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An Intervention to Increase IOA and Objectivity in Supervisors at WoodsEdge Learning Center

Karli Silverman
Western Michigan University, karli.j.silverman@wmich.edu

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Karli Silverman
Richard W. Malott
Western Michigan University

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ABSTRACT

The purpose of my research was to increase interobserver agreement (IOA) and objectivity in supervisors at WoodsEdge Learning Center. We questioned whether or not designing and implementing a new grading sheet would lead to this outcome. Our methodology consisted of internet research regarding interventions to increase these measurements, followed by task analyses of the behaviors that should occur when tutors provided discrete trial training (DTT), surveys regarding the quality of feedback received at WoodsEdge, visits to various early intervention centers, and ended with the creation and multiple revisions of a new grading sheet. My involvement with this intervention ended before the new sheet was able to be implemented and evaluated.

Keywords: Interobserver agreement, objectivity, discrete trial training

Overview of the Intervention to Increase Supervisor IOA and Objectivity

My involvement with the Behavioral Research Supervisory System (BRSS) has been with the Maintenance and Supervision System (MSS). This is a system within the Behavior Analysis Training System (BATS) that serves two primary functions: to supervise the supervisors at WoodsEdge Learning Center and to maintain previously completed BATS projects. This system, like the others in BATS, has two managers who are responsible for seeing to the completion of all tasks in the system.

My primary involvement in this system has been to assist in the completion of an intervention to increase the interobserver agreement (IOA) and objectivity of supervisor feedback and monitoring at WoodsEdge. This intervention falls into the category of supervising the supervisors and is being conducted by Brittany Yenter. This intervention is important to WoodsEdge for several reasons.

The first reason that this is an important intervention is that one of the primary functions of WoodsEdge is the provision of early intensive behavioral intervention (EIBI) for children diagnosed with autism. EIBI is an intervention that begins at a young age, is conducted with one teacher and one student for up to 40 hours a week, and often involves the use of discrete trial training (DTT) (Fazzio & Martin, 2011). DTT is an instructional method that is based on the well tested principles of behavior, focuses of creating a high number of learning opportunities, reinforcing correct responses, prompting when needed, and immediately correcting incorrect responses (Leblanc, Ricciardi & Luiselli, 2005). Because of the intensity and importance of this type of intervention, best methods ought to be used when teaching new tutors. When staff are competent there is an increase in the probability of procedures being run correctly which in turn correlates with greater success of the students (Catania, Almeida, Lui-Constant & Digennaro Reed, 2009).

Another reason why this is an important intervention to conduct is due to the fact that one of the other primary purposes of WoodsEdge is to teach Undergraduate tutors how to properly implement DTT. An intervention that improves feedback at a center that focuses on teaching is important because of the relationship between quality of feedback and practitioner improvement. This relationship can be described simply by citing feedback as the stimulus that leads to learning and performance improvement (Menachery, Knight, Koodner & Wright, 2006).

This intervention addresses two areas of supervisor behavior: IOA and objectivity. IOA is essentially the measure of the extent to which assessment is consistent between observers i.e. results are based on the behaviors of the observed rather than on the behaviors of the observers (Kazdin, 2011). This is an important area to focus on because there is a high number of supervisors observing and providing feedback to a high number of tutors at WoodsEdge. Therefore, feedback should not be dependent on which supervisor is observing, rather it must solely be a function of tutor behavior. The second area that this intervention addresses is that of supervisor objectivity. Supervisor objectivity, in this case, means that feedback and scores are based on clearly identifiable, measurable, and observable behaviors. This is an area of focus due to the fact that the current system for providing feedback leads to supervisors having to subjectively pick a score based on the nonoccurrence of behavior rather than having a clear

legend that dictates a score. This intervention is in the form of a new monitoring sheet to be used by supervisors while providing monitoring and feedback.

MSS Mission Statement

Maintain the implementation of useful past OBM and Autism projects and provide supervision and support for supervisors and support-coordinators at WoodsEdge Learning Center

Roles and Responsibilities of the Students in the Maintenance and Supervision System

The Maintenance and Supervision System (MSS) is a developing subsystem within the Behavior Analysis Training System (BATS). This developing system is comprised of two primary goals: is to effectively store previous OBM and Autism projects and to supervise the supervisors working at WoodsEdge Learning Center. These goals are accomplished through the completion of many other smaller projects and tasks.

The first project which addresses one of those goals is the Google Docs MSS Database for BATS Projects. This is an online database housed at Google Docs where past projects, both OBM and Autism, are uploaded. The purpose of this database is to maintain past projects long after the students who created them are gone, to improve the overall functioning of BATS and WoodsEdge, and to provide future BATS students with a large number of projects to use for ideas when creating their own. In order for this project to run smoothly, there are several smaller tasks which also must be completed. The first is the timely upload of projects by MSS managers into the database after they are received from the Project Performance Management System (PPMS). The second is that the individual students working in MSS become very familiar with the previously completed projects so that they themselves can become a resource to be used by other BATS students.

Another project that is a part of this system is an intervention to increase on task behavior in supervisors. This is a subcategory of the supervising the supervisors area of MSS. There are several tasks that are required in order to achieve this project. One such task was the design and implementation of an intervention to increase supervisor objectivity and IOA regarding their behavior of providing feedback and monitoring. This intervention also required the completion many tasks. To begin with, research to clarify and to define behavior involved with proper monitoring and feedback was defined. This research consisted of internet research using journal articles and task analyses of the behaviors that were and were not occurring at WoodsEdge. Secondly, the actual intervention had to be implemented followed by the completion and distribution of surveys to evaluate the success of the intervention.

A third project that addresses one of the goals of MSS is The Google Docs Red Dot Database for WoodsEdge Red Dot Procedures. This is another database located on Google Docs which houses information regarding which procedures are often red dotted, the phases that a

student is on, and any previous subphases written. This is important information because it can help supervisors prevent wasting valuable time.

There are several other tasks that have become the responsibility of MSS since its creation. One such task is the provision of training for the new groups of supervisors at WoodsEdge and the communication of updates to all members of BATS. Additionally, the periodic review of this database is necessary in order to verify that WoodsEdge support-coordinators are making the updates that are needed. A final necessary task is to monitor the completion and update practices regarding the behavioral profiles of the students by case coordinators.

Specific Student Responsibilities

Lindsey Donovan

Lindsey Donovan is one of the second year graduate students who created MSS. One area of focus of MSS, the maintenance of previous projects, was a disconnect within BATS that she identified and designed an OBM project to address. Thus one of her main tasks was the creation of the Google Docs database now used to store projects. After the creation of the database her main role became to delegate tasks to other MSS students and oversee that tasks are being completed in a timely manner. Additional responsibilities include attending monthly BRSS meetings and monthly R&D meetings.

Mindy Newhouse

Mindy Newhouse is the other second year graduate student who created the MSS. Her primary area of involvement in the system is the supervision of the supervisors at WoodsEdge. There are many specific tasks that go into accomplishing that goal. The first of which was the maintenance of the Google Docs Red Dot Database, a previously created OBM project. This project, as previously mentioned, stores relevant information for second year master students to use while working with their child(ren) at WoodsEdge. Tasks of hers include creating data and tracking sheets to be used while supervising supervisors, to update training material and child specific information as needed, to redefine current performance standards and add new contingencies to support the new required level, and to create surveys to test the social validity of her intervention. She also helps monitor Brittany Yenter and provides her with support and evaluation regarding her involvement in the system. Finally, Mindy also attends the monthly BRSS and R&D meetings.

Brittany Yenter

Brittany Yenter is the first year graduate student that is working within MSS. She has been involved with both areas of focus of the system. Regarding maintaining past projects she has organized and named many of the folders in the Google Docs Database, uploaded numerous documents, and monitored and evaluated my work on the database. In relation to the supervision of the supervisors area she is in charge of the intervention to improve the objectivity and IOA of monitoring and feedback from supervisors at WoodsEdge. Tasks related to that area include extensive research on the internet and in person task analyses and the creation and

implementation of the intervention. Another task of hers regarding MSS has been the creation of the MSS Manual, which provides undergraduate students and new first year managers with relevant information. She also spends time meeting with and giving the undergraduate student, myself, tasks to complete each week. Finally, she is also responsible for attending monthly BRSS and R&D meetings.

My Roles and Responsibilities

As an undergraduate student in MSS I also have tasks pertaining to both areas of focus of the system. In relation to maintaining projects my main responsibility has been to upload, organize, and rename files that pertain to the various projects. In addition to this, it was my responsibility to note and inform Brittany of any missing files. Regarding the supervision of the supervisors aspect I've been assisting Brittany with the completion of her OBM project: creating an intervention to increase the objectivity and IOA during monitoring and feedback sessions for supervisors at WoodsEdge. Tasks that pertain to this project are research on other systems of monitoring, conducting task analyses of tutor behavior at WoodsEdge, revising the current monitoring sheet, and creating surveys to measure the intervention.

Accomplishments and Disconnects

MSS is a relatively new system that was created due to disconnects in BATS that were noticed by Mindy Newhouse and Lindsey Donovan. The disconnects that drove the creation of this new system were that projects were being lost after their creator graduated and the lack of supervision for the supervisors at WoodsEdge. These disconnects were noticed in the summer of 2011 and the system was up and running in the fall of 2011.

Fall 2011

Fall 2011, being the first semester during which MSS was running, was a semester full of accomplishments for this system. Some accomplishments were in relation to projects created by the new system and others were related to the successful integration of other project into MSS. Naturally, the first and most important accomplishment to be mentioned is simply the creation of this new system by Mindy and Lindsey. With the successful creation of the system came the successful creation of the main projects around which the system focuses. One such accomplishment was the formation of the MSS Google Docs database, by Lindsey, which is used to store past projects. This great accomplishment addressed one of the main disconnects upon which MSS was founded to correct; the loss of project ideas and specific information upon the graduation of the project's creator. A second major accomplishment was that Mindy was able to get her intervention set up to address supervisor on-task behavior at WoodsEdge, this addressed the second major problem that MSS set out to fix which was to provide supervision for the supervisors. A third major accomplishment during its first semester in existence was that MSS created the WoodsEdge Behavior Profile which provide detailed descriptions of the students and their specific behaviors.

In addition to the accomplishments that involve the creation of new programs MSS also had several accomplishments regarding taking on various responsibilities which had been

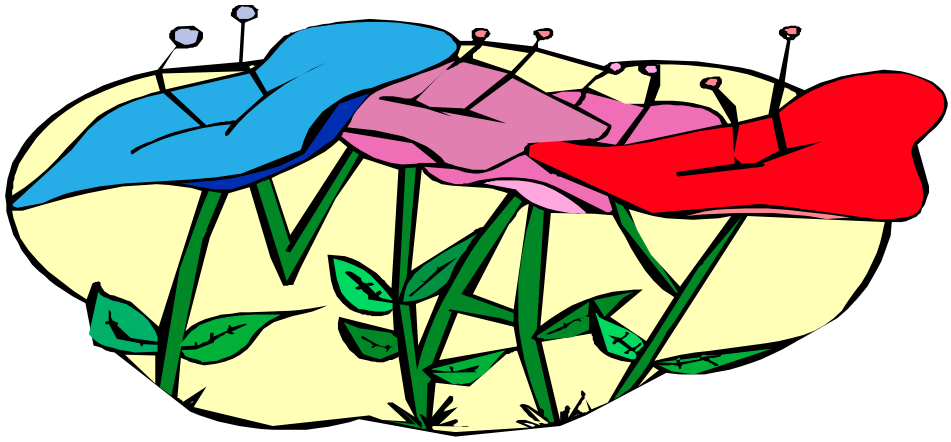
previously allocated to other systems. To begin with, MSS was able to successfully integrate the task of training new supervisors as one of its responsibilities and has been able to focus on the continued improvement of this training. Secondly, the responsibility of running the Red Dot database has also been taken on by MSS, another large accomplishment.

