$ ) when given liquid food instead of standard dry chow.

**101. Effects of Flavor Variety on Food-Motivated Behavior in Dwarf Hamsters (*Phodopus cambelli*).** (Experimental Analysis) LINDA C. BLACKWELL (University of Alaska Anchorage), Jennifer Lynnette LaCasse (University of Alaska Anchorage), Sarah Frances Drummond (University of Alaska Anchorage), Gwen Lupfer-Johnson (University of Alaska Anchorage), Eric S. Murphy (University of Alaska Anchorage)

**Abstract:** When working for food reinforcers, both human and non-human subjects typically increase and then decrease their rates of responding within an operant session. Two competing explanations exist for the within-session changes in response rates: (1) Satiation and (2) Habituation to the sensory properties of the reinforcers. To discriminate between these ideas, 8 dwarf hamsters responded on a fixed-interval 8-s schedule of reinforcement and earned nutritionally identical chocolate- and bacon-flavored pellets. Response rates and habituation of operant responding were examined for sessions in which subjects earned a single flavor of reinforcer and sessions in which reinforcers had a .50 probability of being chocolate or bacon at the end of each interval. Subjects made more lever presses on days when two flavors of pellets were delivered than days when reinforcer flavor remained constant throughout the operant session. Within-session decreases in responding were steeper during sessions when reinforcer flavor was constant compared to when reinforcer flavor varied. These data indicate that habituation to the sensory properties of the reinforcer, not post-ingestive factors such as satiation, are responsible for within-session decreases in responding.

**102. A Preliminary Evaluation of Framing Effects and Loss Aversion in Pigeons.** (Experimental Analysis) JENNIFER RUSAK (University of Florida), Timothy D. Hackenberg (University of Florida)

**Abstract:** Previous research in human decision-making has identified systematic deviations from rational choice predictions. For example, it has been shown that individuals tend to avoid losses, even when alternatives differ only in whether they are framed as a gain or a loss. Little is known about the generality of framing effects and loss aversion with non-human animals. The purpose of the present investigation is to examine framing effects and loss aversion parametrically in relation to average payoff amounts. Four pigeons were given repeated choices between gain or loss alternatives. Choice for gain resulted in the delivery of a number of tokens to which more were added at some probability. Choice for loss resulted in the delivery of a number of tokens from which some were subtracted with some probability. Average token amount was manipulated across conditions such that in some conditions the average amount was equal for gain and loss, and in some the average amount was higher for either gain or loss. Preliminary data indicate that choices are sensitive to amount manipulations, but more data are necessary to support broader conclusions regarding the generality of framing effects and loss aversion to these subjects.

**103. Suppressibility of Simple versus Complex Tics.** (TPC; Applied Behavior Analysis) JOSHUA JAMES KEMP (University of Wisconsin-Milwaukee), Katie Kalvoda (University of Wisconsin-Milwaukee), Abigail A Czarnecki (University of Wisconsin-Milwaukee), Christine A. Conelea (University of Wisconsin-Milwaukee), Douglas W. Woods (University of Wisconsin, Milwaukee)

**Abstract:** Tourette's syndrome (TS) is a disorder characterized by motor and vocal tics. Tics can be simple or complex. Simple tics are abrupt, sudden, and brief actions that are isolated in fashion or strung together in bouts; whereas, complex tics are coordinated sequences of behaviors that may appear purposeful (TSA, 2008). Tics are suppressible when children are reinforced for doing so (Woods & Himle, 2004; Himle & Woods, 2005). However, it is not known whether suppressibility varies depending on tic characteristics (e.g. simple vs. complex). Dystonic (slow and sustained) tics are more likely to be preceded by premonitory sensations than fast and brief clonic tics (Jankovic, 1997); if more sustained tics are more likely to be preceded by premonitory symptoms, signaling their imminence, one might hypothesize that complex tics can be more effectively suppressed than simple tics. This study will examine archival data of tic-suppression tasks to analyze the difference in suppressibility between simple and complex tics. Each participant will have three baseline and three suppression conditions which will last five minutes each. Simple and complex tics will be scored separately and respective reductions observed during suppression will be compared. The results will

provide important data on phenomenological factors influencing tic-suppression, which may be used to increase the efficacy and comprehensiveness of future behavioral treatments.

**104. The Merger of Islamic and Christian Stimulus Equivalence Classes.** (Experimental Analysis) SADIE L LOVETT (Southern Illinois University), Ruth Anne Rehfeldt (Southern Illinois University)

**Abstract:** The present study attempted to merge classes of Islamic and Christian stimuli. Using a match-to-sample procedure, participants were trained on a series of conditional discriminations that resulted in the formation of one equivalence class containing Islamic stimuli and one class containing Christian stimuli. These classes shared two common members. After demonstrating equivalence, participants were tested for a merger of the two classes. If the classes failed to merge, participants then viewed a video that outlined the parallels between Islam and Christianity, and they were subsequently tested for a merger of classes again. For participants still failing to merge the classes, direct training was provided before a final test for a merger of classes was conducted. Preliminary results indicate that initial training in which the classes are trained separately is not sufficient to result in a merger.

**105. One-to-many and Many-to-one Protocols, and Retention in the Acquisition of Equivalence Classes in College Students and Children.** (EDC; Experimental Analysis) YORS A. GARCIA (Southern Illinois University), Ruth Anne Rehfeldt (Southern Illinois University)

**Abstract:** The current study compares two different conditions in the acquisition of equivalence classes in college students and children. All participants in the two experimental conditions were taught four 3-members stimulus classes via conditional discriminations and then were tested for stimulus equivalence. In one condition participants were exposed to a One-To-Many (OTM) training protocol (AB, AC, and AD). In a second condition participants were exposed to a Many-To-One (MTO) training protocol (BA, CA, and DA). One month later participants were re-exposed to the stimulus equivalence test for all two conditions. In a second experiment children were exposed to the same two conditions and month later children were re-exposed to the stimulus equivalence test for all two conditions. Preliminary results suggest that there is not significant difference between both protocols.

**106. Does Training Improve Performance on a Perspective-taking Task?** (Experimental Analysis) Laura M Baker (University of Waikato), JENNIFER M. KINLOCH (University of Waikato), T. Mary Foster (University of Waikato, New Zealand)

**Abstract:** McHugh, Barnes-Holmes, Barnes-Holmes, Whelan, and Stewart (2007) conducted a study on perspective taking using response latency as their dependent variable. They investigated the role of relational complexity within the frame of deictic relations through the use of false belief tasks. They found that the main effect for perspective was significant; consistent with predictions made by Relational Frame Theory. The aim of the current research was first, to replicate their findings that relational complexity increases response latencies on perspective taking tasks, and second, to investigate the effects of training on response latencies. The present method partially replicated that of McHugh et al. (2007) with the addition of a training phase that included multiple exemplars of the perspective taking task with feedback on accuracy. In addition a simple reaction time test was run repeatedly to assess the effect on performance separately from that on perspective taking. Relational Frame Theory predicts a number of outcomes (1) that response latencies would increase as a function of relational complexity; (2) that extended training on the perspective taking tasks would decrease response latencies; and (3) that generalization to novel stimuli would occur. The results will be presented.

