Functional Behavior Assessment (FBA) Training Manual

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Functional Behavior Assessment (FBA) Training Manual

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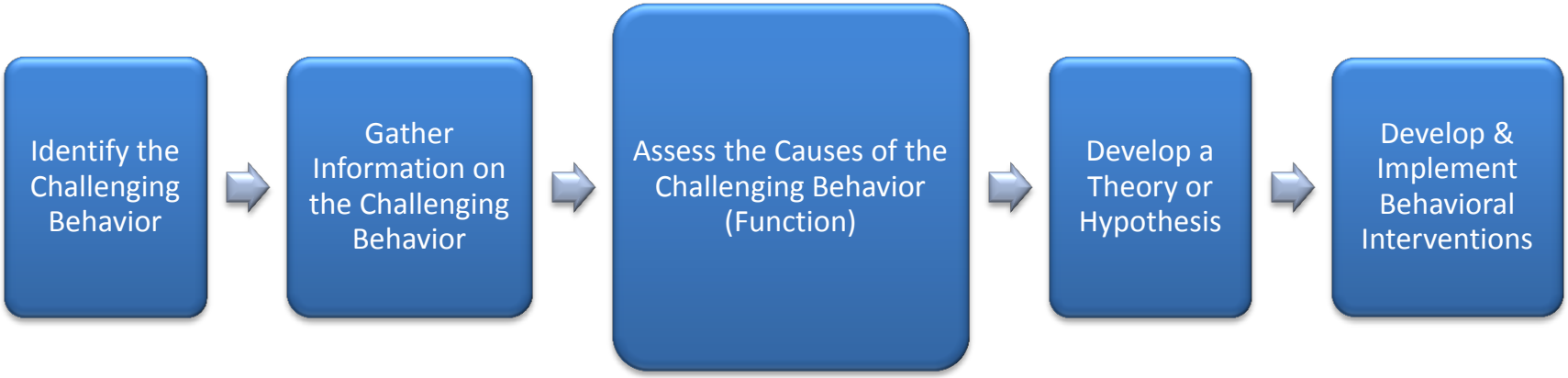
Components of an FBA



Goals of this Training Document:

1. Describe problem behavior in *observable* and *measurable* terms with a well-written **Response Definition**.
2. Be prepared to explain how problem behavior interferes with learning.
3. Explain how behavioral function helps determine a more effective behavior intervention plan and how it is part of an IEP.
4. Identify possible causes of the problem behavior by writing a theory or hypothesis statement. This describes the **context**, **behavioral topography**, and **function of the behavior**.
5. Make recommendations to address the problem behavior including prosocial **replacement behavior**. Subsequent IEPs, positive behavior support (PBS) plans, related services, teachers' lesson plans, and parental assistance can all be used to address the identified causes and subsequent problem behaviors.

Recommended Components of an FBA (and Table of Contents)

Adapted from: von Ravensberg, H. & Tobin, T. J. (2004). *IDEA 2004 Final Regulations: The Reauthorized Functional Behavioral Assessment*. Educational and Community Supports, College of Education, University of Oregon. Retrieved from the internet on October 25, 2008 at *www.uoregon.edu/~hvr/docs/idea04**fba**.doc*

Functional Behavior Assessment

A Functional Behavioral Assessment (FBA) is a process for gathering information to understand the structure and function(s) of a student's behavior(s) in order to develop an effective and efficient behavioral intervention plan that teaches and encourages alternative behaviors. Individualization is highly important in determining behavioral function.

Federal rules require that consent be obtained in order to conduct an FBA. In Montana, parent permission to conduct a functional behavior assessment can be obtained through the use of the Evaluation Plan form.

An FBA should include:

1. A clear description of the problem behaviors, including classes or sequences of behaviors that frequently occur together.
2. Identification of the events, times, and situations that predict when the problem behaviors will occur and will not occur across the full range of typical daily routines.
3. Identification of the consequences that maintain the problem behaviors (that is, what functions the behaviors appear to serve for the person).
4. Development of one or more summary statements of hypotheses that:
    (a) Identify a specific type of situation or context in which behaviors occur.
    (b) Describe the specific behavior(s).
    (c) Identify reinforcers that maintain the problem behavior(s).
5. Collection of direct observation data that support the summary statements that have been developed.

(O'Neill, Horner, Albin, Sprague, Storey, & Newton, 1997).

Procedures for collecting functional behavioral assessment information in cases where additional information is needed may include:

- Interviews with relevant persons including school staff, parent, and student
- Review of existing documents (records review)
- Systematic direct observation
- Systematic manipulation of the educational environment
- Administration of formal assessments or procedures

Components of the Functional Behavioral Assessment may include, but are not limited to:

- Description of the behaviors of concern, including baseline data
- Definition of the student's educational environment and daily routines that may predict the occurrence of target behaviors, including setting, social and activity influences
- Definition of the immediate antecedent events for occurrences of target behaviors
- Development of a hypothesis statement (or summary statement)
- Identification of the consequences or outcomes of the target behaviors that may be maintaining the behaviors, including identification of effective behavioral reinforcers
- Definition of the efficiency of the target behaviors
- Identification of functional alternative behaviors
- Identification of the primary ways the student communicates with others
- Identification of effective and ineffective strategies and interaction styles
- Summary of the history of target behaviors and the effectiveness of previously attempted interventions

Behavior Intervention Plan (BIP)

The development of a behavior intervention plan occurs as a result of team processes and becomes an integral part of the student's IEP. The IEP team should discuss hypotheses that address the function of the student's behavior. A behavior intervention plan is then designed to identify strategies and interventions that decrease undesirable behaviors and teach replacement skills.

Examples of supportive interventions may include:

- Modifying behavioral antecedents, settings, and events
- Identifying alternative skills and providing systematic direct instruction in replacement behaviors, (e.g., communication, socialization, organization)
- Designing lifestyle interventions that improve the student's quality of life and assist the student in maintaining skills (e.g., transitional skills, problem-solving, skill practice and generalization)
- Examining consequence strategies including reinforcement, redirection and crisis management.

As part of the development of the behavioral intervention plan, the IEP team should determine a process for reviewing the plan's effectiveness. At this meeting, the IEP team should examine:

(1) What type of information will be gathered?

(2) How will the team collect this information?

(3) How will the team use this information to make decisions?

(4) How will this plan be modified or adapted over time?

1. Response Definition

A *response definition* is the way we define a behavioral response. It is an observable, measurable description of a specific behavior (also known as a behavioral definition or operational definition). We can also describe a response definition by saying that it provides the typography of the behavior or what it looks or sounds like. It is helpful in the initial phases of a functional behavior assessment because everyone on the FBA team comes to an agreement on the behavior(s), and can then go out and record/document the same behavior(s).

For example, consider Jenny, whose mother says she exhibits a "tantrum." To Mrs. Smith, her teacher, Jenny's tantrum involves throwing blocks and kicking other children in the school. To Mr. Jones the school principal, Jenny's tantrum behavior looks like an aggressive act on the bus ramp. To Jenny's sister, the tantrum may be viewed as silly and a way for Jenny to 'always get her way.' A response definition by this team of stakeholders may take some time to develop, but when the FBA Team begins conducting observations and collecting data, everyone will be observing the same, agreed upon, behavior.

Here is an example of a well-written response definition for an adaptive behavior:

- Karen can button her shirt from bottom to top without missing any button holes or placing buttons in the wrong button holes.

Here is an example of a well-written response definition for a problem behavior:

- Jenny's tantrum is defined as whining or crying in conjunction with sprawling on the floor, throwing objects, and kicking her legs for a duration of at least 1 minute.

Test yourself. Which of the following is a 'good' response definition?

- Margaret got angry three times today.

- Claude hits himself across the chest whenever he is asked to take a bath.
- Morgan flushed the toilet 28 times this morning.
- Amy pinched Russell seven times today.
- Lydia records every time Duane spits at another individual.