SPRING 2012

Over the course of the spring semester of 2012 there were some disconnects and problems that still needed to be addressed. One of the major disconnects that needed to be addressed had rolled over from the previous semester: the creation of a system manual. This had rolled over due to the large amount of work that had gone into just creating the system. This disconnect was addressed by Brittany Yenter. Over the course of the semester she created a well-organized manual that will help future students to navigate and understand the MSS.

One problem that was new to the MSS the spring semester of 2012 was in relation to the Google Docs database. This problem was noticed by Brittany Yenter and involved missing documents. Specifically, the problem was that there would be individual student assignments missing from the folder of complete cohort assignments. This disconnect was addressed when Brittany suggested that it be made the responsibility of the Project Performance Management System (PPMS) to make sure that cohort files were complete and to send complete files at the end of the semester so the student in the MSS could fill in any files that were missing.

A final disconnect that existed, and began to be addressed, in the spring semester was the need for a higher level of objectivity and IOA regarding the feedback and monitoring provided by supervisors at WoodsEdge. Brittany set out to address this disconnect by creating an intervention to increase IOA and objectivity. This intervention was in the form of a new monitoring sheet to be used while scoring tutors while they provided discrete trial training to students.

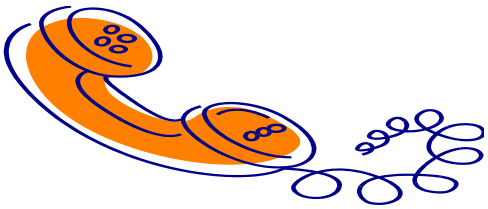


ANALYZE THE NATURAL CONTINGENCIES

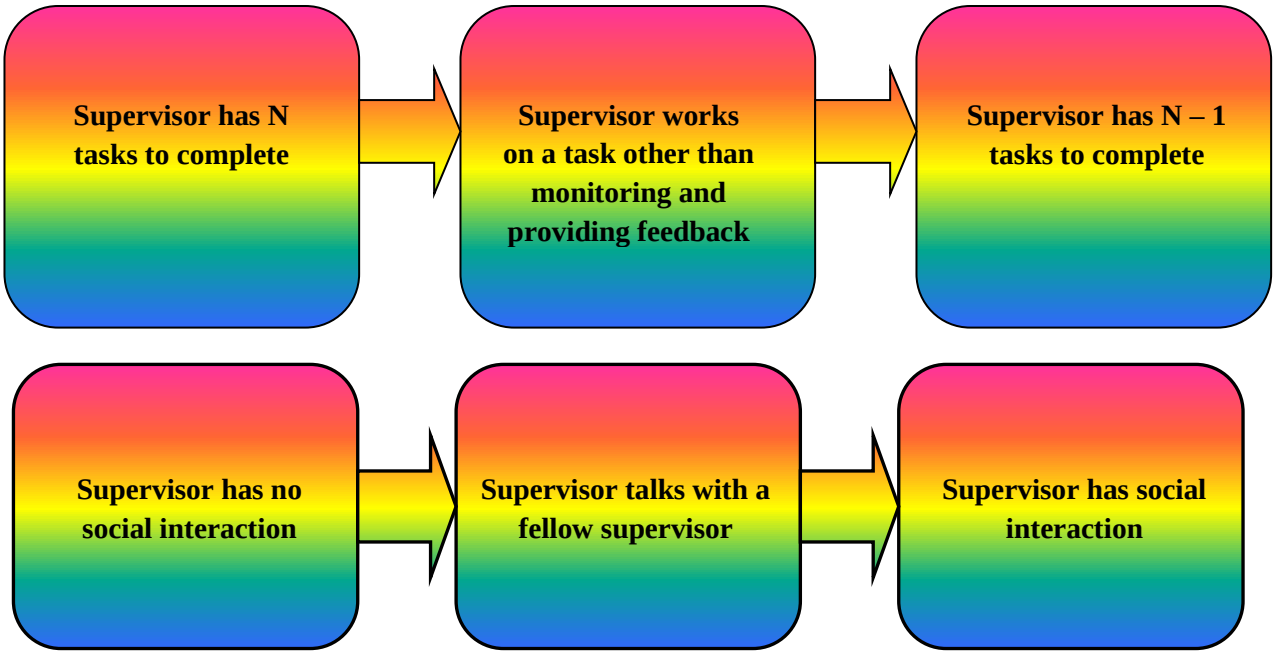
Regarding increasing supervisor objectivity and IOA, there are several factors that must be kept in mind. First off, implementing an intervention, the new monitoring sheet, is not enough to lead to new behaviors. If the new monitoring sheet is to be effective there must also be a performance management contingency in place to support that behavior. This performance management contingency would take the form of making supervisor points contingent of the use of the new monitoring sheet while providing monitoring and feedback. This point contingency is necessary because there are several natural competing contingencies that work against the behavior of monitoring in general.

Many contingencies compete with providing feedback and monitoring. One is the multitude of other supervisor tasks needed to be accomplished during a shift. Some examples of such tasks include making book checks and other support-coordinating duties. Thus, there is a constant level of anxiety regarding getting it all done. Therefore, supervisors performing these other tasks results in a reduction of anxiety.

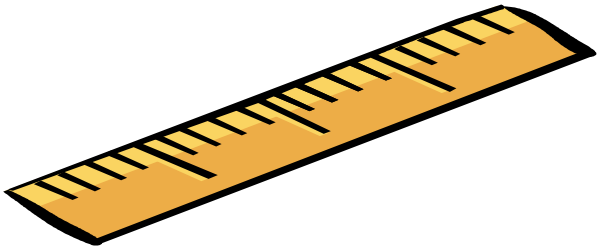
Another contingency that competes with providing sufficient monitoring and feedback to tutors is the reinforcement contingency of socializing.



NATURAL COMPETING CONTINGENCIES

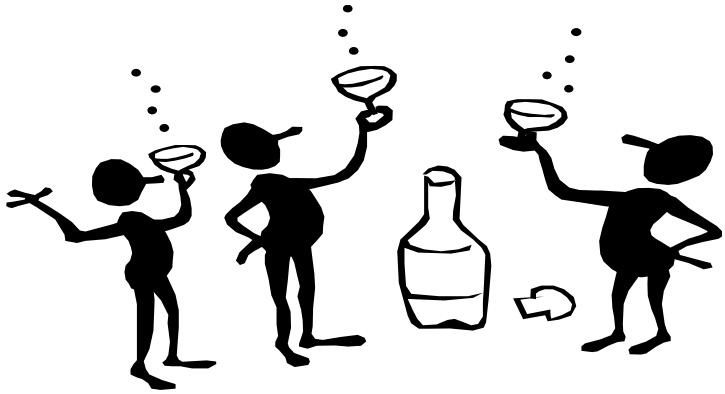


In addition to these natural competing contingencies, the contingency supporting sufficient monitoring and feedback is ineffective. It is ineffective because providing sufficient monitoring and feedback results in having a tutor with only a very small increase in skill.

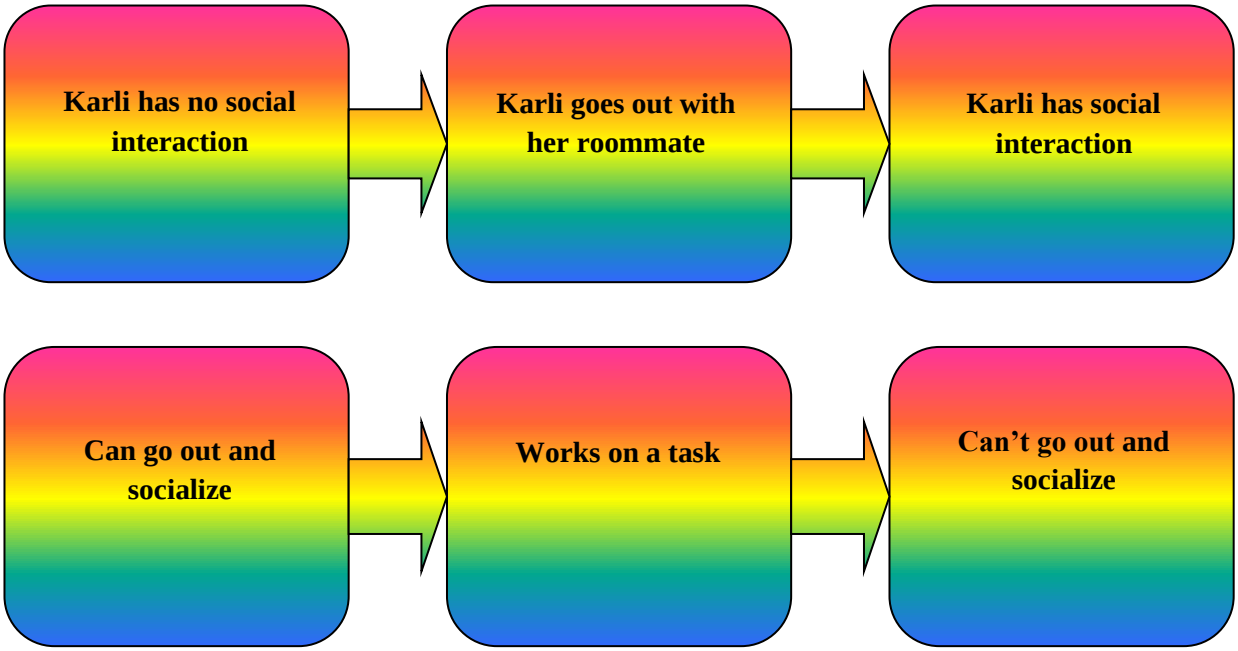


In order for this disconnect to be improved, i.e. an intervention to be designed and implemented, there are many tasks which need to be completed each week by various members of the MSS. The completion of these tasks is supported by BRSS which makes points contingent upon their completion. If this were not the case tasks would go uncompleted because there are stronger natural competing contingencies working against them and only ineffective contingencies supporting their completion.

The natural competing contingency which works against me completing my tasks is the opportunity to go out and socialize, but if I work on them I often lose that opportunity.



NATURAL COMPETING CONTINGENCY

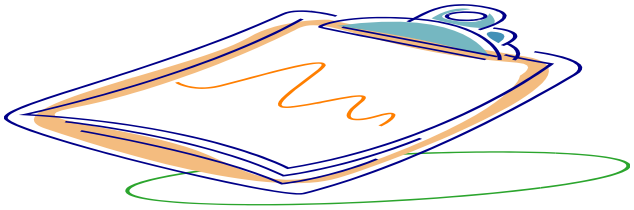


The contingency at work on me completing my weekly tasks is ineffective because of the large amount of work that is required by BRSS. This means that each time I finish a task it only reduces a slight amount of my work load and is thus not very reinforcing.