**107. Choice, Preference and Contingencies in Decision Making and Work Performance in Mentally Disabled Adults.** (DDA; Experimental Analysis) GIOVANA ESCOBAL (Federal University of Sao Carlos), A. Celso Goyos (Fed. Univ. of S. Carlos)

**Abstract:** This study investigated choice responses and preference for work tasks with and without environmental support with mentally disabled adults. Also, work performance was assessed as a function of conditions chosen. Four mentally retarded adults learned a work task consisting of assembling notebook covers with and without support. During the support condition containers used to store the different

components and immediate feedback were used to increase or maintain performance and prevent errors. Following initial training the subjects worked individually either under multiple schedules or under concurrent-chain schedules according to a multi-element design. When the multiple schedules condition was in effect, the components were either presence or absence of support, distributed quasi-randomly. In the concurrent-chain schedules condition, the first link consisted of FR-1 and the second link consisted of either the presence or absence of environmental support. The results showed that when choice opportunities were given, the work support condition was chosen more often. Also time spent complete the task and average number of errors performing the task decreased during this condition. The results suggest that environmental support may yield greater control over work and that the opportunity to make choices engendered more motivation and work independence on the participants.

KEY WORDS: choice, vocational training, mentally retarded adults, self-determination.

**108. A Comparison of Descriptive and Functional Analyses in the Evaluation of Pediatric Food Refusal.** (Applied Behavior Analysis) LAURA ELIZABETH MELTON (Kennedy Krieger Institute), Carrie S. W. Borrero (Kennedy Krieger Institute), Julia N. Woods (Kennedy Krieger Institute)

**Abstract:** We evaluated the outcomes of descriptive and functional analyses by comparing the conditional probabilities (p) of potential reinforcers during the descriptive analysis to reinforcers identified via functional analysis. The participant was a 7 year-old girl admitted to an intensive behavioral program designed to address severe food refusal. First, descriptive analyses of parent administered meals were conducted and data were collected on inappropriate mealtime behavior (e.g., food refusal, inappropriate comments), and the delivery of potential reinforcers. Next, functional analyses of inappropriate mealtime behavior were conducted to identify reinforcers. Conditional p analyses were then conducted using descriptive analysis data to calculate the p of each potential reinforcer within 1-s, 5-s and 10-s intervals following food refusal. Finally, the highest conditional p values from the descriptive analysis were compared to the reinforcers identified during the functional analysis to determine if they “matched.” Results of the functional analysis indicated that adult attention, access to tangible items, and escape from demands (i.e., food removal) reinforced food refusal. However, the results of the descriptive analysis indicated that adult attention and escape may have functioned as reinforcers, suggesting that descriptive analysis results alone would not have identified all relevant functions for food refusal.

**109. Choice and Preference for Caloric and Non-caloric Foods in Mentally Disabled and Overweight Children.** (DDA; Applied Behavior Analysis) GIOVANA ESCOBAL (Federal University of Sao Carlos), Marina Zanoni Macedo (Universidade Federal de São Carlos), Ana Luiza Rocha Faria Duque (Federal University of Sao Carlos), A. Celso Goyos (Fed. Univ. of S. Carlos)

**Abstract:** This study aimed to investigate choice and preference for caloric and non caloric foods with four mentally disabled and overweight children. A small MDF box with two acrylic keys was used as experimental apparatus which was computer programmed and placed on a table in front of the participant. Button presses on both keys were kept on VI-10 schedules. At the end of the interval on one key a non-caloric gum was delivered and, on the other key, a caloric gum was delivered. A session consisted of 18 presentations of the schedule. Relative rate of response was used to analyze data. The results suggested that there was not a clear preference for either alternative. Studies about the nature of choice and preference for caloric and non-caloric foods are important to identify and describe suitable procedures to understand and control food intake in much needed populations, such as overweight children.

KEY WORDS: choice, preference, children with mental disabilities, caloric.

**110. Contingencies that Predict Indifference: Economic Analyses when the Matching Law Isn't Enough.** (Experimental Analysis) MEREDITH S BERRY (University of Florida), Brian D. Kangas (University of Florida), Timothy D. Hackenberg (University of Florida)

**Abstract:** Human subjects engaged in a simulated Rock/Paper/Scissors game against a computer opponent. The computer opponent's moves were determined by programmed probabilities that differed across 10 blocks of 100 trials each. Previous research in our lab has suggested that subjects probabilistically match the appropriate countermove and response allocation was well described by a modified version of the generalized matching equation. In the present experiment, the computer was programmed to play each move randomly

with equal probability. Under these conditions, subjects allocated their responses equally across the three alternatives as predicted by the matching law. No other obvious order was seen, however, with matching analyses alone. Variations of economic analyses promulgated by the 19th century French philosopher Antoine Cournot, yielded order in response allocation when the contingencies predicted and indeed seemingly engendered indifference. Specifically, subjects were significantly more likely to play the move that would have beaten the previous play (i.e., Cournot's Best Response). The conditional probability of employing this strategy was amplified following runs of repeated computer responses, although no subject reported following such a strategy.

**111. Determinants of Function Transfer in Humans.** (VRB; Experimental Analysis) RAFAEL BEJARANO (Henderson State University)

**Abstract:** Past research suggests that stimulus pairings can produce transfer of function (TOF) in humans. This study investigated whether stimulus pairings produces TOF if people are required to perform a verbal task during the stimulus pairings. On training trials, confirmatory feedback was contingent on pressing one of three keys on a computer keyboard, each in the presence of a different alphanumeric symbol. Once key pressing was under stimulus control, pairing and testing trials were interspersed among additional training trials. On pairing trials, the subjects viewed three new nonalphanumeric symbols, each paired with one of the symbols that served as discriminative stimuli during the training trials. Half of the subjects also counted backwards during each pairing trial. On testing trials, one of the symbols that had been presented with the discriminative stimuli in the pairing trials was presented on the screen, together with instructions to press the A, G, or L keys. Key presses did not produce feedback on testing trials. Median percent-correct responses during testing trials were 51.05 for the counting group and 95.84 for the noncounting group, suggesting that TOF through stimulus pairings is mediated by verbal behavior.

**112. CANCELLED: Visual Detection of Melanoma Symptoms as a Problem in Psychophysical Scaling.** (CBM; Experimental Analysis) ELIZABETH A DALIANIS (Illinois State University), Thomas S. Critchfield (Illinois State University)

**Abstract:** Self-examination is central to the early detection of melanoma, which is deadly in advanced stages and potentially survivable if caught early. Unfortunately, little is known about how well people can recognize critical changes in skin lesions, or about how to maximize this ability. In a procedure inspired by psychophysical scaling, three types of melanoma-related changes in skin lesions were manipulated systematically to determine how well untrained volunteers could detect them visually. Also examined: the extent to which discrimination training improved the ability to detect small changes.

**113. Observer Bias: The Effect of Expectancies and Social Contingencies.** (DDA; Applied Behavior Analysis) EMILY HULL BELLACI (University of Houston-Clear Lake), Jonathan R. Miller (University of Houston-Clear Lake), Dorothea C. Lerman (University of Houston-Clear Lake)

**Abstract:** The purpose of this investigation was to extend previous research on factors that influence observer bias by examining the separate effects of social contingencies and expectancies on the accuracy of data collection using Signal Detection Theory. The accuracy of 24 observers' recordings of clear and ambiguous aggression was evaluated following exposure to social contingencies and expectancies. Observers (university students) scored instances of aggression while watching 3 different video segments in a university laboratory setting. The frequency of aggressive instances was held constant across all videos. Each video contained an identical number of clear instances of aggression, ambiguous instances of aggression, and ambiguous non-examples of aggression. All observers were exposed to a baseline condition (no experimental manipulation) and two test conditions. In the Social Contingencies condition, the experimenter informed the observer that he or she had missed some of the aggressions during the previous observation and needed to try harder on the next video. In the Expectancies condition, the observer was told to expect higher rates of aggression in the upcoming video. Results indicated that social contingencies may bias observer accuracy but that expectancies are not likely to bias observers unless previously exposed to social contingencies.