Believe it or not, there's something wrong with every one of the definitions above. See if you can determine where the weaknesses are in each statement (don't read the comments below until you've thought about the statements above). Here is a brief description of what is wrong with each of the statements above:

- Margaret: Getting 'angry' does not accurately describe what happened (yelling, screaming, throwing things, aggression, etc.). Also, it was nice to be provided with a frequency of three, but we might also want to know (a) intensity, (b) duration, and (c) inter-response time.
- Claude: It may seem that Claude's behavioral description was better than Margaret's, but we really don't know *how* Claude hits himself across the chest. Does he use an open hand 'slap' or closed fist? Is it just once or is it repeated several times? Is it so intensive that it leaves a red mark on his chest?
- Morgan: We were provided the frequency of flushing. How many times was it for all the *right* reasons (in other words, did it contain urine or fecal matter)? Perhaps staff should calculate a ratio of correct flushing to occurrences of unnecessary flushes. Another weak point of the statement is found when staff said 'this morning'; what exactly did they mean? 5:30 a.m. to 12:00 (noon)? That would've been a 6.5 hour time frame. Or, perhaps they meant only one hour from

8 until 9:00 a.m.? Providing specific times would've been helpful in order to calculate rate of behavior over time.

- Amy: She pinches Russell. Under what circumstances does she pinch Russell? Might it have been St. Patrick's Day and Russell wasn't wearing green? Does she pinch him to start a playful interaction? Does she hurt Russell or leave marks? In this case, we need to know more about the context of pinching and what the intensity looks like. We also need to know how many opportunities per day, or how much time was available for pinching. "Today" is too vague.
- Lydia: What is the definition of spitting that Lydia is recording? Could it be considered drooling, messy eating, 'fake' spitting (pursing the lips, making noise, and not actually spitting any fluid past the lips), or a full coughed-up wad of sputum? What is Lydia recording, and how is it recorded?

Now, write a response definition for the problem behavior you've noted in one individual at your school. Consider the following dimensions of behavior: frequency, intensity, and duration. Make sure your response definition describes behavior that is (a) observable and (b) measurable. Finally, ask a colleague to act it out based only on what they interpret from your written statement and then revise your definition. You may need to make several revisions.

The response definition we will use for further study is:

_____

_____

_____

2. Review of Records

It is often helpful to examine previous IEPs, psychological evaluations, social history, and even medical records when developing an FBA. Here, the FBA team examines records usually stored in a cumulative file, but may contact outside agencies (doctors, therapists, etc.) in order to strengthen the background information on which the FBA is built.

In reporting findings from the record review, it is best to use language that describes behaviors of concern and the context around those behaviors identified in previous records (e.g., FBAs, BIPs, IEPs or other reports). It is also helpful to describe interventions that were tried in the past, and data indicating the relative success of each intervention. The review of records should also mention any reports that were (a) identified in student's records and/or (b) did not follow the student to the current school.

Sample Record Review:

Item	Date, by whom	Comments and Information
Psychological Evaluation	11/17/11 F. Smith, Psy.D.	Anxiety Disorder may affect concentration and learning
Psycho-educational Assessments:	10/15/12 B. Shaw, M.A., School Psychologist	WISC-R: Performance 110, Verbal 101, Full Scale 104
Vision and Hearing	11/2/2012 M. Jones, School Nurse	Student wears glasses for distance, hearing is within normal limits.
Previous Behavior Intervention	11/2/11 B. Johnson, Teacher at Lyle Elementary, Hopeful MT	Check-in, check-out at the previous school placement was not working.

3. Behavior Checklists

Checklists that identify possible functions or help classify problem behavior can provide helpful direction for an FBA team. Here we describe two such checklists, but there are many others available on the internet or through commercial purchases.

Motivation Assessment Scale. Developed by V. Mark Durand and Daniel Crimmons (1988), the Motivation Assessment Scale (MAS) offers a quick way for teams to assess behavioral function through a series of questions about problem behavior that are answered by faculty, staff, or caregivers using a Likert scale. One or more of the following four functions may emerge: Attention, Escape/Avoidance, Tangible, or Sensory. The Motivation Assessment Scale is available for purchase.

Motivation Assessment Scale

Direction: Read each question carefully and circle the **ONE** number that best describes your observations:

		Never	Almost Never	Seldom	Half the Time	Usually	Almost Always	Always
1.	Would the behavior occur continuously, over and over if this student were left alone for long periods of time?	0	1	2	3	4	5	6
2.	Does the behavior occur following a request to perform a difficult task?	0	1	2	3	4	5	6
3.	Does the behavior seem to occur in response to your talking to other students in the room?	0	1	2	3	4	5	6
4.	Does the behavior ever occur to get a toy, food or activity that this student has been told he/she can't have?	0	1	2	3	4	5	6
5.	Would the behavior occur repeatedly, in the same way, for long periods of time, if no one were around?	0	1	2	3	4	5	6
6.	Does the behavior occur when any request is made of the student?	0	1	2	3	4	5	6
7.	Does the behavior occur whenever you stop attending to the student?	0	1	2	3	4	5	6
8.	Does the behavior occur when you take away a favorite toy, food or activity?	0	1	2	3	4	5	6
9.	Does it appear that this student enjoys performing the behavior?	0	1	2	3	4	5	6
10.	Does this student seem to do the behavior to upset or annoy you when you are trying to get him/her to do what you ask?	0	1	2	3	4	5	6
11.	Does this student seem to do the behavior to upset or annoy you when you are not pay attention to him or her?	0	1	2	3	4	5	6

		Never	Almost Never	Seldom	Half the Time	Usually	Almost Always	Always
12.	Does the behavior stop occurring shortly after you give this student the toy, food, or activity he or she requested?	0	1	2	3	4	5	6
13.	When the behavior is occurring, does the student seem calm and unaware of anything else going on around him or her?	0	1	2	3	4	5	6
14.	Does the behavior cease shortly after you stop making demands of this student?	0	1	2	3	4	5	6
15.	Does the student seem to initiate the behavior in order to get you to spend some time with him or her?	0	1	2	3	4	5	6
16.	Does this behavior seem to occur when the student has been told that he or she can't do something he/she had wanted to do?	0	1	2	3	4	5	6

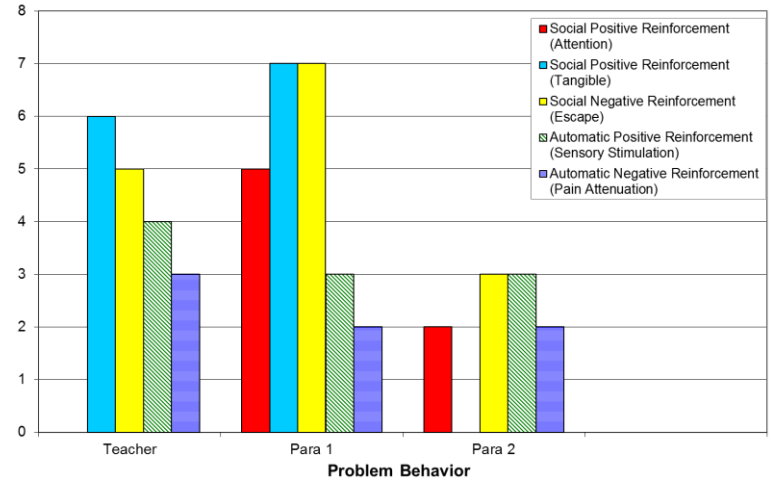
Transfer the numeric answer for each question to the blanks below: Scores are organized into columns by type of motivation. Add the total score and calculate the mean score for each motivation. Then determine the relative ranking by assigning the number "1" to the motivation with the highest mean score, the number "2" to the motivation with the second highest mean score, and so forth.

	Sensory	Escape	Attention	Tangible
	1._____	2._____	3._____	4._____
	5._____	6._____	7._____	8._____
	9._____	10._____	11._____	12._____
	13._____	14._____	15._____	16._____
Total Score:	_____	_____	_____	_____
Mean Score:	_____	_____	_____	_____
Relative Ranking:	_____	_____	_____	_____

Motivation Assessment Scale. Adapted from FBA Forms – Utah Personnel Development Center, Utah State Office of Education. Retrieved from www.updc.org/ubi

<u>Functional Assessment Screening Tool</u>. Dr. Brian Iwata developed this screening tool to quickly determine function(s) of a behavior based on a brief set of questions. This instrument is similar to the MAS, but contains different questions and qualifying responses. This tool required only "yes" or "no" responses. The item on the following page is adapted from the 5th edition of the form, provided by the Florida Center on Self Injury.

How to use results of Behavior Checklists in an FBA. Behavior checklists such as the ones presented here are fairly accurate. A graph showing the results of one of the behavior checklists might be helpful in supporting the hypothesized function (see the figure below). Keep in mind that an FBA is comprised of much more than a behavior checklist. Even though one or two checklists might identify a particular function (e.g., social positive reinforcement -tangible), we must remember that there are better indicators to identify function which will be described later.