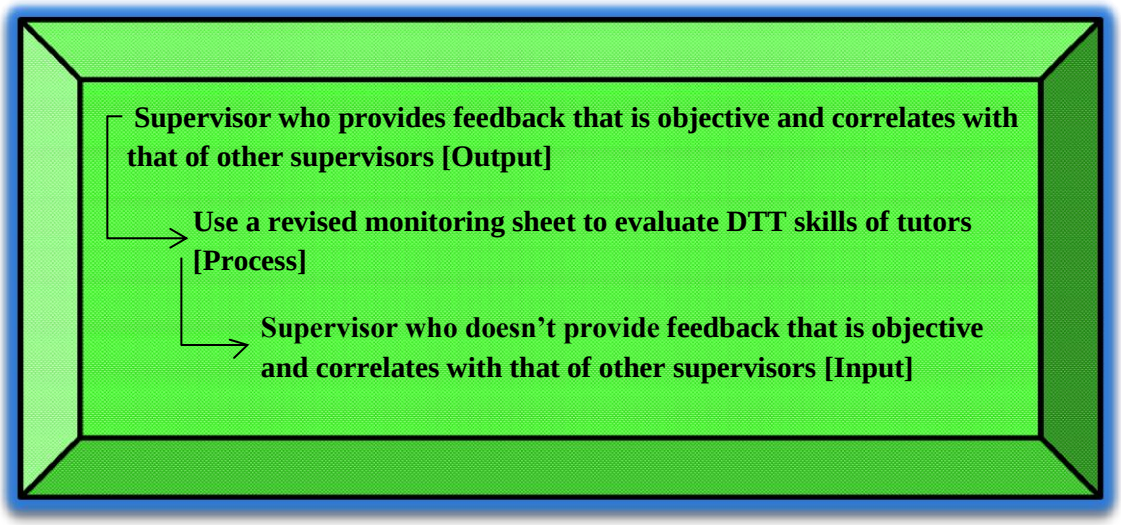
INEFFECTIVE NATURAL CONTINGENCY

Inputs and Outputs in Regards to Improving Supervisor Objetivity and IOA

The input-process-output model is a tool used to identify the primary components of a particular system. This model consists of three parts, system inputs, processes, and outputs. The system's inputs are the unrefined resources that go into a system. The system's process is the means by which the inputs are refined. Finally, the system's outputs are the final product of the system.

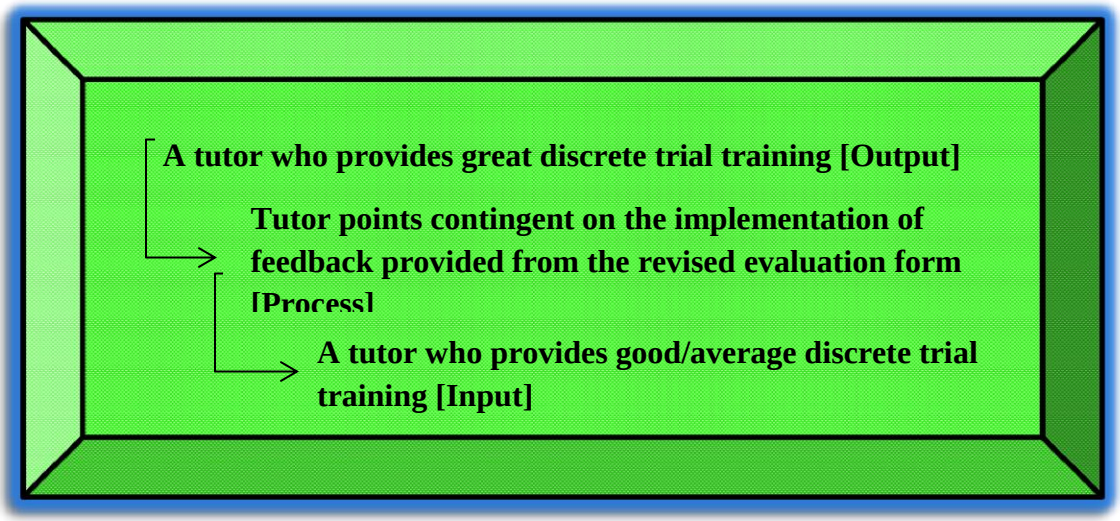


There are two main input-process-output systems which make up the intervention to improve the monitoring and feedback provided by supervisors at WoodsEdge. The first system identifies the inputs, processes, and outputs involved in the implementation of a revised monitoring sheet regarding discrete trial training. The input in this system is a supervisor who doesn't provide tutors with monitoring and feedback that is objective and correlates with that of other supervisors. The process is to use a revised monitoring sheet to evaluate DTT skills of tutors. The output is a supervisor who provides feedback and monitoring that is objective and correlates highly with that of other supervisors.



Another input-process-output system that is involved with the subsystem of creating and implementing an intervention to increase supervisor objectivity and IOA describes other impacts the use of a new evaluation sheet will have. This system will look at the relation between the implementation of an evaluation sheet and tutor behaviors. The input in this system is a tutor

who provides good/average discrete trial training. The process in this system is tutor points contingent on the implementation of feedback provided from the evaluation form. The result is a tutor who provides great discrete trial training.



GOAL SPECIFICATION FORM

Subsystem #___1__			
Output	Supervisors who provide feedback and monitoring that is objective and correlates highly with that of other supervisors		
Standards		**Current**	**Ideal**
	Quality	Good subjective feedback and monitoring	Great subjective feedback and monitoring plus monthly IOA
	Quantity	2 sessions a week	2 sessions a week
	Timeliness	Before end of week	Spaced evenly before end of week
	Cost	30 minutes per week	30 minutes per week

Process			
	Production: X	**Distribution_____**	**R&D_____**

Front line	**Current**	**Ideal**
Personnel	Supervisors	Supervisors
Procedures	Providing monitoring and feedback	Providing monitoring and feedback using the revised monitoring sheet
Equipment	Supervisor, tutor, student, procedure materials, monitoring sheet, pencil, clipboard, and paper	Supervisor, tutor, student, procedure materials, revised monitoring sheet, pencil, clipboard, and paper
Contingencies	Pressure from BCBA supervisors to perform at specified standard	Supervisor points contingent on providing monitoring and feedback that is objective and correlates highly with that received from other supervisors

Management		
Personnel	BCBA Supervisors	BCBA Supervisors
Procedure	BCBA Supervisors monitor supervisors provision of feedback and monitoring	BCBA Supervisors monitor supervisors provision of feedback and monitoring based on the new monitoring sheet and take IOA with supervisors monthly
Equipment	Score sheets, clipboard, and pencil	Score sheets, clipboard, pencil, and revised monitoring sheet
Contingencies	Pressure from WoodsEdge TA to get scores to make grades for tutors	Dr. Malott's approval contingent on BCBA Supervisors monitoring that supervisors provide monitoring and feedback while using the new monitoring system and collecting IOA scores monthly

Input	Supervisor who provide good/average feedback and monitoring

The goal of this intervention is to increase the objectivity and IOA of the feedback provided by supervisors at WoodsEdge. Therefore, the output can be defined as "supervisors who provide feedback that is objective and correlates highly with that of other supervisors." The factor that will lead to this change is a revised monitoring sheet.

The process of this subsystem falls into the production category. This process is production in that the intervention will lead to the output of supervisors who provide monitoring

and feedback that is objective and correlates highly with that of other supervisors, which is different than supervisors who provide good/average monitoring and feedback.

The frontline in this subsystem, those directly involved in achieving the goal, consists of the supervisors using the new monitoring sheet. The supervisors are the frontline because the success of this subsystem is completely based on them. This is the case because it is their choice as to whether or not to use the new monitoring sheet when providing scores and feedback.

The management for this subsystem are the BCBA supervisors at WoodsEdge. The BCBA supervisors are the management because it is their job to monitor that supervisors are using the revised form and to take monthly IOA with them. Additionally, it is also their job to ensure that if the new form is not used that points are lost.

The input into this subsystem is supervisors who provide good/average monitoring and feedback.

DESIGN THE INTERVENTION

The three-contingency model of performance management is a tool used to see what contingencies are in effect regarding a certain behavior. This model consists of three parts: the ineffective natural contingency, the performance management contingency, and the inferred theoretical contingency.

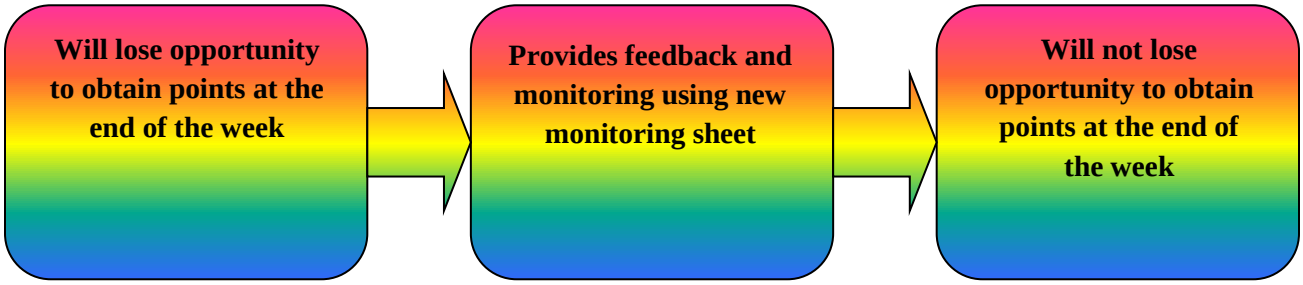
This model can be used to provide a clearer analysis of the contingencies that are in effect regarding supervisor provision of monitoring and feedback. This is an important behavior because it directly correlates with the skill with which tutors provide DTT and therefore with the rates at which students improve. The fact that this behavior is not occurring at a high rate is not due to a lack of caring on the part of supervisors, it is simply because the behavior in question is supported by an ineffective natural contingency. An ineffective natural contingency is one in which the consequences of the behavior are either too small or too improbable to control the behavior. When an ineffective natural contingency is controlling an important behavior, such as providing sufficient feedback, a performance management contingency must be put in place to support that behavior. The performance management contingency in this case would state that the opportunity to obtain points will be lost if feedback and monitoring is not based on the new evaluation sheet. This is an example of an analog to avoidance of loss contingency. This means that the behavior is reinforced because when it occurs it prevents the removal of a reinforcer and that it is indirect acting, meaning the consequence does not immediately follow the behavior. Since the consequence does not immediately follow the behavior, there is a third contingency in effect. This is the inferred theoretical contingency and it is this contingency that controls behavior during the time before the deadline, the end of the week, occurs. This is an escape contingency that involves the behavior of implementing feedback removing the aversive fear of losing points during the next monitoring session.

The three-contingency model for the behavior of implementing supervisor feedback is displayed below.