**114. Behavioral Sensitivity to Conditioned Punishers in Humans.** (Experimental Analysis) ADAM E. FOX (Western Michigan University), Andrew E. Brandt (Western Michigan University), Cynthia J. Pietras (Western Michigan University)

**Abstract:** The present study investigated the punishing effects of a stimulus paired with response cost. Participants responded on buttons for hypothetical money (points) and were told that for every 5 participants, the one who earned the most would receive \$50. The experiment consisted of two parts. Part 1 included training, a baseline condition in which responding produced points according to a random-interval 20 s schedule, and a punishment condition in which responding was conjointly punished by a random-ratio 2 response cost schedule. Participants who showed a punishment effect continued to Part 2. Part 2 included a baseline condition, a brief control condition in which responding produced a visual stimulus (a 3-s white flash on the computer screen), a pairing condition in which response cost was preceded by the visual stimulus, and a conditioned punishment condition in which responding again produced the visual stimulus. None of the 17 participants showed a suppression in responding in the conditioned punishment condition. Rather, response rates were often higher than during baseline. These results suggest that either stimuli paired with point loss are not effective punishers, or that the pairing conditions failed to establish the visual stimulus as a conditioned stimulus.

**115. Conditioned Emotions and Visual Stimuli Applied to Skin: An Analysis of Pavlovian Conditioning in Tattoos.** (TPC; Applied Behavior Analysis) EMINA CUFUROVIC (Northern Arizona University), Andrew W. Gardner (Northern Arizona University), Vanessa Adelman (Northern Arizona University), Nick Lawrence (Tat-Fu Tattoo)

**Abstract:** With the increasing popularity of tattoos (Swan, 2006), it has become more important to understand how conditioned emotions between an individual and their specific tattoo are acquired. We hypothesize that Pavlovian conditioning can account for the conditioned emotional responses to the visual stimulus during tattoo application. John B. Watson described conditioned emotions as learned emotional reaction acquired through Pavlovian conditioning (Chance, 2006). While the motivations for any given tattoo vary widely by individual, this study investigated whether conditioned emotions are indeed paired via Pavlovian conditioning, as well as the longevity of these emotions. Two individuals, receiving their first tattoo, were recruited for the current study. Data using GSR (Galvanic Skin Response) measurements of sympathetic activity and emotional arousal were collected prior to the tattoo, during the tattoo application, as well as during follow-up interviews at 1 and 3 month intervals. A survey of the reasons why each participant chose their tattoo was also conducted. A local tattoo shop (TatFu Tattoo) owner in Northern Arizona provided services for all participants. Results are discussed in terms of the strength of conditioned emotions (physiological measures) and reported reasons for getting the tattoo (verbal report) over time.

**116. Acquisition of Language Modes Reading and Listening and its Transfer to Writing Mode.** (VRB; Experimental Analysis) A. DANIEL GÓMEZ-FUENTES (Universidad Veracruzana), Enrique Zepeta Garcia (University of Veracruz), David Martínez Cerqueda (University of Veracruz)

**Abstract:** From the conceptual alternative based on the notion of language game (Wittgenstein, 1953), Ribes (2006) argument that the logic of language is grounded on social practice and not on the fictitious universal logic of grammar. The conventional character of the language like a particular class of interaction is maintained; their functional and morphologic characteristics do not depend on the biological, individual or specific conditions of the species, but they involve a conventional system of relations between individuals and events of the environment. In the present study one of the three dimensions suggested by Ribes (2006) is analyzed: the language like instrument. Language may be conceived of as the instrument by means of which we directly affect the behavior of others, and indirectly the objects and events in the world and ourselves. The acquisition of the modes is evaluated to listen and to read at referential substitute level during the training, and its transference at substitute level nonreference in a different mode, to write, in the active voices and passive of the Spanish using literary and informative texts. 10 experimentally unaware children participated in the experiment, aged 8 to 10, in the third grade the elementary school in the city of Xalapa, Veracruz, México. A pretest-posttest design was applied, two phases of training and tests of transference in inverse sequences. The results suggest that in this experiment, the execution level in the transference tests seems to depend on

the characteristics of the linguistic mode, of the level of execution obtained during the training, of the trained functional level and of the type of voice - activates or passive employee. The content of texts - literary or informative it did not affect the level of execution significantly obtained in the training and the tests of transference.

**117. The Effects of Capturing Versus Successive Approximations on Shaping Human Movement.**

(CBM; Applied Behavior Analysis) TRAVIS HETH (University of North Texas), Jesus Rosales-Ruiz (University of North Texas)

**Abstract:** Clicker training has been used to shape human movement topographies in recent years. Although little research has been done in this area, a pilot study conducted by Heth and Rosales-Ruiz (2007) indicates that using auditory feedback to try to capture a forward bend fails to produce learning, even after many trials. The current study aims to compare subjects' performance using two different procedures, capturing and successive approximations, to shape a forward bend. For both conditions the subjects are told to stand straight up at the start position and then bend forward at the waist when given a signal by the experimenter. In one condition, the subject's movement is "captured" by delivering a click when the subject reaches a predetermined bend angle. During another condition, the subject receives a click during a series of successive approximations toward a target bend. A multiple treatment design will be used to examine the effects of each procedure. Results pending.

**118. Can Money Buy Happiness? Evidence from the Discounting of Uncertain Happiness.**

(Experimental Analysis) TRACY TUFENK (University of Wisconsin - Eau Claire), Daniel D. Holt (University of Wisconsin - Eau Claire)

**Abstract:** With probability discounting, the subjective value of an uncertain outcome decreases as a function of increases in the odds against its receipt. Although individuals regularly make choices between non-monetary outcomes (e.g., choosing between food items), relatively little research has been done in this area. The current study investigated choice behavior between certain and uncertain monetary and non-monetary outcomes. We asked undergraduate college students to make a series of choices between uncertain hypothetical outcomes: money and happiness. Specifically, individuals were asked to choose between a monetary outcome (certain) and personal happiness (uncertain). We found that as an individual's happiness becomes more uncertain they were willing to accept less money. That is, we found that money can 'buy' happiness and that the subjective value of happiness decreases as the odds against its receipt increases (discounting). We also found that individuals who self-reported being relatively "happy," as determined by a happiness questionnaire, were not as willing to take a risk with their personal happiness as those individuals who self-reported being "less happy." While additional data collection and analyses are warranted, the present findings suggest that a fuller understanding of the factors that contribute to choices regarding uncertain non-monetary outcomes is possible.

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**#416 International Poster Session**

5/25/2009

12:00 p.m. - 1:30 p.m.

North Hall A

EDC

**119. Methods for Obtaining Speech and Language Continuing Education Credits at**

**Multidisciplinary Professional Development Events.** (Service Delivery) SHARI L. SCHATZMAN (Eden II Programs) Amy Bergen (Speech-Language Coordinator Eden II Adult Program/TIPSE)

**Abstract:** With the increasing number of professionals that are dually practicing in the areas of speech-language pathology and applied behavior analysis, there has been much discussion regarding speech-language pathologists accruing their required number of ASHA continuing education credits while still enhancing their knowledge of behavior analysis. There are currently over two hundred members of the applied behavior analysis/speech-language pathology list-serve. This poster will discuss the results of a survey of speech language pathologists in terms of their access to information/education in applied behavior analysis and the

role of CEUs in this process. Issues such as management of two separate certifications along with separate sets of CEUs, access to relevant information in ABA, as well as attendance in state and national conferences will be reviewed. Available options for individuals will be examined, including collaboration between CEU providers, provision of ASHA CEUs at ABAI and State ABA conferences as well as the provision of BCBA CEUs at state and national speech and hearing conferences.