Scores of FAST as reported by school staff, depicting possible functions of the student's problem behavior.

Functional Analysis Screening Tool

Client:_____ **Date:**_____

Informant:_____ **Interviewer:**_____

To the Interviewer: The FAST identifies environmental and physical factors that may influence problem behaviors. It should be used only for screening purposes as part of a comprehensive functional analysis of the behavior. Administer the FAST to several individuals who interact with the client frequently. Then use the results as a guide for conducting a series of direct observations in different situations to verify behavioral functions and to identify other factors that may influence the problem behavior.

To the Informant: Complete the sections below. Then read each question carefully and answer it by circling "Yes" or "No". If you are uncertain about an answer, circle "N/A".

Informant-Client Relationship

1. Indicate your relationship to the client: [ ]Parent [ ]Instructor
   [ ]Therapist [ ]Parapro [ ]Residential Staff [ ]Other
2. How long have you known the client? _____years _____months
3. Do you interact with client daily? _____[ ]Yes [ ]No
4. In what situations do you usually interact with the client?
   [ ]Meals [ ]Academic training [ ]Leisure activities
   [ ]Work or vocational training [ ]Self care
   [ ]Other_____

Problem Behavior Information

1. Problem behavior [check and describe]:
   [ ]Aggression:_____
   [ ]Self-injury:_____
   [ ]Stereotypy:_____
   [ ]Property destruction:_____
   [ ]Disruptive behavior:_____

2.

Frequency:			
[ ]Hourly	[ ]Daily	[ ]Weekly	[ ]Less

3.

Severity:	
	mild: disruptive but little risk to property or health
	moderate: property damage or minor injury
	severe: significant threat to health or safety

4. Situations in which the problem behavior is **most likely:**
   Days/Times:_____
   Settings/Activities:_____
   Persons present:_____
5. Situations in which the problem behavior is **least likely:**
   Days/Times:_____
   Settings/Activities:_____
   Persons present:_____
6. What is usually happening to the client right **before** the problem behavior occurs?_____
7. What usually happens to the client right **after** the problem behavior occurs?_____
8. How do you handle the behavior when it occurs?_____
9. Comments:_____

1. Does the client usually engage in the problem behavior when he/she is being ignored or when caregivers are paying attention to someone else?
[ ]Yes [ ]No [ ]N/A
2. Does the client usually engage in the problem behavior when requests for preferred activities [games, snacks] are denied or when these items are taken away?
[ ]Yes [ ]No [ ]N/A
3. When the problem behavior occurs, do you or other caregivers usually try to calm the client down or try to engage the client in preferred activities?
[ ]Yes [ ]No [ ]N/A
4. Is the client usually well behaved when he/she is getting lots of attention or when preferred items or activities are freely available?
[ ]Yes [ ]No [ ]N/A
5. Is the client resistant when asked to perform a task or to participate in group activities?
[ ]Yes [ ]No [ ]N/A
6. Does the client usually engage in the problem behavior when asked to perform a task or to participate in group activities?
[ ]Yes [ ]No [ ]N/A
7. When the problem behavior occurs, is the client usually given a break from tasks?
[ ]Yes [ ]No [ ]N/A
8. Is the client usually well behaved when he/she is not required to do anything?
[ ]Yes [ ]No [ ]N/A
9.Does the problem behavior seem to be a "ritual" or habit, repeatedly occurring the same way?
[ ]Yes [ ]No [ ]N/A
10. Does the client usually engage in the problem behavior even when no one is around or watching?
[ ]Yes [ ]No [ ]N/A
11. Does the client prefer engaging in the problem behavior over other types of leisure activities?
[ ]Yes [ ]No [ ]N/A
12. Does the problem behavior appear to provide some sort of sensory stimulation?
[ ]Yes [ ]No [ ]N/A
13. Does the client usually engage in the problem behavior more often when he/she is ill?
[ ]Yes [ ]No [ ]N/A
14. Is the problem behavior cyclical, occurring at high rates for several days and then stopping?
[ ]Yes [ ]No [ ]N/A
15. Does the client have recurrent painful conditions such as ear infections or allergies? If so, please list:_____
[ ]Yes [ ]No [ ]N/A
16. If the client is experiencing physical problems, and these are treated, does the problem behavior usually go away?
[ ]Yes [ ]No [ ]N/A

Scoring Summary - Circle the number from above of each question answered "Yes".

Items circled "Yes"				Total	Potential Source of Reinforcement
1	2	3	4		Attention/Preferred Items [Social]
5	6	7	8		Escape [Social]
9	10	11	12		Sensory Stimulation [Automatic]
13	14	15	16		Pain Attenuation [Automatic]

4. Student interviews

We sometimes overlook the simplest method as a way to determine function of behavior. In regard to FBA, this is as easy as asking the student, "Why do you do this problem behavior?" If appropriate, we might also ask the student's peers, "Why do you think he/she behaves this way?"

It would be nice if every child who presented problem behavior at school could inform their teachers with the correct function of their behavior. However, that is not always the case where humans and problem behavior is concerned. The child may not be able to express "why" they behave the way they do, or they may not really understand the root causes of their behavior. Therefore, while it seems a simple thing to ask, we must remember that reliable answers from verbal children are not always accurate.

5. **Interviews with Others**

In order to find out more about the student's problem behavior, teachers must interview parents and other teachers, as well as paraprofessionals and auxiliary personnel, administrators, and counselors.

A Functional Analysis Interview form was developed by O'Neill, Horner, Albin, Sprague, Storey, & Newton, (1997). While a bit lengthy, the value of this interview lies within its organizational structure and content. Please know that it is not necessary to only ask questions about the targeted problem behavior. A school FBA team should be interested in discovering student likes/dislikes, strengths, and aspirations. A sample interview for an FBA can be found at http://cecp.air.org/fba/problembehavior2/appendixc.htm.

Some school districts require at least 2 interviews included in an FBA. While it is not as important to include a specific number of interviews, it is important to meet with a variety of

people who come into contact with the student and possibly the problem behavior. Consider conducting interviews by phone, in the school office, at a coffee shop, or at the person's place of employment. In reaching out to as many people in the student's life as possible, the FBA will also help bridge resources and involve everyone in the process.

Who might you interview for the student who is having problem behaviors?

_____

_____

_____

6. **FBA Team Meetings**

An FBA should not be written by any one person or outside expert. It is important that the FBA be written by a group of people who know the student well. This team approach is similar to an IEP team, although an FBA team doesn't necessarily need to be only for students in special education. Any student who has significant behavior challenges, whether in Special Education or not, may have an FBA.

Some schools establish regular FBA Team meetings. These meetings may be part of a regular schedule or part of a larger, school-wide plan to reduce problem behavior and should be held throughout the period of time it takes to complete the FBA. An FBA team does not stop meeting when the FBA is complete. The FBA team meets regularly to review data from the Behavior Intervention Plan, especially at the onset of any new intervention or change in the plan.

7. Direct Observations

There are two types of observations: indirect and direct. An indirect observation relies on other witnesses to the behavior, or other reports of observed behavior. Indirect methods of observation include anecdotal records, behavior logs, scatter-plot recordings, Office Discipline Referrals, and incident reports. When an observation is a direct observation, the observer records what they are watching, in real time. A video-recording may be a direct observation if the person watching the video is writing down what they observe at the moment it is viewed. If an observation is conducted and information on behavioral events are written down after the fact, it is not considered a 'direct observation' but would be considered an anecdotal record.

There are many types of direct observation available to observers of all skill levels. A few of the most common direct observation techniques are described here.

Frequency count. One of the simplest observations to perform is the frequency count. In this case, a targeted behavior is identified and defined (e.g., a response definition) for all potential observers. The observer records tally marks every time the target behavior is noticed during a pre-determined time frame. A variation on this method is to identify two "incompatible" behaviors (one problem behavior, one 'opposite of the problem' behavior), and record the frequency of problem and desired behavior. It may also make sense to record frequency of stimuli that surround behavior (e.g., if student was asked a direct question, if other students raised their hands, and if response was appropriate or inappropriate). See the examples provided on the following page (Frequency Observation, Frequency Matrix).