THE THREE-CONTINGENCY MODEL: PROVIDING FEEDBACK AND MONITORING BASED ON A REVISED MONITORING SHEET

INEFFECTIVE NATURAL CONTINGENCY

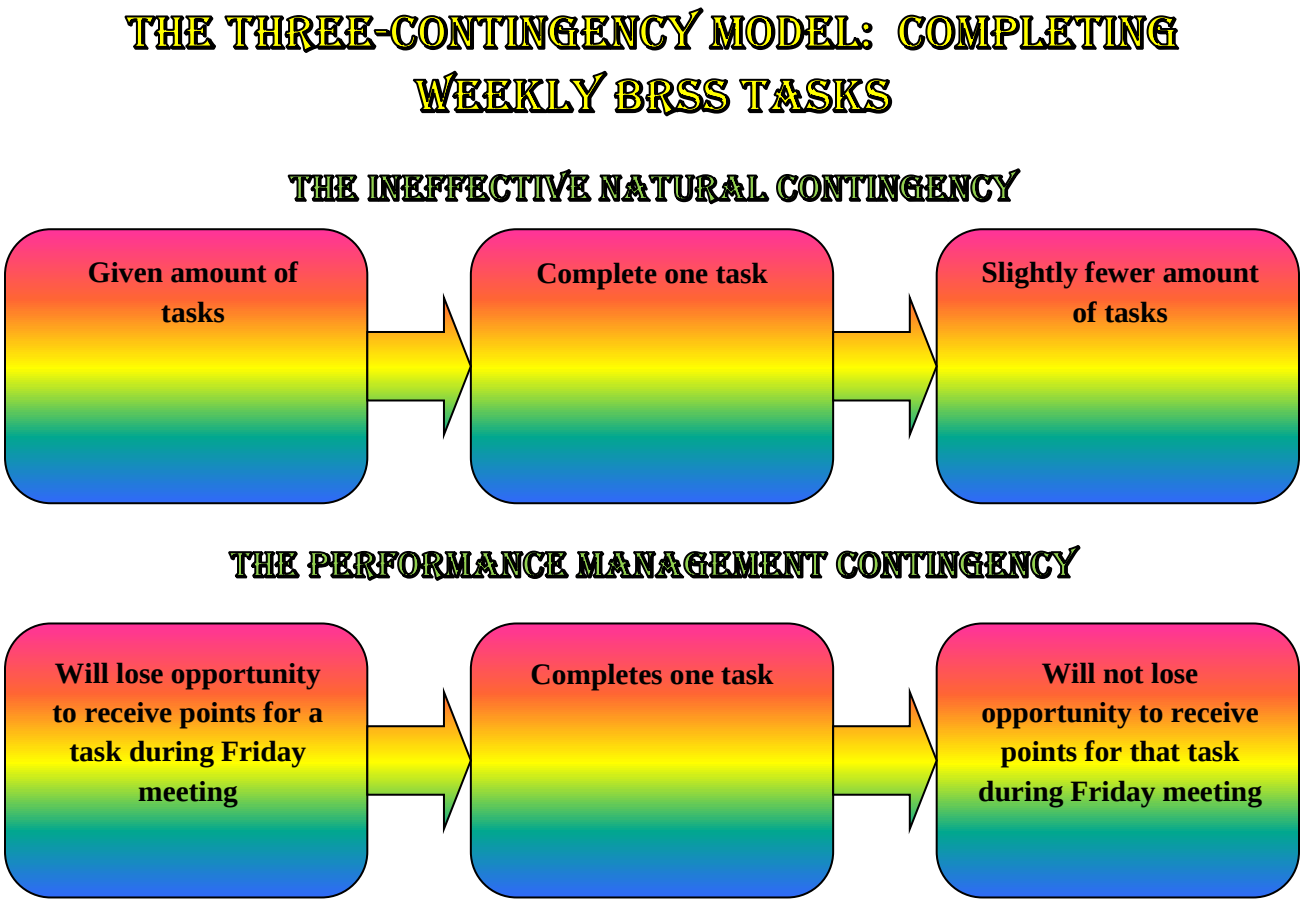
PERFORMANCE MANAGEMENT CONTINGENCY



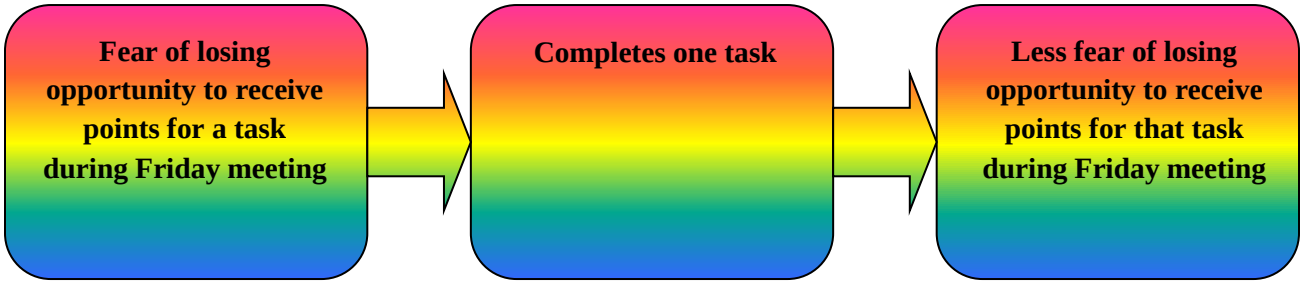
INFERRED THEORETICAL CONTINGENCY

This model can also be used to provide a detailed analysis of the contingencies in effect for my behavior of completing my weekly tasks for BRSS. This behavior, like the provision of feedback using a new monitoring sheet, is under the control of an ineffective natural contingency. This is an ineffective contingency due to the fact that the consequence is too small to successfully control behavior. Because of this, BRSS has implemented a performance management contingency to support the behavior of completing these tasks. This performance management contingency is again similar to the contingency in the previous example. In this case, I will lose the opportunity to obtain points unless I complete my tasks by the Friday meeting. This is another analog to avoidance of loss contingency. Because it is an analog to avoidance of loss there is also an inferred theoretical contingency which controls my behavior over the course of the week. In this case it is also an escape contingency where the behavior of completing tasks reduces my fear of losing points at the Friday meeting.

Below is the three-model contingency that describes my behavior of completing my weekly BRSS tasks.



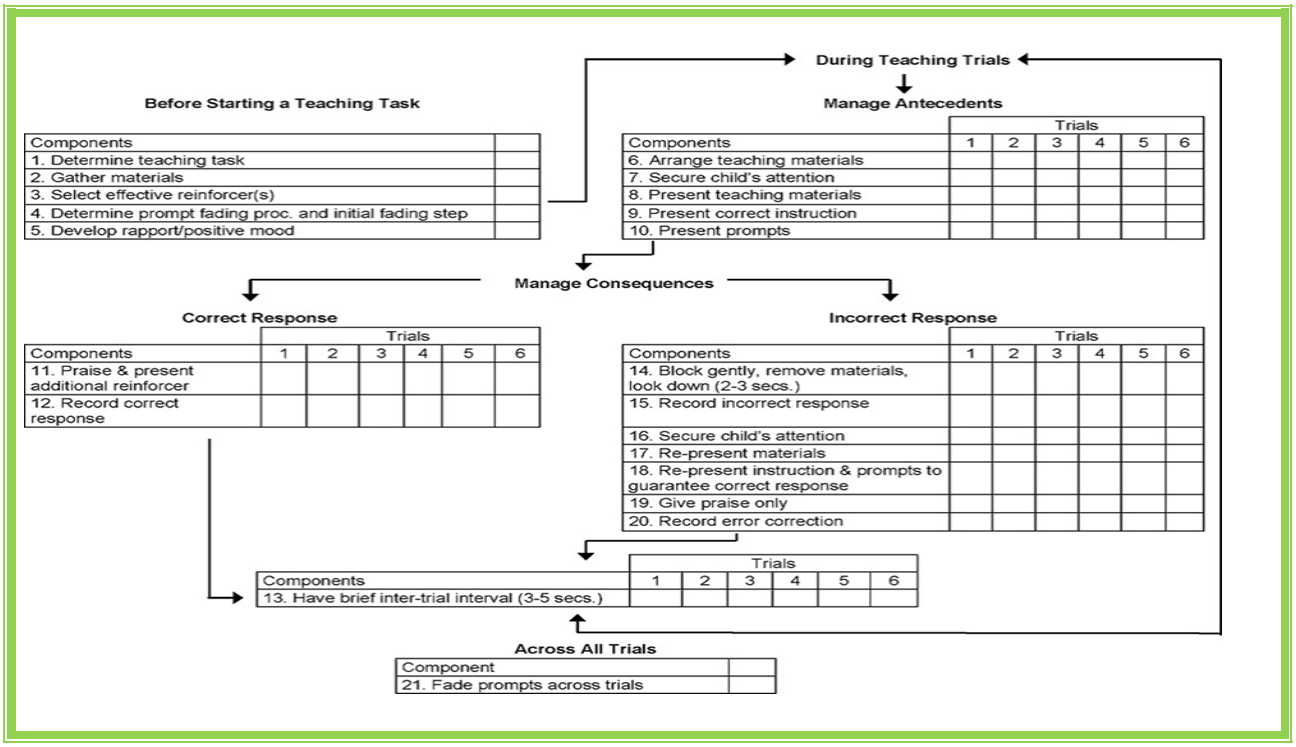
THE INFERRED THEORETICAL CONTINGENCY



RELEVANT FORMS, JOB AIDS, AND PRODUCTS

Over the course of this semester I have accomplished many tasks aimed at assisting in the completion of the Maintenance and Supervision System's OBM project of creating a new monitoring sheet to be used at WoodsEdge. Some of these tasks have included the acquisition or creation of forms needed to complete this project.

DR. FAZZIO'S DTTEF



Before Starting a Teaching Task

Components	
1. Determine teaching task	
2. Gather materials	
3. Select effective reinforcer(s)	
4. Determine prompt fading proc. and initial fading step	
5. Develop rapport/positive mood	

During Teaching Trials

Manage Antecedents

Components	Trials 1	2	3	4	5	6
6. Arrange teaching materials						
7. Secure child's attention						
8. Present teaching materials						
9. Present correct instruction						
10. Present prompts						

Manage Consequences

Correct Response

Components	Trials 1	2	3	4	5	6
11. Praise & present additional reinforcer						
12. Record correct response						

Incorrect Response

Components	Trials 1	2	3	4	5	6
14. Block gently, remove materials, look down (2-3 secs.)						
15. Record incorrect response						
16. Secure child's attention						
17. Re-present materials						
18. Re-present instruction & prompts to guarantee correct response						
19. Give praise only						
20. Record error correction						

Components	Trials 1	2	3	4	5	6
13. Have brief inter-trial interval (3-5 secs.)						

Across All Trials

Component	
21. Fade prompts across trials	

One form that I found through research that is relevant to the completion of this project is Dr. Fazzio's Discrete Trial Training Evaluation Form (DTTEF). Dr. Fazzio is a certified behavior analyst from Canada who has done extensive research with children diagnosed with autism. Her research has been conducted at the St. Amant center which is a center that helps to assist individuals with developmental disabilities, brain injuries, or autism ("St. amant," 2009). This form is relevant because of its ability to serve as a template for the revised monitoring sheet and validating the research that was found to support it. This form was chosen to act as a template because of the excellent way that it organizes the necessary components of a discrete trial into manageable segments. This organization is important because increasing IOA between supervisors' scores is one of the main targets of the revised monitoring sheet. Increasing IOA is one of the main targets because with such a high number of supervisors it is very easy for a tutor to receive feedback from one supervisor that is different from that of another. Another reason is that it is one of the best objective measures that can be used to evaluate this kind of intervention. This means that targeting IOA will be able to provide clear and accurate data to be used to identify differences between the sheets.

In addition to finding relevant information over the course of my involvement with BRSS, I have also created several products which will assist in the completion of this project. These products include two surveys, one for the tutors and one for the supervisors at WoodsEdge, a consent form to be filled out by WoodsEdge tutors, and several rough drafts of the new monitoring sheet.

SUPERVISOR SURVEY

1. You feel that the method used to provide feedback to tutors leads to changes in tutor behavior.

2. You make note of the suggestions that you make to tutors.

3. You feel that tutors implement the suggestions that you make to them during feedback provision.

4. You feel that modeling after feedback would increase tutor implementation of that feedback.

5. How well do you feel your feedback score would match that of another supervisor for the same tutor?

6. Regarding time spent monitoring, scoring, and providing tutors with feedback, you feel that you spend _____ time on these activities.