**120. Integrating PBIS and Day Treatment Components for an Alternative School.** (Applied Behavior Analysis) JOSHUA NEEDELMAN (USM), Amy Baranek (University of Southern Mississippi), Joe Olmi (The University of Southern Mississippi)

**Abstract:** This poster will be an introduction into a model created for a district's alternative school which serves student from grades 3-12. The discussion of the model will include how it fits into a Response to Intervention Model. The model includes a procedure for admission into the school and information regarding a three level token economy system shown to increase responsiveness for students with significant behavior problems. The program includes positive behavioral interventions and supports (PBIS) components including teaching positively stated school expectations and providing incentives for appropriate behavior. Approximately two years of data will be presented regarding program effectiveness. Analyses will include approximately two years of longitudinal data indicating level, transitions, recidivism, attrition, and treatment integrity. Finally, the program indicates criteria for re-entry to the student's home school. Individuals will gain an understanding of the process and needs for implementation of behavioral programming for alternative schools and will learn key behavioral components that enhance response to intervention programming. This presentation will offer a detailed review the preceding components of the model designed to increase student resiliency and facilitate their transition back to their home schools.

**121. Preschool RtI Training: Model, Methods, and Outcomes.** (Service Delivery) LAURA BERRY KUCHLE (University of Cincinnati), Liz Barkley (University of Cincinnati), Wesley J. Sheeley (University of Cincinnati), David W. Barnett (University of Cincinnati)

**Abstract:** Response to Intervention (RtI) enables a service delivery model aligned with the goals of prevention and early intervention using direct assessment methods and single case design and decision components from ABA. Given the emphasis on prevention and early intervention in educational law (IDEA 04), there is a greater need for school psychologists to provide effective services to preschool children. However, there has been little research devoted to training school psychologists in RtI. This presentation describes a training model and key methods emphasizing RtI services that integrate positive behavior supports and early literacy. Major practicum training experiences supporting RtI are parent programs, staff development (instruction & managerial), teacher supports that are progress monitored on key variables, and tiered early literacy and behavioral interventions (class, group, and individual child) that are monitored through tiers of services. The presentation will provide a summary of the intervention outcomes for students served by trainees during over 3 years, all carried out at a local Head Start. Outcome data are used to evaluate the efforts of the trainees and the training provided by the program. Discussion will focus on the need for well-prepared school psychologists to support RtI in early childhood education settings.

**122. An Evaluation of the Effects of an Abridged Parent Training Program on Parent-child Interactions in the Home.** (TBA; Applied Behavior Analysis) ALLISON M. JONES (University of North Texas), Richard G. Smith (University of North Texas), Barbara Carlson (University North Texas), Amanda C. Besner (University of North Texas), Kimberly L. James-Kelly (University of North Texas), Martha Joe Staff (University of North Texas), Michelle Lamancusa (University of North Texas)

**Abstract:** Training in behavior management has been used to teach parents how to appropriately intervene on their children's behavior. This study examined the effects of a condensed parent training program on parent-child interactions in the home. Two parents participated in a positive parenting workshop that included explicit training of four skills and indirect training of two additional skills. In order to determine skill acquisition, both parents performed pre- and post-training role plays and completed written exams prior to the workshop, after each session and following the entire workshop. Role play assessment results showed improvements in all skill areas for both participants following the workshop. Written assessment results showed improvements for all skills directly taught except Set Expectations for Participant 2. Multiple

measures were examined in the home prior to and following the workshop to assess skill generalization. Home assessment results showed an increase in positive interactions and decrease in coercive interactions and undesirable child behavior for both participants.

### **123. An Examination of Practices Regarding the Utilization of Scientifically Based Research at the District Level (in Two Midwestern States) and the State Policy Level Following Passage of NCLB.**

(Theory) PATTY L. POLSTER (St. Louis University)

**Abstract:** Administrators across the nation are regularly faced with decisions regarding the best ways to serve their students and community. NCLB legislation calling for the utilization of scientifically based research necessitates a more thorough administrative decision-making process than many in the field are accustomed to.

The current study will attempt to examine the extent to which Missouri and Illinois school district administrators and school boards have developed (and/or currently utilize) specific policy and/or procedures related to the identification and utilization of research in educational and/or curricular decision making, as well as what proportion of administrators surveyed report having received adequate training to identify and utilize SBR. Additionally, interview data from representatives of several state departments of education will be presented regarding policies and/or procedures related to the identification and utilization of SBR, as well as staff readiness to implement any such policies.

Discussion will consider conceptualizations of strategic or effective management from the Organizational Behavior Management literature as well as consideration of the current state of educational research.

### **124. Use of Behavior Principles: A Comparison of Special Education Classroom in India and Florida.**

(Applied Behavior Analysis) GOPKULALAKSHMI SADHANANTHAM (Special Education Teacher), Rangasamy Ramasamy (Florida Atlantic University)

**Abstract:** There are over 3000 special education schools in India that are run by government, private, and welfare organizations catering to about five million children with moderate to severe disabilities. These schools come under three general categories namely, schools for children with intellectual disabilities, schools for children with physical and multiple disabilities, and schools for children with sensory disabilities. In contrast, about 10% of students with disabilities receive special education services in public schools in all 50 states. For the purpose of this presentation, the first author selected her classroom for children with intellectual disabilities in India and compared it with her present classroom for children with autism and intellectual disabilities in a high school classroom in Florida where she currently teaches. The goal of this presentation is to highlight the use of behavior principles in both classrooms to teach students with cognitive disabilities. In this poster presentation, the authors will highlight how behavior principles are used in both countries to improve the students' appropriate behavior. The participants that attend this International Poster Session will understand the status and use of applied behavior analysis in special education classroom in India and in Florida.

### **125. Paraprofessional/ Parent Training Using Video Modeling to Implement the use of Activity Schedules.** (AUT; Applied Behavior Analysis) KIMBERLY SARA BROWN (San Diego State University), Bonnie Kraemer (San Diego State University)

**Abstract:** Due to the increasingly diminishing resources in public schools paraprofessionals and parents often do not receive training in how to work with children using empirically validated strategies. It is known however that students with autism spectrum disorder frequently benefit from instruction presented in a visual format such as activity schedules. This study will evaluate the effectiveness of using video modeling to train parents and paraprofessionals to implement activity schedules with children who have autism. Specifically, the participants will be three elementary aged students, their parents and classroom instructional assistants. The intervention will be implemented over a three month period and will consist of having the parents/paraprofessionals watch a video of the classroom teacher implementing an activity schedule either in the home or school. Participants will be asked to view the video prior to implementing the activity schedule with the target child. A non-concurrent multiple baseline design will be utilized to evaluate (1) the parent/paraprofessionals' ability to implement use of the activity schedules and (2) the students' level of

independence in using the activity schedules. If there is consistency between school and home in using empirically supported strategies, it is more likely that children will generalize and maintain their skills.

**126. Effects of Unison Responding and SAFMEDS on College Students' Acquisition of new Terminology.** (TBA; Service Delivery) DAWN W. HAMLIN (SUNY Oneonta), Devender Banda (Texas Tech University)

**Abstract:** This study looked at the use of unison responding (UR) and SAFMEDS and their effects on college student acquisition of new terminology. Research of UR procedures and SAFMEDS have found both to provide increased student achievement (Randolph, 2007; Byrnes, 1990). To date however, no study has compared UR to SAFMEDS for effects on vocabulary attainment. Using a pre-test, intervention, post-test design, this study looked at pre-service student attainment of specialized vocabulary in an introduction to exceptional children course. This study provides a comparison between group 1 which used UR to practice new terminology, group 2 which used SAFMEDS to practice new terminology, and group 3 which used neither UR nor SAFMEDS and acted as a control group. Additional social validity data was collected from the pre-service teacher participants measuring their attitude about UR and SAFMEDS and their likelihood of using either method in their future classrooms. Results of this study are discussed and implications for practice and research are provided.