Frequency Observation (50 min. class)			
Student behaviors when answering questions	**Tally Marks**	**Total Tally Marks**	**Percent**
1. Raises hand/waits to be acknowledged before responding	𝍸 /	6	30%
2. Raises hand and responds at same time	////	4	20%
3. Responds without raising hand	𝍸 𝍸	10	50%
Total		20	100%

Frequency Matrix – (with definitions specific to Johnny & Teacher)			
Time: (50 min. class)	**Teacher directs a specific question at Johnny**	**Teacher directs a question to whole class and waits for response**	**Teacher Requests Physical Response**
Appropriate response **Total:** 5	Johnny responds appropriately. /	Johnny raises hand, is called upon to answer the question and gives an appropriate response. ////	Johnny provides appropriate physical response to teacher request.
Inappropriate response **Total:** 2	Johnny responds inappropriately to the directed question.	Johnny raises hand, is called upon to answer the question, but gives an inappropriate response. //	Johnny provides an inappropriate physical response to teacher request.
No response **Total:** 2	Johnny was unable to respond to teacher's directed question.	Johnny was off task or not listening to teacher's whole class question.	Johnny was off task, or did not respond to teacher request. //
INTERRUPTION or DISRUPTION of teacher while she is otherwise talking. //// Total = 4			

Duration Recording. Sometimes it is important to know how long a problem behavior lasts. In this instance we use *duration recording* to mark the beginning and end of an event. Each event serves as one frequency, but the duration may be varied. Consider a child's tantrum behavior. The FBA team would need to clearly define the all behavior(s) that meet the category of "tantrum," for example they should clearly identify behaviors observed at the beginning of a tantrum and those behaviors that identify the end of a tantrum, so that each potential observer could record the same durations for each event. In one case, a child's tantrum may begin with crying/whining and escalate from there. As soon as crying/whining is observed, the duration recording begins. The end of the child's tantrum may involve a noticeable calm (stops crying, stops whining). That would mark the end of the duration. Duration recordings require a minimal amount of tools: a clock and/or timer and a pencil/paper for marking down the duration.

Some examples of duration recordings useful to include in an FBA are: (a) measured periods of 'time-out from reinforcement', (b) calculation of academic engaged time (AET) or "On-Task" observations, and (c) time spent engaged in problem behavior (as in the tantrum example provided earlier). Duration recordings can be measured in terms of percent of an overall time frame (e.g., 5 minutes) as in the example provided below:

> George was academically engaged during independent seatwork in Reading class for only 140 of 300 seconds in this five-minute time-period. His AET score was calculated by dividing the number of seconds engaged (as measured on a stopwatch) by the total time (140s ÷ 300s X 100 = 47%). This rate of AET (47%) is significantly below the expected rate for children of his age. A behavior intervention plan to improve AET during independent seatwork would be recommended for George after a more thorough examination of his learning and attending problems has been completed.


For this observation, all that was necessary was a set of timers (one kitchen timer that counts down, and one stopwatch that can be turned on or off easily). One timer must start counting down (e.g., 300s or 5 minutes), and the other is turned on or off depending on the child's behavior. If he is 'engaged' or on-task, the timer is allowed to run. If the child is disengaged or off-task, the observer must stop the timer. Then, when the first timer counts down the 300 seconds, the observation is over. The number of seconds engaged (as measured by the on/off timer), is then divided by the total time of the observation (300 seconds). See the example for the formula.

Equal Interval, Momentary Time Sample. Information gleaned from this type of observation provides clear evidence of behaviors that occur during different types of instruction over time.

The time sample form offers systematic observation of several categories of behavior (listed on the left side of the table), during 20 equal intervals (shown across the top of the table). There are two lines for each behavior category, "S" and "P." S stands for the target student, and P denotes a typical, neighboring peer (this is provided so that an analysis of typical student behavior can be used as a comparison). Most often, each interval is set at one minute, providing a 20-minute observation period. In some cases, the intervals can be changed to 30 second intervals (resulting in a 10-minute observation period) or increased to 2 minute intervals (resulting in a 40 minute observation period).

Every interval is recorded in the following manner:

1. During the first five seconds of each interval, observe the student carefully for "productive" (on-task) behavior. Mark a "+" sign if the child is productive (attending, raises hand, has materials, etc.) or write a "–" if the child is not.
2. During the next portion of the interval, mark with a ✓ whenever behaviors in any of the rows below 'productive' are observed. I have sometimes circled specific behaviors or written VA or PA in the corresponding interval box to clarify my observations and record more accurately what I saw.
3. When the classroom activity changes (transition) mark the change below the table so that you can analyze how activities affect behavior.

See the sample on the following page. A blank form is provided as well.

TIME SAMPLING OBSERVATION FORM
OBSERVER C. Young-Pelton

STUDENT Missy B. Have
SETTING Math - 6th Mrs. Jones
TIME 2:00 - 3:10
DATE Feb. 7
INTERVAL 1 min.

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
PRODUCTIVE works at seat, Attends to directions, raises hand	S	+	+	+	−	−	+	+	+	−	+	+	−	−	−	+	+	−	−	+	+
Brings materials 80%	P	+	+	+	+	+	+	+	+	+	+	+	+	−	−	+	−	−	+	+	+
IMPULSIVE: blurts out answers, Can't wait for turn, becomes Overexcited, can't calm down	S			√																	
	P																				
DISTRACTED hums to self, Fidgets, doodles, looks around	S					√				√					√				√		
	P																				
AGGRESSION (VA/PA) VERBAL-threatens, calls names, argues PHYSICAL-hits, pushes, bits, kicks	S												VA	VA	PA						
	P																	VA			
MATERIAL ORGANIZATION Fails to organize, looses materials, Can't find things Book, Page?	S				√	√															
	P																				
TEMPORAL ORGANIZATION Fails to follow routines, doesn't understand routine and order	S																				
	P																				
DEPENDENCY Requires multiple directions, assistance beyond other students	S							√											√		
	P																				
CONSTANT MOTION Off of seat, unable to work in group, Moves about, rocks, skips, runs	S												√	√							
	P																				
SPOTLIGHT Talks loudly, laughs, makes noises, Intrudes on others, crawls on floor	S														√			√			
	P																				

Directions | Seat work | Discussion | Get ready to go!

TIME SAMPLING OBSERVATION FORM STUDENT _____ DATE _____

OBSERVER _____ SETTING_____ TIME _____ INTERVAL _____

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
PRODUCTIVE: Works at seat, attends to directions, raises hand, brings materials	**S**																				
	P																				
IMPULSIVE: Blurts out answers, can't wait for turn, becomes overexcited, can't calm down	**S**																				
	P																				
DISTRACTED: Hums to self, fidgets, doodles, looks around	**S**																				
	P																				
AGGRESSION: (VA/PA) VERBAL – Threatens, calls names, argues PHYSICAL – Hits, pushes, bites, kicks	**S**																				
	P																				
MATERIAL ORGANIZATION: Fails to organize, loses materials, can't find things	**S**																				
	P																				
TEMPORAL ORGANIZATION: Fails to follow routines, doesn't understand routine and order	**S**																				
	P																				
DEPENDENCY: Requires multiple directions, assistance beyond other students	**S**																				
	P																				
CONSTANT MOTION: Out of seat, unable to work in group, Moves about, rocks, skips, runs	**S**																				
	P																				
SPOTLIGHT: Talks loudly, laughs, makes noises, intrudes on others, crawls on floor	**S**																				
	P																				

When writing results of a time sample observation in the FBA, it might look something like this:

> Missy was observed in Math class with Mrs. Mattos on February 7. The focus of this observation was to determine a rate of production or "on-task" behavior as sampled through twenty equal intervals in her sixth grade general education class. This observation may have included a variety of contexts (discussion, independent seatwork and transition).
>
> Missy's productive or on-task behavior rate was determined by the number of productive intervals divided by the total number of intervals, then multiplied by 100 (12 ÷ 20 X 100 = 60%). An "on-task" rate of 60% is significantly below the average rate of her peers and may indicate the need for intervention.
> During this observation, the teacher engaged in direct instruction for four minutes followed by seatwork for 10 minutes, followed by discussion for four minutes and then preparation to leave. Within this time sample period, Missy was verbally aggressive to a classmate twice and physically aggressive one time. The observer also recorded behaviors in the following categories: impulsive, distracted, disorganized, dependent, and excessively in motion. A further examination of Missy's learning and behavior problems in Math class is recommended.

So, let's test your observational skills. Click on this video to get a full measure of your abilities. http://www.youtube.com/watch?v=vJG698U2Mvo

How did you do?

You may want to take advantage of some observation training videos available from the Montana Autism Education Project.