7. If you feel any changes should be made regarding monitoring, scoring, or the provision of feedback please share them below.

The supervisor survey was created to provide data to illustrate the differences between the current and revised monitoring sheet (see Appendix A.1 for the complete survey). This survey addressed several areas relevant to the provision and tutor integration of feedback and each question, excluding question 7, was scored on a 5 point scale ranging from strongly disagree to strongly agree. The answers to the various questions on this survey provide yet another source of empirical data that can be used to show differences between the two sheets. Question 7 was used to generate a variety of suggestions to use to address additional disconnects that the researchers weren't aware of.

TUTOR SURVEY

You feel that you receive similar scores and feedback from different supervisors.

You feel that you successfully implement the suggestions made to you by supervisors.

You feel that the suggestions you receive from supervisors are easy to follow.

You feel that the current monitoring system requires improvement in your performance in the booth.

You feel that the addition of modeling feedback would greatly improve your DTT skills.

You feel that the amount of feedback you receive is sufficient to improve your DTT skills.

If there are any changes that you think should be made to the current monitoring system please share them below.

The tutor survey was created to provide data illustrating the differences between the evaluation forms from the tutor's perspective (see Appendix A.2 for the complete survey). This survey addressed several areas relevant to tutor implementation of feedback and was also scored on a 5 point scale which ranged from strongly disagree to strongly agree. As with the supervisor survey, the values that are answered with each question will provide empirical data to be used to identify differences between the sheets. This survey also included a question regarding individual tutor suggestions.

CONSENT FORM

FOR QUESTIONS ABOUT THE STUDY, CONTACT: Brittany Yenter at bmyenter@hotmail.com or by phone at 715-498-5008.

DESCRIPTION: You are invited to participate in a research study on the effects of a new monitoring sheet on Interobserver Agreement (IOA) of scores given to tutors by supervisors. You are being asked to give the researchers permission to take a video of you providing discrete trial training to a child diagnosed with autism. This video will then be scored using the current monitoring sheet and a revised form and IOA will be calculated. The scores from these videos will have no impact on your grade and will solely be used to identify differences between the current and revised monitoring sheet.

RISKS AND BENEFITS: There are no foreseeable risks or benefits associated with your participation in this study.

TIME INVOLVEMENT AND PAYMENTS: Your participation in this experiment will take no time and only requires your signature on this form and that experimenters are able to videotape you during your shift for 10 trials. There will be no payment or reimbursement for your participation in this study.

PARTICIPANT'S RIGHTS: If you have read this form and have decided to participate in this project, please understand your participation is voluntary and you have the right to withdraw your consent or discontinue participation at any time without affecting you're relationship with the Western Michigan University Psychology Program. Additionally, your individual privacy will be maintained in all published and written data resulting from the study.

CONTACT INFORMATION:

Questions, Concerns, or Complaints: If you have any questions, concerns or complaints about this research study, its procedures, or its risks and benefits you should ask the head researcher, Brittany Yenter. You may contact her now or later at 715-498-5008.

Independent Contact: If you are not satisfied with how this study is being conducted, or if you have any concerns, complaints, or general questions about the research or your rights as a participant, please contact the Stanford Institutional Review Board (IRB) to speak to someone independent of the research team at (650)-723-5244 or toll free at 1-866-680-2906. You can also write to the Stanford IRB, Stanford University, MC 5579, Palo Alto, CA 94304.

The extra copy of this consent form is for you to keep.

_____ _____

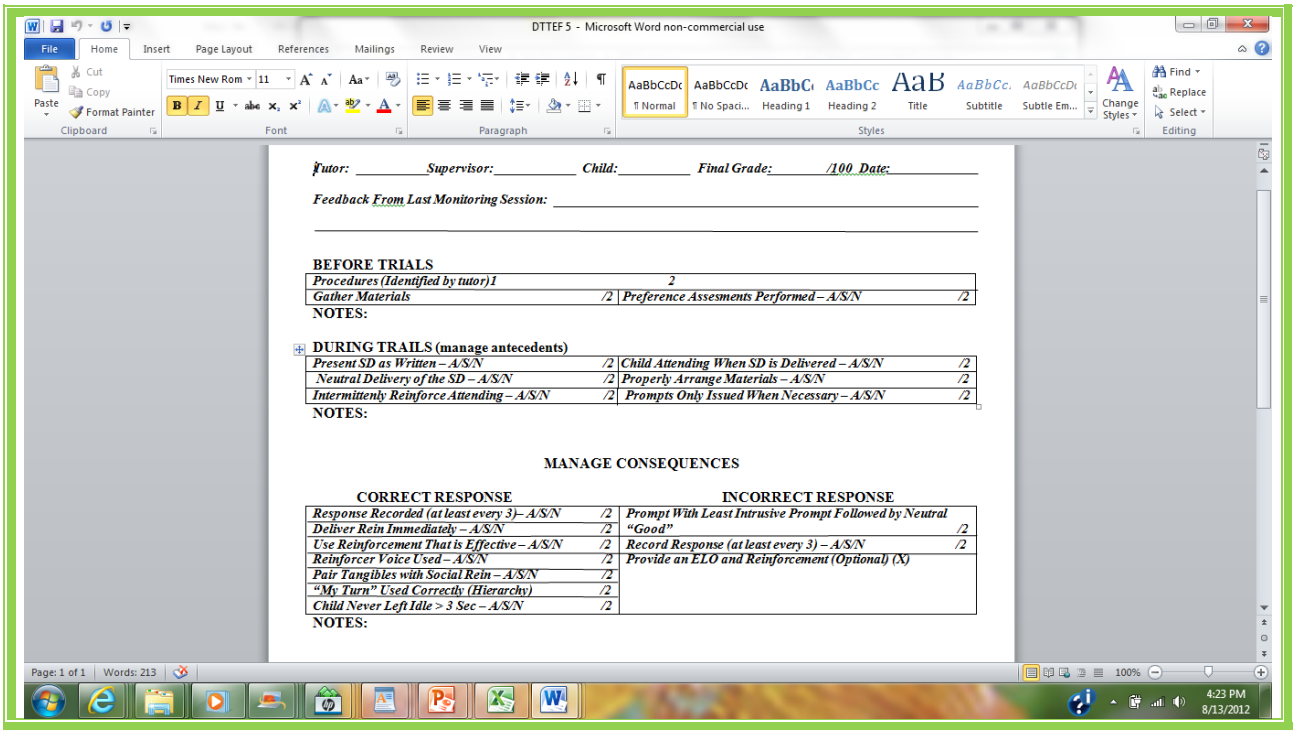
Signature of Adult Participant Date

_____

Printed Name of Participant

Another form that I created in regards to this project was a consent form to be signed by WoodsEdge tutors (see Appendix B). This form gave researchers permission to take videos of tutors providing DTT to a student and score them using both the current and revised form. The videos were chosen as a means of collecting data due to the fact that in order to evaluate the effectiveness of the evaluation sheet all variability must be kept to a minimum. Low variability is important because researchers need the only differences between scores and IOA to be due to the different evaluation forms used, not because of some other factor like the tutor having a good day, different supervisors, etc. This permission enabled researchers to objectively compare data regarding IOA between scorers and identify differences between the sheets.

MONITORING SHEETS



The final forms that I created were the revised monitoring sheets to be used at WoodsEdge (see Appendix C for all forms). Over the course of my involvement in BRSS I created five different forms. All forms were created using research gathered over the course of my two semesters of involvement and revised to facilitate ease of use and accuracy. The first form was created and upon further inspection found to be overly trial based, which could lead to supervisors having to attend more to boxes on the sheet rather than the behaviors of the tutor (see Appendix C.1). The second sheet was essentially a condensed version of the first (See Appendix C.2). After analyzing this sheet it became apparent that it may be overly simplistic and thus it was revised. The third sheet was created by integrating more target behaviors, adding "notes" sections, and configuring the entire sheet to be worth 100 points (see Appendix C.3). The third sheet was then used to score videos and it was found that its organization made it very difficult to follow and that the scoring system led to subjective scores being given. These concerns were

addressed by the fourth sheet, which organized behaviors based on their chronological occurrence over the course of a discrete trial and built in points so that each behavior could be scored on a two point scale (see Appendix C.4). On the fourth sheet it was noted by Brittany Yenter that the overall organization of the sheet differed a bit significantly from that of the primary model, Dr. Fazzio's DTTEF, therefore the fifth sheet was put together in a way that more closely matched Dr. Fazzio's sheet (see Appendix C.5).

Implement the Intervention

The disconnect that the project of creating a new monitoring sheet set out to solve was that of the objectivity and IOA of supervisor feedback. This disconnect existed due to the lack of an objective monitoring sheet.

The intervention designed to address this disconnect was a revised monitoring sheet. This intervention addresses the low IOA because performance is scored based on individual components of discrete trial training that must occur during each trial. The intervention consists of supervisors providing feedback using this sheet. This intervention will be implemented fall of 2012.

Featured below is a cultural change model, a diagram used to track the impact of an intervention, highlighting the effects of a revised monitoring sheet. This cultural change model diagrams from the undergraduate tutor to the psychology community.

Undergraduate Tutor

The cultural change model begins with the undergraduate tutor providing DTT at WoodsEdge. The tutor is required to implement feedback from the previous scoring session based on the new monitoring sheet. If the feedback is not implemented by the next scoring session the tutor will lose points.

Graduate Supervisor

The next level in the cultural change model is the Graduate Supervisor at WoodsEdge. This individual is in charge of scoring and providing feedback to tutors based on the new monitoring sheet. The supervisor receives BATS points for completing these behaviors. The supervisor will lose points if these behaviors are not completed by Friday.

BCBA Supervisor

The third level of this model consists of the BCBA Supervisor at WoodsEdge. This individual is required to monitor the behavior of the supervisors and report to Dr. Malott. If the BCBA Supervisor does not monitor and report this person will lose approval form Dr. Malott. If these behaviors are completed, the individual will not lose approval.

Dr. Malott

This model's fourth level consists of the behavior of Dr. Malott. He is in charge of managing the BATS program and its students. If he does not monitor this institution and its

participants he will lose the approval of the WMU Psychology Department. If he does monitor properly, he will not.

WMU PSYCHOLOGY DEPARTMENT

The fourth level contains the behavior of the WMU Psychology Department. This organization is responsible for monitoring its faculty, i.e. Dr. Malott. If the department does not supervise Dr. Malott, and its other professors, it will lose the approval of the Psychology Community. If the WMU Psychology Department does properly oversee the behavior of its staff it will not lose the approval of the Psychology Community.