**127. Effects of a Contingency for Pretest Performance on Posttest Performance in a Laboratory Setting.** (TBA; Applied Behavior Analysis) MATTHEW A. TAYLOR (Queens College and the Graduate Center, CUNY), Michael Itzkowitz (Queens College, CUNY), Kathleen A. Mangiapanello (Queens College and the Graduate Center, CUNY), Nancy S. Hemmes (Queens College/CUNY)

**Abstract:** This study assessed the well-established effects of exposure to pretesting on subsequent test performance, by manipulating parameters of the pretest condition. College students were assessed with a between-participants design by randomly assigning participants in randomized blocks of four to the following conditions: 1) control; 2) focused study; 3) pretest without contingency for performance; 4) pretest with contingency for performance. Under condition 4, students who met a performance criterion were able to leave the experiment early. The procedures for all four conditions were run identically except for the above-described experimental manipulations. Pretest and posttests consisted of multiple-choice and completion questions. Prior history of questions on the posttest differed: questions were: 1) novel; 2) previously exposed on pretest; 3) reworded version of the previously exposed. The dependent variables were the number of correctly answered questions on the posttest and on the pretests. Participants performed significantly better on posttest questions that were previously exposed (identical and reworded version). There was no effect on performance on novel posttest items as a function of the experimental condition. The number of correct answers for pretests was significantly greater under the performance contingency as compared to conditions without it.

**128. Teacher Education Students' Perceptions of 3C/ROD: Close, Continual Contact with Relevant Outcome Data.** (TBA; Applied Behavior Analysis) RENEE K. VAN NORMAN (University of Oregon), Deborah Russell Carter (Boise State University), Matthew Tincani (Temple University), Shannon Crozier (University of Nevada, Las Vegas)

**Abstract:** This investigation evaluated students' perceptions of frequent formative assessments used in six university teacher preparation courses. The Social Validity of Assessment Practices Survey was designed to evaluate students' perceptions of course assessment activities designed to allow university professors close, continual contact with relevant outcome data (3C/ROD; Bushnell & Baer, 1994). Assessments included questions about an instructor-generated evaluation of instruction, in-class activities, quizzes, and other assignments and procedures. Survey results include both individual ratings for each assessment activity and students' rating of satisfaction with the assessment methods as they related to their understanding of course content. Results indicate students were very satisfied with instructors' assessments. Students felt instructors used assessments to modify teaching and perceived that quizzes and activities were closely linked to course content. They felt less strongly about the value of instructor-generated evaluation of instruction and the frequency of quizzes for enhancing their content learning. This study provides preliminary descriptive evidence supporting the importance of including model demonstration tactics in teacher preparation courses

to assist in the development of educators skilled in the collection of meaningful data and its use in instructional decision making. Implications for education, limitations of the study, and suggestions for future research will be presented.

**129. Comparison of the use of Orthographic Rules in Three University Populations.** (VRB; Applied Behavior Analysis) MARÍA LUISA AVALOS LATORRE, Leticia Ornelas Orozco, Alba Mayo Villanueva Ortiz(no), Jehovana Elizabeth Reyna Vega(no), Erika Vianey González Plascencia(no), David Angel Pacheco Angeles(no)

**Abstract:** In Mexico, the studies relating to the use of the orthographic rules they focus predominantly in elementary education, whereas in university education it has been realized scantily. The objective of the study was to determine the level use of rules of written accent and orthographic. 400 university students of three Universities participated. They realized three types of activities. The first activity consisted in to write the letter or written accent correctly in every word. The second activity consisted in to write the letter or written accent correctly in every word. The second activity consisted of writing the letters and lacking accents in word of sentences. Finally, in the third activity to the presented sentences with homophonous word, the participants chose the correct word. The results will be analyzed in terms of the percentage of correct words in every activity and will be compared among the university populations considered in the study.

**130. The Effect of Teaching College Students to Task Analyze Long Term Writing Assignments.** (TBA; Applied Behavior Analysis) CHRISTOPHER L. SCHWILK (Shippensburg University), James K. McAfee (Penn State University), William Therrien (University of Iowa)

**Abstract:** Academic writing is an important and complex task comprised of multiple sub-tasks. This poster will present the results of a time-lagged group study that examined the effect of teaching college students with writing difficulties to task analyze assignments and establish dates for subtask completion. Teachers often use task analysis of assignments to assist students to break larger tasks into smaller components. Additionally, researchers have established task analysis is a critical component of strategy development and as an aid to help students complete assigned tasks. When students with disabilities transition to college, supports that existed in high school for breaking assignments into smaller parts disappear. Participants were taught a strategy to break their assignments into smaller components for assignment completion and establish planned dates for completion of the assignment components. Results of the study suggest that brief instruction in task analysis may be an effective procedure to improve writing assignment completion.

**131. Stimulus Control by the Multiple-Choice Item.** (EAB; Applied Behavior Analysis) HAROLD L. MILLER JR. (Brigham Young University), David Foster (Kryterion)

**Abstract:** We report an experimental series with human subjects recruited from upper-division psychology majors. Each was asked to complete a set of computer-presented quizzes consisting of multiple-choice items on traditional topics in the psychology curriculum. There were three formats for the presentation of answer options. The Standard format presented each answer option simultaneously. Subjects were asked to select the correct answer. The Discrete format presented each answer option one at a time until all had been presented. After each answer option appeared, the subject answered yes or no and could ask to review previously presented options. The Foster format presented each option one at a time but stopped presentation once the subject answer correctly or incorrectly. Subjects were allowed an initial period in which to study the textual material related to the topic, then took a quiz that implemented one of the formats. The items in each format were equated for difficulty. We report the results for each format in terms of percentage correct, response latency, total time, and additional, derived measures.

**132. On interteaching.** (TBA; Applied Behavior Analysis) GUNN LOKKE (University College of Ostfold, Norway), Jon A. Lokke (University College of Ostfold, Norway), Erik Arntzen (Akershus University College)

**Abstract:** Interteaching is an application of behavioral principles in higher education, utilizing the three-term-contingency, and highlighting dyadic activity, or peer learning (Boyce & Hineline, 2002; Saville, Zinn, & Elliot, 2005). Antecedents and consequences are arranged for talking in student dyads. In an earlier experimental study (Løkke, Løkke, & Arntzen, 2008) we compared the effectiveness of interteaching vs

traditional lectures, using a single group experimental reversal design with two conditions. Relatively small effects and differences between interteaching and traditional lectures in our 2008 study have prompted a new study highlighting more intense introduction and implementation of interteaching over four consecutive weeks in an introductory psychology course. Several of Toppings (2005) proposals for effective peer learning are given attention. Effects are measured within a pretest – posttest group design.