Some observation techniques I find particularly useful are: _____

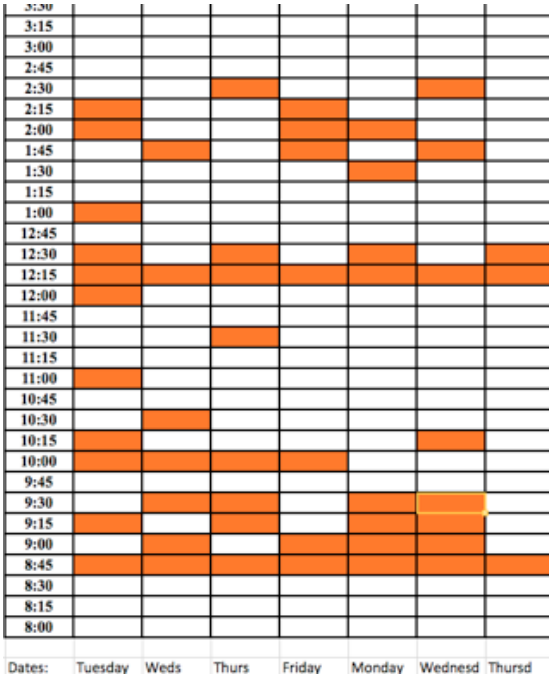
_____

_____

_____

8. Scatterplot

When conducting an FBA, it is extremely helpful to determine predictable times, places or events that are associated with problem behavior. To conduct this simple analysis, collect Incident Reports, Office Discipline Referrals, or other reports of problem behavior and record incidents on a scatterplot. In this example, you can see a *Scatterplot* of problem behavior where an occurrence of the problem behavior is documented with orange-filled cells on a spreadsheet.



From the layout of this graphic display, further analysis of typical days of the week and time of day can be made. In this case, problem behavior is highly predictable at 12:15 every day, and 12:30 every other day (e.g., possible lunch time issues). Problem behavior is also predictable at 8:45 a.m. every day (e.g., possible morning routine issues). Monday and Wednesday of week 2 seemed to be especially difficult. It might be advisable to collect more data in order to determine a more predictable pattern of days in the week.

A blank scatterplot can be found at

http://opi.mt.gov/groups/fbabip/weblog/6a265/Scatter_Plots.html

9. **Antecedent-Behavior-Consequence (ABC) Observation**

When behavior is closely related to what happens immediately before or after the student's response, an Antecedent-Behavior-Consequence observation is appropriate. An antecedent is also known as a "quick trigger" that immediately *precedes* a behavioral response. A consequence immediately *follows* a behavioral response. These may be easily recognized, or they may be often overlooked. A good observer will notice a variety of antecedents and consequences from other sources besides those involved in the direct influence of the behavior. For example, consider the following scenario:

- A teacher asks a student, "Turn to page 56 in your math book" (antecedent).
- The student throws the book on the floor (behavior)
- The teacher says, "Go to the Principal's office" (Consequence).
- A good observer will notice that other students are watching, laughing, or reaching out with a high-five. Those are also consequences that may influence the function of the student's behavior more heavily than the teacher's actions.

In an ABC observation, a student is identified and a class of behaviors noted. The observer writes behaviors as they occur and then lists all immediate antecedents and consequences that occurred before and after the behavior. See the ABC sample below:

Date	**Time**	**Antecedent**	**Behavior**	**Consequence**	**Possible Function**
2/7	9:40am	*Teacher announces it is time for reading*	*Tells inappropriate joke*	*Peers laugh, class is disrupted*	*Escape/Atten.*
2/7	9:42am	*Teacher says that every student will read aloud today*	*George says, "That's what you think"*	*Teacher ignores, continues to hand out books*	*Attention*
2/7	9:45am	*Teacher calls on George to read first*	*Throws book*	*Sent to office*	*Escape*

A summary of the ABC observation written in the FBA report includes some analysis and synthesis of behaviors to function, and might look something like this:

> George was observed in his reading class on February 7. Behaviors of concern for this observation were a variety of disruptions (e.g., humming loudly, telling inappropriate jokes, putting head on desk, refusal to participate, and throwing books). The antecedent for these behaviors was usually an instructional demand or prompt from the teacher. Notable consequences ranged from gaining peer attention, being ignored by teacher, and being sent to the office. The most frequent possible function(s) were escape and attention.

ABC observations are valuable tools to use when direct observations are not possible to employ throughout the student's day. Teachers can write the behaviors, antecedents and consequences and time of day, and then go back and fill in date and perceived function later.

A blank ABC observation form is provided on the following page.

ABC Observation Form

Date	Time	Antecedent	Behavior	Consequence	Possible Function

10. Functional Assessment Observation Form

There are times it makes sense to collect very specific data from the full school day, in all settings/environments, across all teachers, and in all activities. Some recommendations made by experts suggest that an FBA team have at least 10 days of solid data before making decisions.

In their landmark book, *Functional Assessment and Program Development for Problem Behavior: A Practical Handbook,* Robert O'Neill and colleagues (1998) proposed a tool called the Functional Assessment Observation Form. This daily log collects data on specific behaviors, and identifies predictable antecedents while proposing possible functions for behavior. The form uses team-identified codes but also allows for new/other behaviors and possible functions to be recorded. For example, see the form on the following page. The example is designed for a child whose problem behavior is physical aggression and throwing objects, and has three numbered options for additional problem behaviors to be recorded. It has five team-identified predictors and room for four others.

The benefit of using this form is that teams can analyze days, times, behaviors, predictors, and possible functions according to codes and can determine rates of each type of behavior based on individual predictors, whether or not the imposed consequence worked and rates of staff perceived functions for each behavior. This form is particularly helpful when there are multiple behaviors, multiple predictors (antecedents), and more than one possible function.

Name:

Functional Assessment Observation Form

Starting Date: Ending Date:

	Behaviors					Predictors									Perceived Functions: Get/Obtain				Perceived Functions: Escape/Avoid					Actual Cons.		
Date/Time	Phys. Aggression	Thows objects	1)	2)	3)	Demand/Request	Difficult Task	Transitions	Interruption	Inattention by adult	a)	b)	c)	d)	Attention	Desired Item/Activity	Self Stimulation	A)	Demand/Request	Undesired Activity	Person	B)	OTHER, Don't Know	Intended	Unintended	Staff Initials

Define Behaviors: 1)
2)
3)

Define Predictors: a)
b)
c)
d)

Define Perceived Functions: A)
B)

Define Intended Consequences:

Define Unintended Consequences:

Adapted from O'Neill, Horner, Albin, Storey, & Sprague (1998).

11. Reinforcer identification – conduct reinforcer inventories

One of the most overlooked components of an FBA is the reinforcer effectiveness and motivational domain. In order to develop effective interventions, an FBA team must understand what motivates the student and what reinforcers the student prefers.

There are some simple ways to conduct a reinforcer survey. The first and most obvious way to conduct a reinforcer survey is to ask the student. As in the student interview, sometimes the student doesn't know, can't say, or is not going to provide adults with an appropriate response. In such an instance, a reinforcer survey like the one on the following page may be administered. If a student is unable to complete the form, have an adult complete it on their behalf.

Another option is to use a "forced choice survey." In this case, you limit the reinforcers to six tangible items that you can hold in front of the student for 5-10 seconds in order to see which one they choose. Record all responses, and when you've presented all the items, rank order the items based on your completed assessment. This form is attached on the two following pages after the school-based reinforcer survey.

There are other, more complicated types of reinforcer assessments. You can search for these online. The main thing to remember is that effort to do the right thing or what teachers desire is often not what motivates a child. Motivation and reinforcement play a big role in designing effective interventions.

Checklist of School Reinforcers

Student: _____ Teacher: _____ Date: _____

Instructions: Circle the reinforcers that are most effective in the classroom with this student.