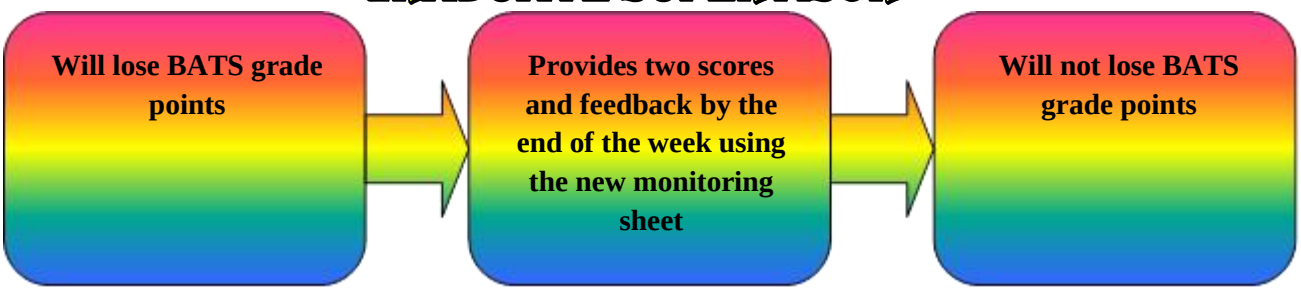
PSYCHOLOGY COMMUNITY

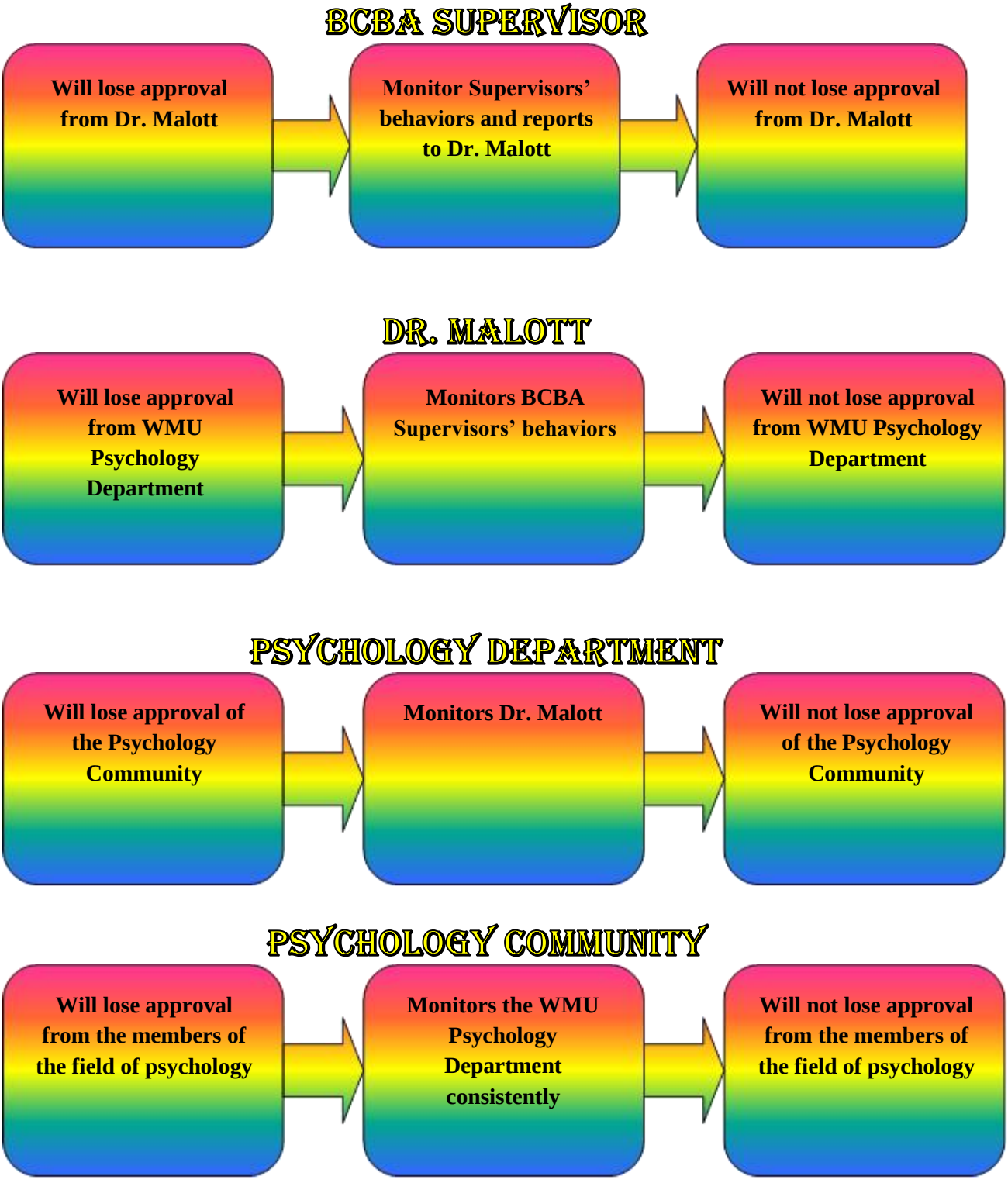
The Psychology Community consists of organizations, specifically APA and ABA, which oversee the practice of psychology at universities and makes up the fifth and final level of this model. The Psychology Community is in charge of determining what entities are qualified in regards to behavior analysis. Therefore, it must oversee the actions of various universities' psychology programs, such as the WMU Psychology Department. If the Psychology Community does not monitor these entities it will lose approval from members of the field of psychology. If it does supervise the various psychology departments it will not.

CULTURAL CHANGE MODEL

UNDERGRADUATE TUTOR

GRADUATE SUPERVISOR




BCBA SUPERVISOR
Will lose approval from Dr. Malott
Monitor Supervisors' behaviors and reports to Dr. Malott
Will not lose approval from Dr. Malott
DR. MALOTT
Will lose approval from WMU Psychology Department
Monitors BCBA Supervisors' behaviors
Will not lose approval from WMU Psychology Department
PSYCHOLOGY DEPARTMENT
Will lose approval of the Psychology Community
Monitors Dr. Malott
Will not lose approval of the Psychology Community
PSYCHOLOGY COMMUNITY
Will lose approval from the members of the field of psychology
Monitors the WMU Psychology Department consistently
Will not lose approval from the members of the field of psychology

EVALUATE THE INTERVENTION

One necessary aspect of any intervention is that effort be made to evaluate it. When evaluating an intervention there are several factors that should be kept in mind. These factors are whether or not the intervention caused behavioral change, what that change was, and if the intervention was successful. As previously mentioned, the intervention was aimed to increase supervisor objectivity and IOA has not yet been implemented and therefore it cannot be fully evaluated. It will be implemented by the fall of 2012 semester.

Even though the intervention has not yet been implemented there are certain evaluative measures that can be taken. One such measure is the evaluation of the materials used to create the new monitoring sheet and of the procedures that will be used to evaluate the intervention after implementation.

MATERIALS

There were many materials that played an integral role in the design of the new scoring sheet. These materials primarily consisted of sheets used by other centers with the purpose of scoring tutors provision of DTT. These centers included the St. Amant Center, the Kalamazoo Autism Center, WoodsEdge Learning Center, the Center for Human Development, and the Children's Hospital of Michigan.

THE ST. AMANT CENTER

As noted earlier in this paper, the St. Amant Center is an autism center located in Manitoba, Canada ("St. amant," 2009). One area of focus at this center is autism and extensive research has been done by Dr. Fazzio with the children in this center ("St. amant," 2009). Much of this research has focused on the scoring of tutors providing DTT to children diagnosed with autism (Fazzio & Martin, 2011). One research article written regarding Dr. Fazzio's DTTEF, which played an important role in the creation of the new monitoring sheet, by Jeanson et al demonstrated the high validity and reliability of this sheet (Jeanson, Thiessen, Thomson, Vermeulen, Martin & Yu, 2010). These factors, Dr. Fazzio's credentials and the published research, validated the use of her DTTEF as a template for the new sheet.

THE KALAMAZOO AUTISM CENTER

The Kalamazoo Autism Center (KAC) is an autism center located in Kalamazoo Michigan and run by Dr. Malott, a distinguished behavior analyst who teaches at Western Michigan University. This center is based completely on applied behavior analysis and operates smoothly due to the collaboration of the daycare in which it is housed and the combined efforts of Ph. D., Graduate, and Undergraduate students of Western Michigan University. In addition to providing autism services, this center is also a practicum site and therefore education is a primary goal. Due to this fact, integrating components from the sheet used there to score tutors as a template to create a new scoring sheet was deemed valid.

The WoodsEdge Learning Center

The WoodsEdge Learning Center is another autism center located in Kalamazoo Michigan. This center is also a practicum site for Western Michigan University and affiliated with Dr. Malott. This center provides autism services for young children. It is for this center that the intervention to increase supervisor objectivity and IOA is being conducted. The scoring sheet for WoodsEdge was an important template for this intervention for many reasons. Due to its long history of collaboration with behavior analysts, the scoring sheet targeted many important behaviors for tutors to exhibit during the provision of DTT. Additionally, because the intervention is for this center it is important that the target behaviors that are important to them be maintained in the intervention.

The Center for Human Development

The Center for Human Development is located in Berkley Michigan has an autism center run by Dr. Lori Warner. Dr. Warner was kind enough to let my supervisor and I tour her facility and share with us the sheets that are used to evaluate tutor provision of DTT to students diagnosed with autism. When touring we were very impressed by this center and its adherence to behavioral principles. The sheet we received from them was very helpful when trying to identify key behaviors regarding the provision of DTT.

The Children's Hospital of Michigan

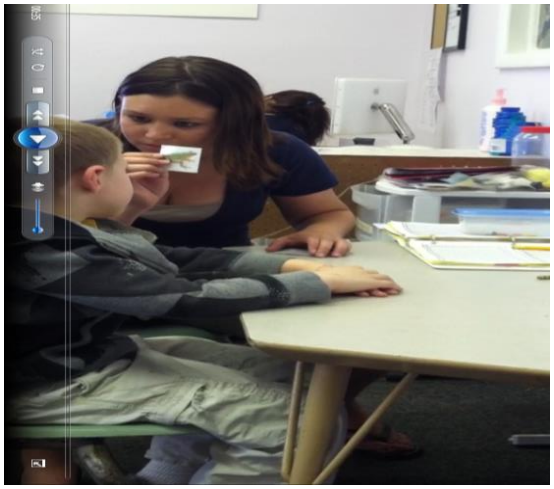
The Children's Hospital of Michigan is located in Novi Michigan and its autism center is run by Krista Kennedy M.S. She was also kind enough to let my supervisor and I tour her center and we found this center to be equally impressive. Additionally, we were provided with the sheets used there to evaluate the provision of DTT and found them to be very helpful and valid due to the fact that they are currently used in tutor scoring.

Future Evaluative Techniques

In addition to evaluating the validity of the materials that helped create the new monitoring sheet another way to evaluate an intervention that has not yet been implemented is to examine the methods that will be used to evaluate the intervention in the future. There are several methods that will be used to determine whether or not the intervention could be deemed a success. These methods are the use of the new sheet to grade videos of DTT being provided, a survey to measure the validity of the behaviors included in the sheet, and pre and post surveys to evaluate differences.

Scoring Videos

One of the methods by which this intervention will be evaluated will be to score videos taken of WoodsEdge tutors providing DTT to children diagnosed with autism. Scoring videos will be used to determine the effects of a new sheet on IOA of scores. These effects will be determined by measuring how closely scores from the previously used sheet correspond and comparing that to how closely scores from the new sheet correspond for each individual video. Additionally, videos will be used instead of live performances in order to reduce variability. Reducing variability is important due to the fact that any differences in scores need to be based on the sheets alone.



Survey to Measure the Validity of the Behaviors

Another means of evaluating the effects of this intervention was integrated from the Jeanson study which was discussed earlier in this section. In this study a survey was presented to behavior analysts which detailed the behaviors addressed by Dr. Fazzio's DTTEF and had these individuals rate the importance of each behavior (Jeanson et. al, 2010). We have modified this survey to address the behaviors addressed on this sheet (see Appendix D). Like the Jeanson study, these behaviors will be rated on a 7 point scale that varies from 1 being "Not Important" to 4 being "Important" to 7 being "Very Important/Essential" (Jeanson et. al, 2010). Below are the behaviors included in the new sheet that will be rated in their importance regarding the provision of DTT.