**133. MOVED TO 5/24: Effects of Words versus Random Characters on Performance in a Typing Program for Adult Learners.** (CBM; Applied Behavior Analysis) LAUREN LONG (Johns Hopkins University School of Medicine), Anthony L. DeFulio (Johns Hopkins University School of Medicine), Darlene E. Crone-Todd (Johns Hopkins University School of Medicine), Kenneth Silverman (Johns Hopkins University School of Medicine)

**Abstract:** Individuals participating in a clinical trial designed to evaluate the effectiveness of employment-based abstinence contingencies in initiating cocaine abstinence worked as data entry operators in a model therapeutic workplace. Prior to serving as data entry operators, participants received typing and keypad training in which voucher-based payments were contingent on correct keystrokes. A single-subject, alternating treatments design was used to investigate whether presenting characters randomly or as words affected the amount of training required to achieve fluency, or the level of fluency achieved in the typing training program. Fifty-seven participants were alternately assigned to two typing programs, which were identical except that they were counterbalanced with respect to order of presentation of random characters and words. Programs included four sets of 20 steps. Words were presented in half of the steps and random arrangements of the same characters were presented in the remaining steps. Forty-eight participants completed at least one set and were included in the analysis. Fluency was more rapidly obtained and a higher level of fluency was achieved when words were used as training stimuli. These data suggest that word-based presentation of stimuli is preferable to randomly arranged characters in typing training programs.

**134. Insight or Grapevine? Contingency Shaping and Social Transmission of a Maximization Strategy in Paid Trainees.** (CBM; Applied Behavior Analysis) LAUREN LONG (Johns Hopkins University School of Medicine), Anthony L. DeFulio (Johns Hopkins University School of Medicine), Kenneth Silverman (Johns Hopkins University)

**Abstract:** Individuals participating in a clinical trial designed to evaluate the effectiveness of employment-based abstinence contingencies in maintaining abstinence of cocaine and opiates received typing training. During a 22 month period in which a particular version of the typing training program was in place, 56 of 74 participants engaged in an extended pattern of behavior which maximized their earnings but halted their progress through the training program (DeFulio et al., In press). During follow-up interviews conducted six months after the conclusion of study participation, some participants indicated that they learned about the maximization strategy through direct experience with the contingencies, while some reported being told about the strategy by other participants. Because all of the typing performance of our participants is recorded by computer, we were able to determine precisely which participants were engaging in the maximization pattern of behavior, when they were engaging in the pattern of behavior, and the extent to which they experienced direct contact with the contingencies before engaging in the pattern of behavior. The analysis of these measures indicates that the widespread occurrence of this pattern of behavior in our subject population was largely a function of social transmission of the maximization strategy.

**135. Effects of Homework Submission and Revision Requirements on Quiz Performance in a College Setting.** (Applied Behavior Analysis) JASON S. ROCKWELL (Queens College and the Graduate Center, CUNY), Michal E. Freier (Queens College/CUNY), Nancy S. Hemmes (Queens College/CUNY)

**Abstract:** Recent literature (Oliver & Williams, 2005) suggests the use of accuracy-based objectives on homework assignments results in higher performance on course assessments. In the current study, the effects of submission and criterion-based homework assignment contingencies on homework submission and quiz grades were assessed. For each chapter unit, students were given a homework assignment for which they were able to receive personalized corrective feedback contingent on submission. Using an alternating treatments design, students were then assigned to one of three conditions during each instructional unit. In the no-points condition, students had no opportunity to earn course credit for homework submission. In the

submission condition, students received full credit for all submissions, regardless of accuracy. Finally, students in the revision condition were required to resubmit an assignment until demonstrating mastery in order to receive any credit. Group-mean percentage of homework assignments submitted was higher in both of the points conditions than the no-points condition. In addition, students submitted more accurate responses in the revision condition; nonetheless, students in this condition did not demonstrate higher quiz scores.

**136. Using the Stimulus Equivalence Paradigm to Teach Course Material in an Undergraduate-level Rehabilitation Course.** (Applied Behavior Analysis) BROOKE DIANE WALKER (SIU Carbondale), Ruth Anne Rehfeldt (Southern Illinois University)

**Abstract:** The purpose of this study is to examine the degree to which the stimulus equivalence instructional paradigm can be effectively used to teach course material to students in an undergraduate disability course. The study is divided into three sets of experiments, each consisting of three sets of four instructional stimuli related to the causes, names, definitions, and service needs for a variety of disabilities. Participants are pre and post-tested on the material by the experimenter using flashcard-style manner with no feedback. Training is conducted using an instructional package consisting of multiple-choice questionnaires and feedback. Preliminary results suggest that the stimulus equivalence paradigm can be effectively used in such a paper-and-pencil training format, and performance in the class is enhanced as a function of participating

**137. Types of training strategies used by Physics and Mathematics to Train New Researchers.** (EAB; Applied Behavior Analysis) MARÍA ANTONIA PADILLA VARGAS (University of Guadalajara), Georgina Margarita Arteaga Flores (University of Guadalajara), Hitomy Edith Matsuda Wilson (University of Guadalajara)

**Abstract:** This piece of research attempted to compare training strategies used by researchers in Physics and Mathematics to train their apprentices. In each area six researchers belonging to three different generations participated: 2 with 25 years of research experience, 2 with 12 years of experience, trained by the first ones, and 2 trained by the latter. One instrument designed to fit the present research purposes was used to collect data. Four kinds of training strategies were found: by dogma (when the researcher tells the apprentice the rules that must be followed to perform each activity), by direct training (when the apprentice is exposed to the task and the research gives him constant feedback), by reference (when the apprentice is exposed to the observation of the performance of others and is asked to do the same), and by faith (when the apprentices face the situation on their own as they see fit). Preliminary data showed that Physics researchers trained predominantly by Reference while Mathematics researchers by Direct Training. The implications that these results have for teaching sciences are discussed.

Key Words: Training strategies, experts, novices, Physics, Mathematics.

**138. The Effects of a Point Contingency on Homework Completion, Homework Accuracy, and Quiz Performance in a Graduate-level Behavior Analysis Course.** (Applied Behavior Analysis) BROOKE DIANE WALKER (SIU Carbondale), Yors A. Garcia (Southern Illinois University), Stephen Filipiak (Southern Illinois University), Ruth Anne Rehfeldt (Southern Illinois University)

**Abstract:** The current research study examines whether the completion of homework assignments affects students performance on quizzes in a graduate-level rehabilitation class. Using an alternating treatment design, points are provided contingent upon the completion of weekly study questions in one condition, while no points are provided contingent upon their completion in another condition. Preliminary results suggest that the point contingency does not affect the likelihood of students completing the assignments, and does predict quiz performance

**139. Reliability of Students' Self-recorded Participation in Class Discussion.** (Applied Behavior Analysis) KATHERINE R. KROHN (University of Tennessee), Lisa N Foster (University of Tennessee at Knoxville), Robert Williams (University of Tennessee)

**Abstract:** Many instructors include credit for students' in-class participation in their grading scheme; however, credit is often awarded subjectively at the end of the course. Objectifying the participation-grading

system tends to be labor-intensive for instructors. One procedure that requires little instructor time is having students record their own participation. This self-recording procedure must prove reliable for the instructor to use the participation records as the basis of a participation grade. Thus, the purpose of the current study was to determine whether students can reliably record their own participation under both credit and non-credit conditions. Over 2 consecutive semesters, students (N = 329) in 6 sections of a large undergraduate course self-recorded their comments in class discussion. In some phases, students received a small amount of credit toward their course grade for reporting up to 2 comments in class discussion. Students self-recorded their comments in all phases of the study, including non-credit phases. Two external observers recorded student participation for 25% of discussion days. Overall percentage of agreement between students and observers was high under both credit conditions, though students reported more comments under credit than non-credit conditions and were slightly more inclined to under-report participation in the non-credit phases.