MATERIAL REINFORCERS

- Points
- Tokens (including stickers and stars)
- Food
  - pretzels
  - popcorn
  - candy
  - cookies
  - soft drinks
  - fruit
  - marshmallows
  - crackers
  - chips
  - juices
  - raisins
  - cake
  - ice cream
  - other preferred foods
- Badges, pins, ribbons
- Books
- Cards (letter, flash, picture)
- Magazines
- Puzzles
- Toys
  - kaleidoscope
  - flashlight
  - playground equipment
  - balloons
  - pushing/pop toys
  - commercial games
  - marbles
  - jacks
  - plastic toys (animal, people)
  - yo-yo
  - modelling clay
  - household items (pots, coffee cans, boxes, plastic jugs)
  - twirlers or fans
  - bean bags
  - sand pictures
  - toy musical instruments
  - whistles
  - dolls
  - make-up kits
  - stuffed animals or furry toys
  - cars, trains, trucks
  - construction toys
  - beads
  - putty toys
- Computer games
- Radio
- Stereo/record player
- Tape recorder
- TV
- Filmstrips/movies
- Viewmaster
- Photo albums
- Class pictures
- Maps
- Globes
- Vibrator/massager
- Golf/tennis items
- Calendars
- Paints and related art equipment
- Money for classroom bank and store
- Subject-matter accessories

ACTIVITY REINFORCERS

- Deliver messages/run errands in building
- Custodian helper
- Teacher helper
- Take specific equipment to recess
- Free-time, student-selected activity
- Work with older students in building
- Help in lunchroom
- Water classroom plants
- Feed classroom animals
- Sharpen pencils
- Visit principal or other building staff
- Any classroom clean-up activity
- Recess
- Operate classroom equipment
- Visit other classes
- Distribute and collect classroom materials
- Take part in a school play or assembly
- Help other students
- Mainstreamed activity classes
- Display student work
- Free time with no contingencies
- Self-graphing
- Climbing and locomotor activities
- Typing
- Read a book or magazine
- Walk to a designated community location
- Field trips
- Select location for field trip
- Turn lights on/off
- Decorate own bulletin board
- Read a wall map
- Read subject matter of interest
- Engage in self-stimulatory activity
- Select reinforcers
- Plan daily schedules
- Puppet show participation
- Musical chairs game
- Make material reinforcers
- Cook edible reinforcers
- Organize eating area (setting table, getting juice from fridge)
- Show and Tell
- Listen to music
- Bounce on bounceboard
- Parties
- Skating
- Watch filmstrips/movies
- Listen to tapes, records
- Play musical instruments
- Play a game with adults or peers

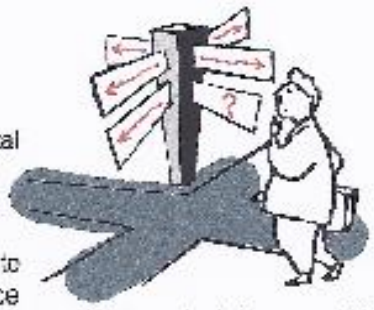
SOCIAL REINFORCERS

- Verbal praise (specific to student)
- Smiles
- Laughter
- Tickling
- Winks
- Head nods
- Approval signs (OK gesture)
- Any positive peer/adult activities (social)
- Any positive interactions with adults
- "Goof off" periods
- Being responsible for other students
- Attention when talking
- Hugs, handshakes
- Physical contact (pat on back or shoulder, quick squeezes, touching arm)
- Wrestling
- Parties, recess, free time
- Special seating privileges
- Helper privileges
- Sitting in bean bag chair with peers

From Richard L. Simpson and Madelyn Regan, *Management of Autistic Behavior* (Austin, TX: Pro-Ed, 1988). Exhibit 4–3, page 4:6. Reproduced with permission from Pro-Ed, Inc.

6.

Forced-Choice Reinforcer Assessment: Guidelines



The teacher of a child with severe or profound developmental disabilities may want to motivate the student by rewarding his or her work performance and effort with classroom items, events, or activities that the child likes. Because of communication deficits, though, the student may not be able to make his or her preferences clearly known. The forced-choice reinforcer assessment technique allows the teacher to discover what potential reinforcers a child actually prefers and even permits the instructor to rank those reinforcers in the order of apparent student preference.

Below are guidelines for completing a 'forced-choice' reinforcer assessment (Berg, Wacker, & Steege, 1995).

1. **Collect information about the child's preferences.** Use information collected from interviews with the student's teaching staff and care-givers–as well as results of direct observations of the student–to create a list of reinforcers that are likely to motivate the child. Possible choices might include food items, social interactions with specific people, access to toys, and preferred activities (e.g., computer time). NOTE: Reinforcers are best when they are feasible, easy to supply, and help to advance the child's educational goals.

2. **Prepare for the assessment survey.** Narrow your reinforcer list to no more than 6 items or activities that can easily be obtained and given out in a classroom setting. Be sure to have those items on hand for the reinforcer assessment. Choose a time to conduct the assessment when there are no distractions in the room and you can give the student your complete attention. If necessary, use two or more sessions to complete the reinforcer assessment.

3. **Allow the student to sample reinforcers.** At the start of your assessment, give the child a *brief* opportunity to sample each reinforcer.

   - If the reinforcer is a *food item*, the child is given a tiny taste of the food or beverage.
   - If the reinforcer is an *activity* such as working on the computer, the child has 5-10 seconds to engage in the activity.
   - If the reinforcer is *access to a preferred object* (e.g., stuffed toy), the student has 5-10 seconds of access to the object.

4. **Conduct a 'forced-choice' assessment.** You are ready now to move to the next phase of the reinforcer assessment. Randomly pick 2 of the 6 choice-items, present them together in front of the student and allow the child 5-10 seconds to select one of the two. (Depending on what is most convenient, the examiner can hold choice-items in his or her hand, or display them on a table.) NOTE: the child may signal 'choice' by touching or picking up an item, looking fixedly at the item, pointing to the item, or engaging in any other behavior that he or she typically uses

to indicate preference. If the student selects an item within the time limit, record the child's choice. If the child fails to choose before the time expires, remove the two reinforcer choices and record that the child did not choose an item.

Continue to present sets of two reinforcer choices to the child until all choices have been paired with one another. Record the child's preferences.

5. **Rank-order student preferences.** Analyze the student's choices to determine the *most preferred* and *least preferred* items. You can compute a 'preference percentage' for any item by: (a) calculating the number of times that the child *selected* item X, (b) dividing that figure by the total number of pairs in which item X appeared, and (c) multiplying the answer by 100 (See Figure 1).

> ***Figure 1: Formula to calculate 'preference percentage':***
> Number of times item X selected / total number of choice pairs that include item X = (____/____) X 100 = ____ %

Rank-order the child's 'preference percentages' to determine which items the student most preferred and those which the student least preferred.

6. **Verify that student choices are true reinforcers (OPTIONAL).** Once you have assessed the child's reinforcer preferences (Steps 1-5), you may choose simply to use the 2 or 3 most preferred reinforcers as classroom rewards to increase the student's work effort, improve behaviors, etc. Or you may want to *test* the reinforcers first in a real-world setting to see if they are actually potent motivators:

   - Have the child start a task that you would like to motivate them to complete (e.g., matching letters to corresponding picture cues as a pre-reading task). Using a *highly preferred* reinforcer, give the child brief rewards at several points during a 10-minute period and measure the child's attention to task and work completion. Then repeat the process, this time rewarding the child with the *least-preferred* reinforcer from your list.

   - Over several days, repeat the reinforcer trials. (Vary your use of reinforcers, though, so that sometimes you start with the least-preferred reinforcer and sometimes you start with the most-preferred reinforcer.) Then analyze the data that you collected on student engagement during these trials.

   - If the student shows notable improvements on your goal behavior (e.g., increased attention, more work completion) when completing the task for the *preferred* reinforcer but does not show the same gains with the *non-preferred* reinforcer, you can be reasonably sure that you have found a motivating reward that you can use as part of your instructional or behavioral program.

Reference:

Berg, W. K., Wacker, D. P., & Steege, M.W. (1995). Best practices in assessment with persons who have severe or profound handicaps. In A. Thomas & J.Grimes (Eds.), *Best practices in school psychology III* (3rd ed., pp.805-816). Washington, DC: National Association of School Psychologists.

12. **Ecological Context**

Behaviors happen for a reason – that is the *function of the behavior*. Behavior interacts with the environment. Certain behaviors with the same behavioral definition may have different functions in various contexts. Including the 'ecological context' in an FBA is extremely important for teams to identify strategies that might address prevention, teaching new skills, and reinforcing desirable behavior.

What variables in the environment should be included? Well, taking a wide sweep of a classroom at a fast glance, the following environmental contexts may apply:

a. the classroom, decorations, desks/chairs, room arrangement, spatial orientation
b. schedule, order of tasks, difficulty/ease of tasks, preference for tasks, transitions
c. curricular and instructional materials, age appropriate tasks, modifications and/or accommodations, method of instruction (class-wide lecture, small group, etc.)
d. opportunities for breaks, schedules of reinforcement, token or class reward systems
e. rules that govern behavior (class rules and hidden curriculum), other stimulus controls
f. teacher, paraprofessional, volunteers, administrators, related services personnel
g. method of adult request-making, and ability to communicate positively with students
h. students, friend/foe behavior history, novelty of relationships, bus or hallway friends
i. amount of misbehavior, distractions, disruptions caused/allowed by other students

Not every FBA report will need to mention all these variables, because the FBA is highly individualized to one single student. However, these variables are important to consider for their importance or role in the context of problem behavior. Knowing what environmental contexts are present when behavior occurs will help an FBA team develop a more effective intervention.