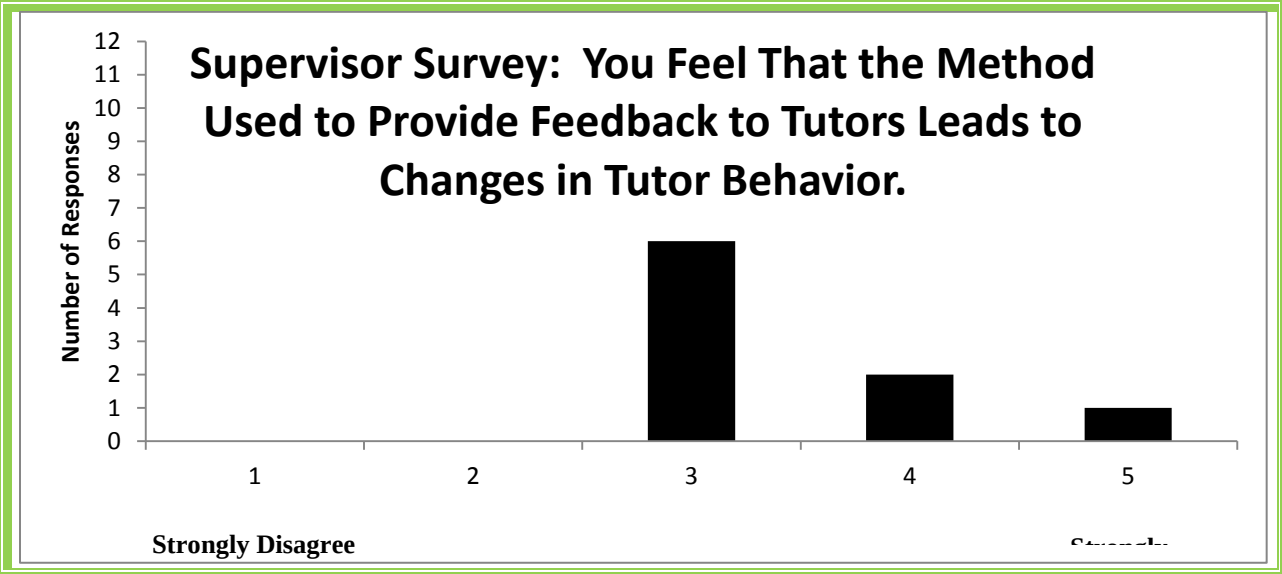
Behaviors to be Rated

1 Tutor Identifying Procedure Being Run
2 Gathering Materials
3 Preference Assessment Performed
4 Present SD as Written
5 Child Attending When SD is Delivered
6 Neutral Delivery of SD
7 Properly Arrange Materials
8 Intermittently Reinforce Attending
9 Prompts Only Issued When Necessary
10 Response Recorded (At least every three trials)
11 Deliver Reinforcement Immediately
12 Use Reinforcement that is Effective
13 Reinforcement Voice Used
14 Pair Tangibles with Social Reinforcement
15 "My Turn" Used Correctly (Hierarchy)
16 Child Never Left Idle > 3 Seconds
17 Prompt with Least Intrusive Prompt Followed by Neutral "Good"
18 Followed Behavioral Plan Correctly

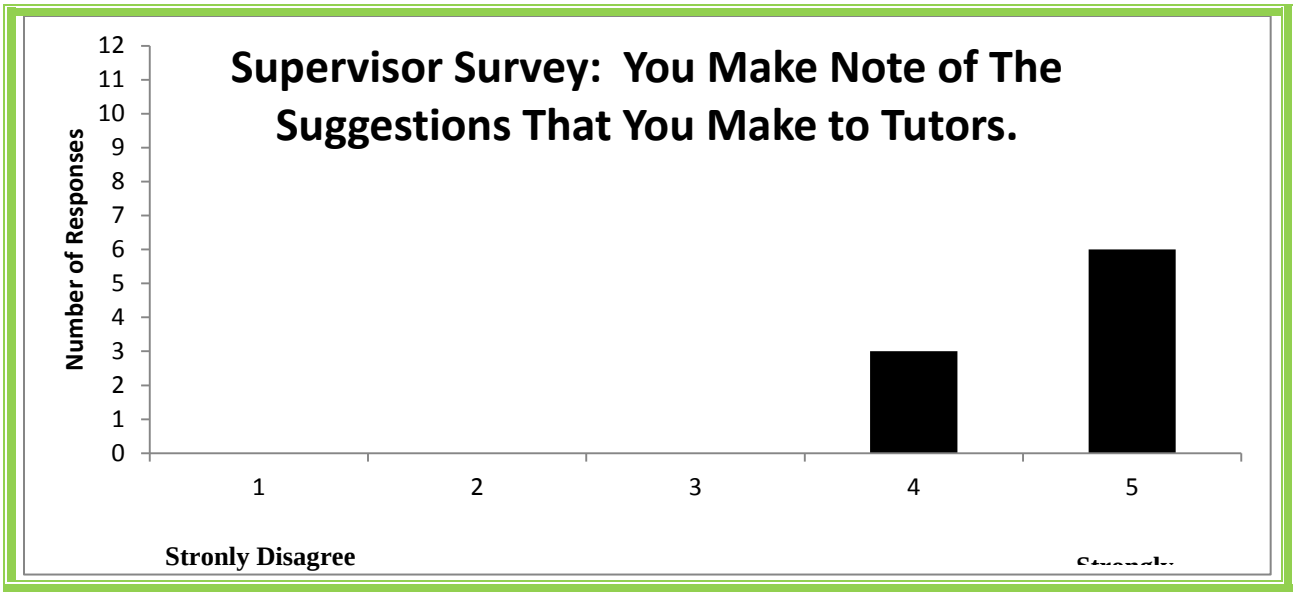
19 Implemented Feedback
20 Pacing (Prompt after 3-5 sec/Reinforce for 3-5 sec/4 LO's per minute)
21 PECS Book Used Correctly

PRE AND POST SURVEYS

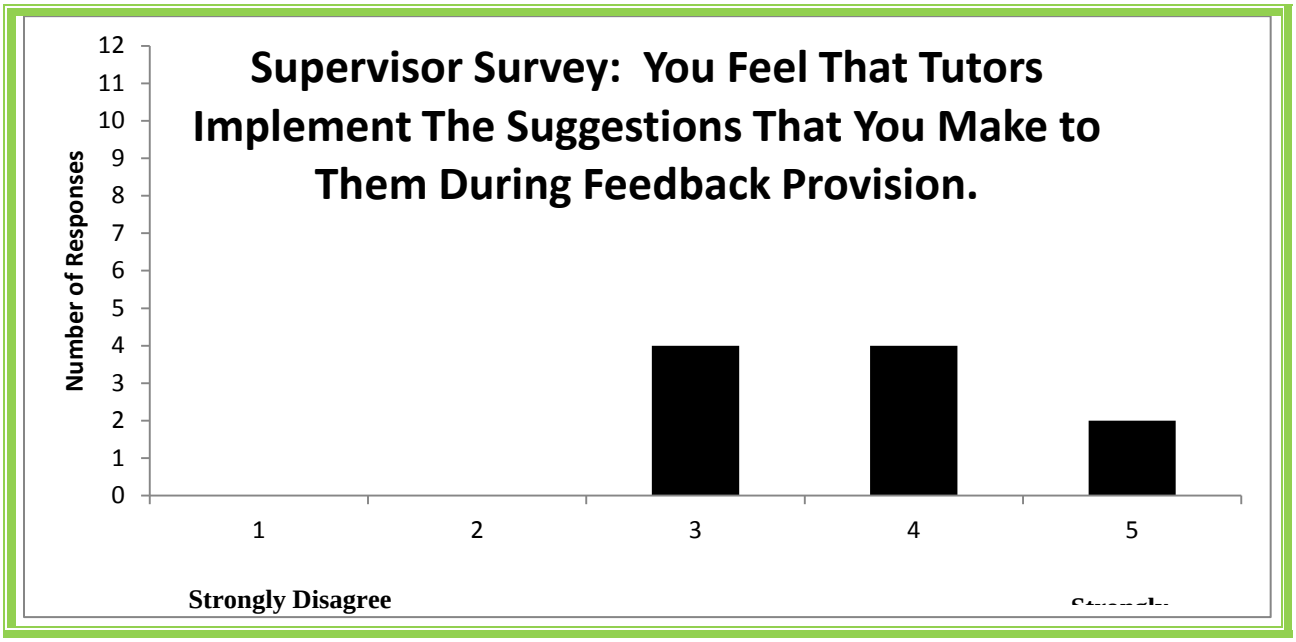
A final means by which the intervention to increase supervisor objectivity and IOA will be evaluated is through the use of Pre and Post Surveys (see Appendix A.1 and A.2 for complete surveys). Upon sending out the Pre surveys it was determined that the most relevant information will likely be gained from the supervisor survey, therefore only this survey will be distributed after the intervention is implemented (see Appendix E.1 for supervisor result graphs). Below is the graph of the supervisor responses to each of the questions on the supervisor survey (see Appendix E.2 for tutor result graphs).



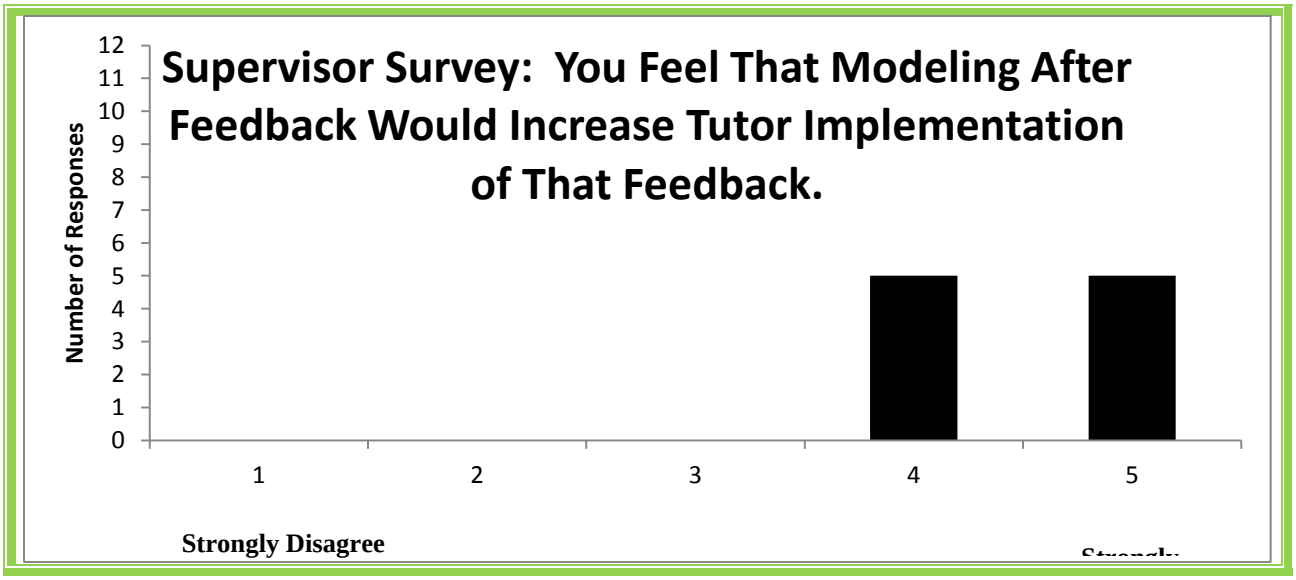
This first question "You feel that the method used to provide feedback to tutors leads to change in tutor behavior" was included to measure what, if any, difference the new sheet makes in regards to changing tutor behavior. This survey was scored on a 5 point scale that varied from "Strongly Disagree" to "Strongly Agree." Even though increasing the change in tutor behavior is not one of the specified goals of the intervention it would still be a valid thing if it were to happen.