**140. Comparison of Student Quiz Scores Following Lecture and Interteaching with and without Extra Credit Points for Preparation Guide Completion.** (Applied Behavior Analysis) STEPHEN FILIPIAK (Southern Illinois University), Ruth Anne Rehfeldt (Southern Illinois University)

**Abstract:** This study will compare the effects of lecture and interteaching with and without points for preparation guide completion on subsequent quiz performance in an undergraduate research methods class. A counterbalanced multielement design was used to alternate three conditions: (1) traditional lecture, (2) interteaching with extra credit points available for completion of preparation guide over that weeks material, and (3) interteaching with no extra credit points available for preparation guide completion. Preliminary findings suggest that students will perform best in interteaching conditions with extra credit points available for preparation guide completion. Further, interteaching with or without extra credit points is predicted to be only slightly superior to class periods with no interteaching session. Students will also indicate via social validity questionnaire their preference for each instructional condition.

**141. Effects of a Reciprocal Peer Tutoring Program on the Academic Achievement of College Students in an Applied Behavior Analysis Course.** (TBA; Applied Behavior Analysis) RYAN M. ZAYAC (Central Washington University)

**Abstract:** Research demonstrates peer tutoring, a type of cooperative learning, to be an effective strategy for increasing student achievement at various educational levels. This project examined the effectiveness of reciprocal peer tutoring (RPT) on the academic achievement of undergraduate college students enrolled in an applied behavior analysis course. An alternating treatment design was used to examine the effects of the RPT program. Similar to previous findings, the results showed an increase in academic performance when the students were encouraged to meet outside of normal class time. These results suggest that reciprocal peer tutoring is effective for college students and can be an effective strategy to assist them in learning the material presented throughout the class.

**142. The Effects of Text Messaging on At-Risk College Student-Athlete's Class Punctuality.** (Applied Behavior Analysis) Valorie R. Lott (University of Memphis), Jessica L. Mills (University of Memphis), DAVID BICARD (The Univeristy of Memphis)

**Abstract:** A multiple baseline across students was used to assess the effectiveness of students text messaging upon arrival to class. The results showed meaningful improvements in both punctuality and attendance. Follow up data were also collected.

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**#417 International Poster Session**

5/25/2009  
12:00 p.m. - 1:30 p.m.  
North Hall A  
TBA

**143. Teacher and Student Learning Gains Through an Intensive Summer Learning Experience for Children with Autism.** (AUT; Service Delivery) Jeanie Lundy (Kids for Camp), Laura Brumfield (University

of Florida), LYNDA TYSON (Kids for Camp), Leasha Barry (University of West Florida), Tiffany Brown (Kids for Camp)

**Abstract:** This presentation will summarize data collected over a six week intensive summer educational experience in which over 60 residents of a rural community were trained to work with children with autism using behavior analytic techniques. Data were collected on both trainees and child progress on learning goals. Implications for implementing summer programming for children with Autism who live in areas lacking resources will be included.

**144. Identifying Function via Visual Inspection.** (Applied Behavior Analysis) JENNIFER LYNNE BRUZEK (Vanderbilt University), Nealetta Houchins-Juarez (Vanderbilt Kennedy Center Behavior Analysis Clinic), Kathleen J. Miller (Vanderbilt University), Craig H. Kennedy (Vanderbilt University)

**Abstract:** We provided written guidelines to introductory-level Master's students to teach them visual inspection strategies for two types of assessments; descriptive analyses and brief analog functional analyses. During baseline, students were provided twelve graphs from each assessment type and were asked to score each graph as one of six possible functions (baseline). Next, scoring guidelines were provided for one assessment type while the other assessment type stayed in baseline. The students were asked to score a second set of twelve graphs from each assessment type. Finally, scoring guidelines were provided for the second assessment type and the students were asked to score a third set of twelve graphs from each assessment type. All student responses were compared to the responses of three trained behavior analysts who scored the graphs prior to their disbursement. Interobserver agreement exceeded 90% for all graphs across both assessment types following baseline. Results will be discussed in terms of student performance and generality of the guidelines implemented.

**145. The Changeability of Misconceptions in Psychology and Behavior Analysis.** (EDC; Theory) JON A. LOKKE (University College of Ostfold, Norway), Gunn Lokke (University College of Ostfold, Norway), Erik Arntzen (Akershus University College)

**Abstract:** Students frequently show misconceptions regarding constructs in psychology in general and basic constructs in behavior analysis in particular. We (Arntzen, Løkke, Løkke, & Eilertsen, submitted paper) have replicated the study by Lamal (1995) with some additional statements. The results showed a variety of misconceptions. It is important to try to change these widely held misconceptions in students. Among others, Chew (2006) presents some promising strategies for changing misconceptions. In this study we assessed misconceptions both in general psychology and behavior analysis in an introductory course in psychology, and addressed misconceptions directly in accordance with data. We have an emphasis on active participation from the students, stimulation of frequent responding, and presentation of many reinforcers for accurate responding. We retested the students (bachelor students) after the intervention, and we will present some results.

**146. On Experimental Functional Analysis Skills (EFAS).** (EDC; Applied Behavior Analysis) JON A. LOKKE (University College of Ostfold, Norway), Gunn Lokke (University College of Ostfold, Norway), Erik Arntzen (Akershus University College)

**Abstract:** Systematic training and acquisition of experimental functional analysis skills (EFAS) are documented in several published studies. Our studies include over 30 participants. After training all usual conditions or the demand condition only, all participants reached a high success criterion in one or two days of training. A cost and time efficient program for EFAS is important in order to meet the increased interest in the technology in society at large. In the Master's program in Behavior Analysis at Akershus University College the training is integrated in an ordinary course. A detailed training manual, or protocol, is an important prerequisite for effective training. Furthermore, our experience is that functional analysis methodology and training can be included in an ordinary science methodology course: Experimental functional analysis skills require training in arranging well known behavior contingencies and arrangements, in addition to knowledge of well known causal designs and validity threats.

**147. Effects of the Peer Reviewer Component of a Computer-Aided PSI Course.** (Experimental Analysis) JODY M. LAMBERT (University of Manitoba), Gabriel Schnerch (University of Manitoba & St. Amant), Joseph J. Pear (University of Manitoba)

**Abstract:** Comparisons between two computer-aided personalized system of instruction (CAPSI) classes will be evaluated in order to ascertain part of the effect that peer reviewers play. Data from students taking CAPSI courses in Behaviour Modification Applications at the University of Manitoba in the summer session of 2007 and 2008 will be analyzed. Students in the summer semester of 2008 were not given the option to peer-review their peers' unit tests (NPR semester) and unit tests were marked by the instructor or mentor(s). Students in the summer semester of 2007 were given the peer-review option (PR semester) and the instructor or mentor only marked tests when two students were unavailable to peer review. Student academic performance, measured by progress indices, will show whether students in one group progressed significantly more quickly than students in the other. Final exam grades will be compared using t tests to determine if there are statistically significant differences between the two groups. The peer reviewing option is an integral part to the CAPSI system and is therefore of importance to determine its effectiveness. Results of this study will help researchers better understand the peer-reviewing process as well as reveal potential ways to improve on its concept.

**148. Teaching Teachers: A Comparison of Educational Tactics.** (EDC; Applied Behavior Analysis) TRACY REILLY-LAWSON (Caldwell College)

**Abstract:** This study compares the effects of peer tutoring and observational learning on correct responding of students in a college setting. Ten students attending college teacher preparation programs at the bachelors and masters degree levels participated in this study. A pre- and post- multiple baseline design across participants was implemented. Pre-tests were given at the start of each topic covered. The professor implemented peer-tutoring and observational learning to classes in a counter-balanced manner. Post-tests were completed at the end of each class session. The results show peer-tutoring as an effective tactic to increase the number of opportunities to respond and the number of correct responses emitted.