13. **Develop a hypothesis statement**

A functional hypothesis statement contains three things: (a) setting events and antecedents that usually are associated with the behavior, (b) the problem behavior, and (c) the consequences that have maintained or strengthened the behavior over time, otherwise known as function. There are only four recognized functions in behaviorism. They are: (a) positive socially mediated reinforcement or *attention*, (b) positive reinforcement or *tangible*, (c) negative reinforcement or *escape*/*avoidance*, and (d) automatic, non-socially mediated reinforcement or *sensory regulation or stimulation*. One other negative automatic function exists called *pain attenuation* and this may occur to override existing painful conditions (for example, consider the behavioral response of rubbing your temples if you have a headache).

Most hypothesis statements are written in the following format: "Especially when… (list antecedent, setting events), [Student's name] will… (list problem behavior), in order to (list maintaining consequence or suspected function)."

Here, you are provided an example:

> **Hypothesis Statement:** *Especially when* staff members make a self-care request, *Mary will* begin banging objects and escalate to physical aggression, *in order to* avoid the non-preferred task.
>
> **Antecedent or Trigger:** Staff request to perform a self-care skill (brush hair, shower, etc.)
> **Child's name:** Mary
> **Target behavior:** Banging objects and then escalating to physical aggression with staff
> **Maintaining Consequences:** She avoids the non-preferred task.

Did you notice the order of terms in the above statement? *Especially when… Mary will… in order to…*

Here is a second example:

> **Hypothesis Statement:** *Especially when* he desires to confirm his academic or social thoughts and actions (during direct instruction), *Duane will* interrupt the teacher, *in order to* gain attention.
>
> **Antecedent or Trigger:** Desire to confirm thoughts and actions (academic and social)
> **Child's name:** Duane
> **Target behavior:** Interrupting teacher during direct instruction
> **Maintaining Consequences:** Teacher provides attention and peers also take notice

Write a sample hypothesis statement for one of your students:

Antecedent or Setting Event:_____

Child's name:_____

Target Behavior:_____

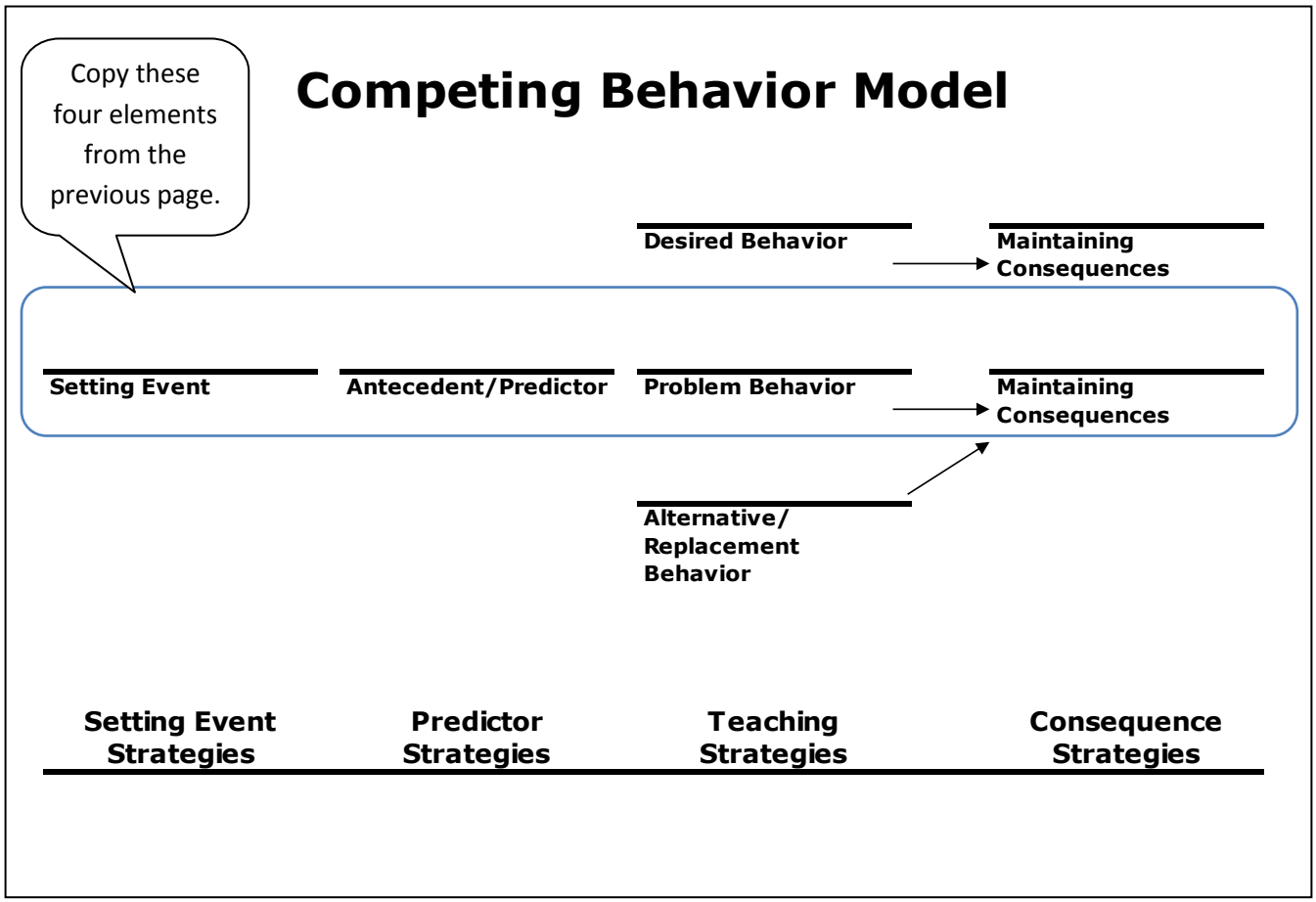
Maintaining Consequences:_____

Especially when _____ *[Student name]* _____ *will*_____ _____ *in order to* _____.

Another way to write your hypothesis statement is to fill in the blanks on a competing behavior chart. Start here by filling in this table:

Setting Event	Antecedent	Problem Behavior	Maintaining Consequences

Now, develop the hypothesis statement and the components you have identified into a Competing Behavior Model Chart.



The Competing Behavior Model was introduced by O'Neill, Horner, Albin, Sprague, Storey, and Newton in their book *Functional Assessment and Program Development for Problem Behavior: A Practical Handbook* (1997). The first step is to place the four term contingency (setting event, antecedent, behavior, maintaining consequence or function) in the middle row. Next, the FBA Team should select an "alternative replacement behavior." This will be a behavior that meets the same function as the original problem behavior but does so in a way that requires a behavioral action and also provides positive experiences. Some examples of alternative replacement behaviors might include the following:

- a child who bites others might be provided with a chew toy

- a student who blurts out answers might be taught to raise his hand
- a boy who fidgets and moves excessively might be asked to run errands
- a girl who refuses difficult tasks might be taught to ask for a break

While these suggested alternative replacement behaviors are not perfect, they prevent the student from engaging in problem behaviors and encourage the student to develop new skills that are more acceptable. Eventually, an IEP team would want to reduce these alternative replacement behaviors and move toward more age-appropriate, normal behavior that could then be reinforced by natural consequences.

At times, it is very helpful to use *incompatible behaviors* to replace problem behavior. In this case, the FBA team might consider actions that are impossible to be performed at the same time the problem behavior is performed. See the examples in the table below:

Problem Behavior	Incompatible Replacement Behavior
Off-Task	On-Task
Screaming	Singing
Spitting	Swallowing
Running Away	Staying near Adult

Once the 'alternative replacement behavior' has been identified, the FBA team should consider what "normal" behavior looks like. For example, a team might ask, "Do most children ask for breaks every five minutes?" If not, then the FBA Team should identify a 'desired behavior' and 'maintaining consequence' that is more normalized. These ideas should be written at the top of the Competing Behavior Model so that the team can consider them at a later date. The desired behavior can also be considered the most appropriate social behavior. This should be the target of the behavior improvement plan.