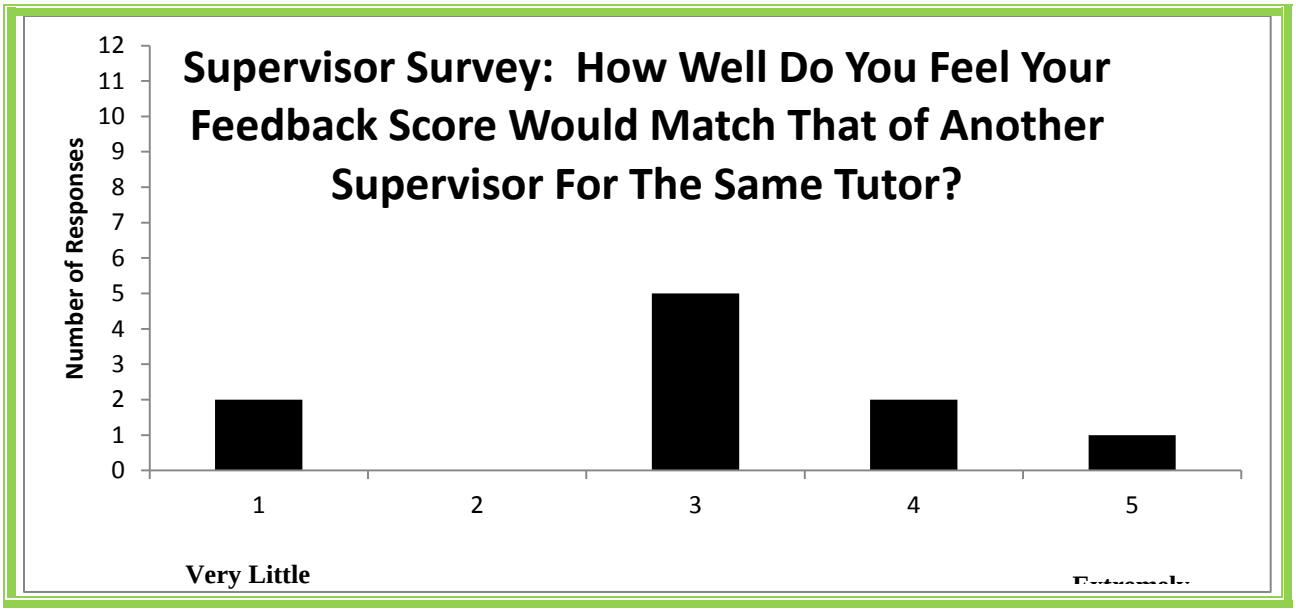
The second question on the survey asks if "You make note of the suggestions that you make to tutors." This question was also scored on a 5 point scale which varied from 1 being "Strongly Disagree" to 5 being "Strongly Agree." This question was included to address whether or not the current sheet being used led to tutor implementation of feedback. Unfortunately, the question was not written in such a way as to address whether or not supervisors were aware of the suggestions made during the last monitoring session and is thus not as targeted as we had hoped.



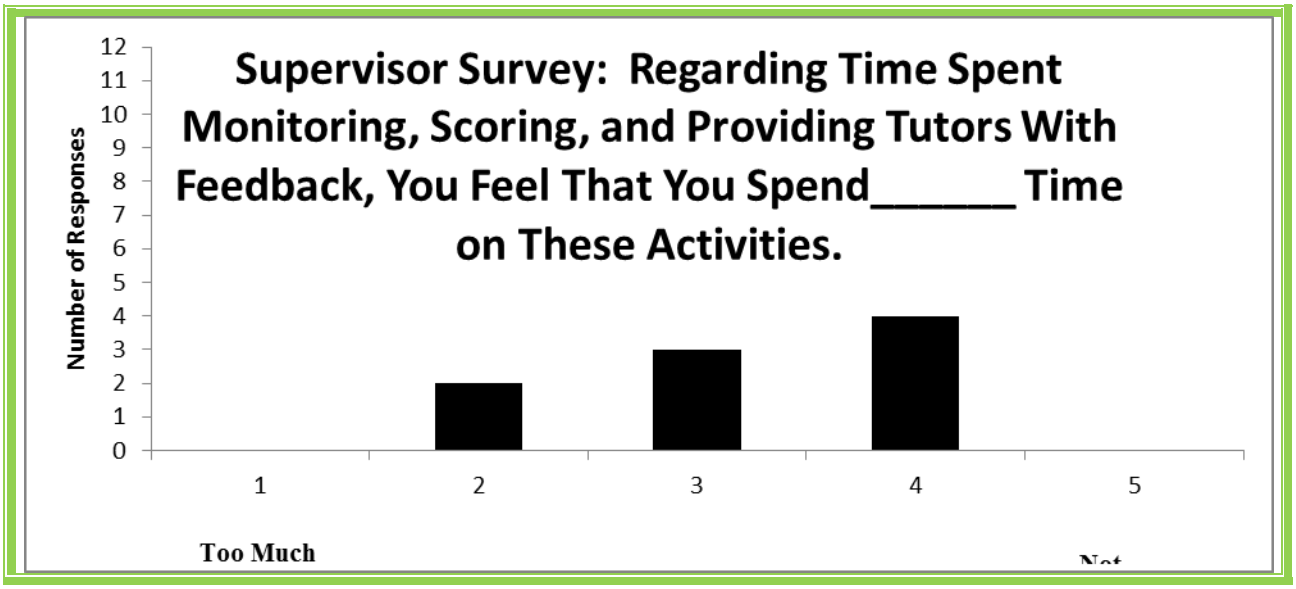
Question three of this survey, "You feel that tutors implement the suggestions that you make to them during feedback provision" obviously addresses implementation of feedback. This question will be useful in evaluating the intervention based on whether or not these figures change with the new monitoring sheet.



The fourth question of this survey asks whether or not supervisors "Feel that modeling after feedback would increase tutor implementation of that feedback." This question was included to see whether or not including modeling in this intervention would be warranted.



The fifth question on this survey asked "How well do you feel your feedback score would match that of another supervisor for the same tutor?" This question was scored on a five point scale that ranged from "Very Little" to "Extremely." This question will provide evaluative data for this intervention if the data changes from one monitoring sheet to the next.



The final question on this survey asked for supervisors' thoughts "Regarding time spent monitoring, scoring, and providing tutors with feedback, you feel that you spend ____ time on these activities." This survey asked this in order to see if a new sheet will have an influence on the time spent on these activities.

RECYCLE

Many times after evaluating an intervention, that evaluation will not produce a perfect fix to a problem. Rather, it will show areas where the intervention fell short: disconnects. These disconnects can then be addressed through a process known as recycling. Recycling is a method used to address disconnects that still exist after the implementation of an intervention. This method entails going back through the previous five steps with the new disconnects in mind and analyzing, specifying, designing, and implementing an intervention to address them. It is through this meticulous recycling methodology that all disconnects end up being addressed.

SPRING 2012

There were two significant disconnects within MSS that were observed and addressed in the spring of 2012: missing assignments in the Google Docs folders and the need for improved IOA and objectivity at WoodsEdge. The first disconnect was one that was easily addressed by Brittany Yenter. She addressed the missing files by advising that it be made the responsibility of the Project Performance Management System (PPMS) to forward completed files at the end of each semester so the MSS managers could fill in any missing assignments. The second disconnect, the need for improved IOA and objectivity at WoodsEdge, began to be addressed in the spring semester. The first step in addressing this disconnect was to do a brief task analysis of the behaviors that were and were not occurring at WoodsEdge. From there, we moved into

research on best methods regarding feedback and monitoring. By the end of the semester the disconnect was still unsolved, but significant progress had been made regarding the specific steps that needed to be taken in order to address it.

SUMMER 2012

During the summer of 2012 the primary disconnect that I was involved in addressing was the intervention to increase IOA and objectivity at WoodsEdge. It was during this semester that progress was made to design the new monitoring sheet (see Appendix C for all monitoring sheets). The first sheet designed was primarily based on information from the research conducted the semester before (see Appendix C.1). This sheet was then examined and found that it was overly trial based. This observation was used to redesign the sheet. Upon objective evaluation this second sheet, which relied heavily on "Always, Sometimes, Never" scoring, proved to be overly simplified (see Appendix C.2). After this evaluation, Brittany Yenter and I took a trip to two autism centers located on the eastside of the state. From these centers we gained valuable information regarding important behaviors to be targeted. After that trip, a third monitoring sheet was created (see Appendix C.3). From that point, the next stages in identifying disconnects with the sheet involved seeking expert opinion and analyzing the videos with the new sheet. After this was done, the sheet was reorganized to facilitate ease of use and the scoring system built in points to that each behavior could be scored on a two point scale (see Appendix C.4). The final revision was to redesign the sheet to more closely resemble Dr. Fazzio's DTTEF (see Appendix C.5).

PERSONAL EXPERIENCE AND CONCLUSIONS

My BRSS experience has been absolutely life changing. My entire life, I have been the least organized person I've ever known. I was so unorganized that it always amazed others that I was able to function with the piles of papers and other miscellaneous items that cluttered my room. BRSS has changed this. While I may not have my class work color coded, yet, I've still made vast improvements in my time management and organizational skills. Now, homework and other tasks are accomplished, for the most part, over the course of a week, rather than the night before being due. I firmly believe that this less stressful way of living will carry through Graduate school and even throughout my life, and I'm very thankful for it.

In addition to leading to those well needed personality changes, BRSS has enabled me to create this well-put-together thesis. Without this course, I never would have been able to divide such a large and daunting task into manageable units. I'm sure that my Honors Thesis would have consisted of four months' worth of work shoved into one sleepless and very stressful and miserable month. Now I have a thesis I can be proud of and that I don't resent.

Along with this thesis, I have also had the opportunity to assist in the completion of a meaningful OBM Project. Being involved with this project has been an amazing experience for an Undergraduate to have and I am very thankful. Over the course of these semesters I've had a lot of great and very valuable experiences due to my involvement with this project. One such opportunity was that I was able to travel to the Eastside of the state and tour two ABA centers. It was amazing, as an Undergraduate, to be able to see how these centers operated and sit and speak with the directors of these facilities, especially considering that I have hopes of opening my own center of sorts someday.

Another great opportunity that I had over the semesters that I was involved with BRSS was that of creating and revising the monitoring sheets to be used at WoodsEdge. This experience taught me a lot about how to deal with various formatting issues on Word, which has never been a skill of mine. Additionally, I learned a lot about how to break a complicated behavior into its most meaningful parts. Finally, I got the valuable of experience of trying to grade tutor performance based on a monitoring sheet. This experience, I feel, will make me both a better tutor and better able to teach others how to perform these necessary behaviors at a later date.

My final great experience from these semesters was the opportunity to work under an experienced Graduate student, Brittany Yenter. Working with her has been an experience that I will be forever grateful for. Over these semesters working under her has given me valuable insight into behavior analysis in general, what to expect in Graduate school, and guidance in other academic areas. Thanks for everything Brittany!

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