**149. From Instruction to Practice: Common Types of Graphs in Applied Behavior Analysis Research.** (Applied Behavior Analysis) MARANDA TRAHAN (Southern Illinois University Carbondale), Nicole Heal (Southern Illinois University)

**Abstract:** Visual inspection is one of the hallmarks of applied behavior analysis and has several benefits over other modes of data interpretation (Baer, 1977). A number of studies have demonstrated techniques to improve inter-rater agreement of visual inspection of single-subject designs (e.g., Stewart, Carr, Brandt, & McHenry, 2007). However, there have been no reviews on the kinds of graphs published or the verification that these graphs complement typical graduate instruction. Thus, the purpose of this paper was to examine the types of graphs displayed in the Journal of Applied Behavior Analysis over the past 10 years. Each graph was classified into one of many categories. Inter-rater agreement was calculated for over 30% of all graphs and averaged over 80% agreement. Results showed that while a majority of graphical displays were standard designs (e.g., multiple baseline, reversal, multielement), a large number of graphs were mixed designs, consisting of two or more standard designs. Thus, it can be suggested that researchers are constructing designs that most appropriately answer the given research question (Baer, Wolf, and Risley, 1987).

**150. The Impact of Increasing Affirmative Statements Through Positive Behavioral Intervention Training for Lunchroom Staff Members.** (EAB; Applied Behavior Analysis) JENNIFER SWEENEY (Kent State University), Chris LaVogue (Kent State University), Melody Tankersley (Kent State University)

**Abstract:** Addressing problem behaviors in schools is a concern among professional educators and academics alike. With the current legislative focus on proactive research guided interventions, school settings are now the ideal environment for positive practical behavioral change. Research suggests that non-instructional settings within the school have the greatest potential for incidences of problem behaviors. This study explored effects of training lunchroom staff in positive behavioral interventions, including teaching the use of positive statements, on the frequency of problem behavior exhibited by elementary students within the lunchroom. Specifically, this study was designed to explore the impact of applying a clearly defined set of

behavioral expectations and the universal benefits of proactive affirmative statements by staff members. The findings suggest that when clear and explicit behavioral expectations are taught to both staff and students not only do the frequency of problem behaviors decrease, but the frequency of positive statements by staff members increased, while negative statements decreased, resulting in a change in the lunchroom environment. The data obtained demonstrates that through positive behavioral intervention training for staff members, a reduction in the frequency of problem behavior can be achieved, resulting in an overall positive environmental change.

**151. Training Parents to Implement a Pill-Swallowing Protocol.** (AUT; Applied Behavior Analysis) ERICA WORCESTER (Center for Autism and Related Disorders), Melissa L. Olive (Center for Autism and Related Disorders)

**Abstract:** Many children with autism take nutritional supplements as part of their medical care. Parents report difficulty in getting their children to swallow pills. Yoo and colleagues described the results of using a stimulus fading technique to successfully teach pill swallowing. The purpose of this study was to train parents to implement the stimulus fading protocol. The parents of three children with autism were trained to follow a pill swallowing protocol. Results indicated that parents were taught to follow a protocol and that their children learned to swallow the pills as a result of parent training.

**152. Developing Skills in Applied Behaviour Analysis in Northern Ireland** (Applied Behavior Analysis) CLAIRE E. MCDOWELL (University of Ulster), Julian C. Leslie (University of Ulster)

**Abstract:** This poster presents information about Northern Ireland's only postgraduate level course in Applied Behaviour Analysis (ABA) based at the University of Ulster in Coleraine. Now in its third year of operation, the broad aim of the MSc ABA is to give students the opportunity to develop their theoretical and conceptual knowledge in behaviour analysis, develop skills in behavioural assessment, and acquire the ability to work in partnership with clients where they plan and implement programmes that are aimed at establishing, strengthening and/or weakening targeted behaviours. The course is designed for professionals who work (or intend to work) in the caring professions, for example with people with autism and other learning disabilities, in the area of general behaviour management, parent training, community development, and adult mental health.

The course content has been approved by the Behavior Analysts Certification Board (BACB) and the programme aims to provide a foundation that contributes to the preparation of candidates interested in applying for the internationally recognised examination leading to certification in Behaviour Analysis. It is normally completed over two calendar years to allow time for students to obtain relevant work experience, which is a requirement for certification in Behaviour Analysis. The course has well established links to ABA settings in the North and South of Ireland, and in America, including the New England Centre for Children, where students have been able to gain valuable work experience.

**153. A study on Functional Analysis in the Classroom.** (AUT; Applied Behavior Analysis) LORI L. CHAMBERLAIN (PA Verbal Behavior Project), Valerie H. McAnaney (PA Verbal Behavioral Project), Elizabeth Anne Maher (VB Project, PA), Kelly R. Gansarski (Tuscarra Intermediate Unit 11), Jodi Gregory (PA Verbal Behavioral Project)

**Abstract:** This study is a comparison of different assessments in Functional Analysis. There are four assessments being compared, FAST, ABC Data, Latency based Systematic Manipulations, and Trial Based Systematic Manipulations. These assessments are utilized in "Verbal Behavior" Classrooms that are autistic support classrooms in the PA public school system. The assessments are being administered by Board Certified Behavior Analysts across different settings. A minimum of four different classrooms, with four different subjects are involved in this study. Interobserver agreement is being checked for implementation of the assessments. The study hopes to determine the most effective form of assessment for Functional Analysis in an applied public school setting.

**154. Facilitating Generalization of Behavior Analysis Knowledge by Teaching with Popular Books.** (EDC; Applied Behavior Analysis) MELISSA CARUSO (Eastern Connecticut State University), Deirdre Lee Fitzgerald (Eastern Connecticut State University)

**Abstract:** There are many prominent popular books that demonstrate the application of behavior analysis for everyday people in natural settings and thus make our technology available to broad public audiences. In this project, popular texts have been selected and analyzed for their contributions in extending behavior analysis to the general public and for their ability to teach students of behavior analysis how to interact with the public in a similarly accessible manner while still remaining technical. The popular books selected examine behavior analysis in a variety of areas, including clinical psychology, pet training, business management, self-help, and educational applications. The utility of these books in teaching university students how to generalize their knowledge of behavior analysis to everyday settings will be addressed. Additionally, ways these texts teach everyday readers the science of behavior in an easy consume way will be highlighted. Teaching recommendations for these books based on empirically supported practices will be presented. Specifically, teaching demonstrations for each of the books and application exercises that can be used in the preparation of students for certification in behavior analysis will be explained.

**155. Connecting the Fundamental Science of Behavior Analysis to Everyday Experience: An Assignment for Students.** (Experimental Analysis) L. KIMBERLY EPTING (Elon University)

**Abstract:** Students often enter traditional Psychology of Learning courses with unfortunate assumptions that behavioral principles and the basic science on which our understanding of them is based are irrelevant to daily life (Machado & Silva, 1998). Instructors may struggle to balance teaching the basic science of behavior analysis and developing students' appreciation for how the principles underlie their existing behavior and experiences (cf. Baldwin & Baldwin, 1999; Machado & Silva, 1998). This poster outlines a homework assignment used to assess students' ability to connect the science discussed in class and to their everyday experiences. Students evaluate the relevance of behavioral principles to various "real-world" events on the first day of class and then again toward the end of the semester. These events never serve as explicit examples in class; thus, students apply the scientific principles in a new context. Results highlight which phenomena most commonly were endorsed as having "no behavioral principle relevance" at the first administration and the accuracy of behavioral accounts of those events at the second administration. The use of such assignments may provide a useful way to maintain emphasis on the fundamental science and impress upon students just why it is so "fundamental" indeed.