When the Competing Behavior Model is filled in, the team should develop strategies to address each of the four parts of the contingency. Consider three components of developing positive interventions: (a) Prevent, (b) Teach, and (c) Reinforce (Dunlap, Iovanone, Kincaid, Wilson, Christiansen & English, 2009). To begin, the team determines what it might want to *teach* by agreeing on an acceptable 'alternative replacement behavior' and listing the teaching strategies for that replacement behavior. Next, the team focuses on preventing problem behavior by addressing some of those setting events and antecedents that have often predicted the occurrence of problem behavior. Consider the 'ecological context' from section 13. Finally, the team must identify purposeful consequences that can be imposed to (a) reduce problem behavior and (b) increase desirable behavior.

A sample of a completed Competing Behavior Model with strategies is on the following page. As you can see from the example, the FBA team brainstormed many different strategies to address each of the four components of the competing behavior contingency. In order to be effective, the team will implement only those strategies predicted to have the most immediate impact on problem behavior.

Behavior Plan Summary

		use work time wisely; complete tasks **Desired Behavior**	complete assignments/classwork **Maintaining Consequences**
lack of sleep; fear of storms/trains; allergies; fear of making mistakes; difficulty copying from board **Setting Event**	instruction/demand given **Antecedent/Predictor**	off-task; not following through with task **Problem Behavior**	escapes activities **Maintaining Consequences**
		request break/get "out" of activity **Alternative/ Replacement**	

Setting Event Strategies	**Predictor Strategies**	**Teaching Strategies**	**Consequence Strategies**	
If Johnny's parents feel he is healthy enough to come to school, he will be in class learning	Begin the day with 5 tokens with which he may request a break. Ms. Space will give a list of break choices.	A visual/written reminder of the break process in his notebook	Provide ongoing social praise--pair with other reinforcement	If Johnny is disrespectful to a teacher, he will have the same consequences as other students (quiet room, suspension, call parents, etc.)
If changes or new events in the schedule occur, teachers/parents will provide information about what is going to happen ahead of time	A token may be used to take a 5 minute break. When 5 minutes is over, Johnny will return to the activity he left	If attention to task waivers, remind "first _____, then _____"	If 5 tokens are not used, can exchange next day for 1 less story problem	If angry/disrespectful behavior takes place, complete Solve-It or other problem solving activity
Initial expectations will be presented to Johnny in written or visual form (i.e. Complete 10 math problems)	Initial expectations may be paired with reinforcement (i.e. Complete 10 math problems, then _____)	Make expectations clear, possibly visual.	After editing 5 DOL sentences from B list, may complete one from A list to lead class	If work is not completed at school, must be taken home and completed
If expectations are unclear, review with Johnny (I.e. What does "respect" mean?) Let him talk through what he can do to be respectful.	Johnny may have opportunities to "teach" other kids (preschool) social rules	For math story problems, provide a copy and guide Johnny to highlight important parts; fade assistance as he learns the skill	During afternoon study time, if work is complete, get a choice of highly reinforcing activities	If Johnny does not return to class activity after 5 minute break (using 1 token), he must remain after school or miss recess to complete assigned activity

14. **Analogue Experimentation**

A behavior improvement plan should address socially significant behaviors and all behavior interventions should be planned with the utmost respect for dignity, humane treatment, and rights of the individual.

Analogue experimentation is a process by which we implement a new function-based intervention and watch it very closely to determine (a) if the intervention ensures safety, (b) effectively reduces occurrences of problem behavior, (c) effectively increases socially appropriate behavior, and (d) is both feasible and reliable. This step in the FBA process has also been referred to as Functional Analysis (FA), and Experimental Analysis of Behavior.

This experimental phase is the most critical step in the FBA process. It must be done carefully and with fidelity. All FBA team members must be on board and committed to the intervention with a sense of group efficacy. Also, the FBA team leader must prepare and plan for the intervention with a carefully written procedure that is both precise and complete.

There are three seemingly simple steps in this process: (a) write/prepare the intervention, (b) try the intervention, and (c) review the results or data.

Depending on the intensity and nature of the intervention, this phase might last just part of one day to two weeks. In some cases where previously known reinforcers are removed, an intervention called *extinction,* the FBA team might prepare themselves to see an increase in problem behavior also known as an extinction burst. Other similar phenomena may also increase the likelihood of problem behavior or escalations, and so precautions must be planned to ensure safety during this phase of intervention. FBA teams should familiarize themselves with policies and regulations in the use of seclusion, restraint and other aversive procedures.

(see http://opi.mt.gov/pdf/speced/Guides/AdvTreatGuide.pdf)

Conclusion

An FBA and BIP should be considered a process rather than a product. Many of the documents completed for this training or for the purpose of conducting an FBA are not necessary to be included in the final document that is placed in the student's cumulative folder. As mentioned earlier, IDEA does not require any specific elements in the process of conducting an FBA. However, there are certain elements that should be identified: (a) antecedents or predictors of the problem behavior, (b) a definition of the problem behavior, and (c) hypothesized function. These elements are all part of the hypothesis statement. "Especially when… (list antecedent, setting events), [Student's name] will… (list problem behavior), in order to (list maintaining consequence or suspected function)."

Individualization is highly important in determining behavioral function. In fact, certain behaviors with the same behavioral definition may have different functions in various contexts. Therefore, it is extremely important that the ecological context be considered at all times. Finally, an FBA should address socially significant behaviors and interventions should be planned with the utmost respect for dignity, humane treatment, and rights of the individual.

Because the FBA is a team process, there are many benefits in completing the steps. First, the FBA process requires a group of concerned educators, administrators, staff, related service providers, and parents to come together and agree on a plan to address problem behavior. This involves working knowledge of clearly defined behaviors, antecedents, setting events, and consequences. Team efforts also require deliberate action to prevent future problems while teaching appropriate behaviors and reinforcing desirable behavior. The biggest beneficiary of the FBA process is the student, who learns new adaptive skills and enjoys successful interactions in school and beyond.

List of References

Dunlap, G., Iovannone, R., Kincaid, D., Wilson, K., Christiansen, K., Strain, P. & English, C. (2010). *Prevent-Teach-Reinforce: The school-based model of individualized positive behavior support*. Baltimore, MD: Brookes.

Durand, V.M., & Crimmins, D.B. (1992). *The Motivation Assessment Scale administration guide*. Topeka, KS:Monaco & Associates.

Gable, R. A., Quinn, M. M., Rutherford, R. B., Howell, K. W., & Hoffman, C. C. (1998). Addressing student problem behavior part 2: Conducting a functional behavior assessment (3rd ed.). Washington, DC: Center for Effective Collaboration and Practice, American Institutes for Research. Retrieved at http://cecp.air.org/fba/problembehavior2/Functional%20Analysis.PDF

IDEA Regulations, 34 C.F.R. § 300.530(f)(1)(i). (2006).

Iwata, B. A., DeLeon, I. G., & Roscoe, E. G. (2013). Reliability and validity of the functional analysis screening tool. *Journal of Applied Behavior Analysis*, *46*(1), 271-284.

Montana Office of Public Instruction. (2001). Aversive treatment procedures: A special educator's guide to the use of aversive treatment procedures. Helena, MT. Retrieved from http://opi.mt.gov/pdf/speced/Guides/AdvTreatGuide.pdf

O'Neill, R., Horner, R. H., Albin, R. W., Sprague, J. R., Storey, K., & Newton, J. S. (1997). *Functional assessment for problem behaviors: A practical handbook* (2nd Ed.). Pacific Grove, CA: Brooks/Cole.

Positive Behavior Interventions and Support Network. (2002) Functional analysis screening tool (5th ed.). Retrieved from http://www.pbisnetwork.org/wp-content/uploads/2011/10/FAST-20021.pdf

Riley-Tillman, T. C., Kalberer, S. M., & Chafouleas, S. M. (2005). Selecting the right tool for the job: A review of behavior monitoring tools used to assess student response-to-intervention. *The California School Psychologist, 1,* 81-91.

Von Ravensberg, H. & Tobin, T. J. (2004). IDEA 2004 Final Regulations: The Reauthorized Functional Behavioral Assessment. Educational and Community Supports, College of Education, University of Oregon. Retrieved from the internet on October 25, 2008 at www.uoregon.edu/~hvr/docs/idea04fba.doc