

## Chapter 2

# The Basics of Functional Behavioral Assessment

### What You Need to Know

We introduced you to the four-phase concept in Chap. 1. The first phase, *Process*, is the working phase of writing a functional behavioral assessment (FBA). Before beginning, it is vital that you develop an understanding of the language and underlying principles that govern the development of an FBA.

In this chapter, our goal is not to give you an in-depth history of FBA. However, it seems to us that we would be remiss if we jumped straight into the FBA process without offering you an understanding of the theoretical fields from which this tool has emerged. We also felt that those of you working in the field of education should know the regulations that govern the use of FBA in public schools. This chapter might seem a bit heavy, perhaps even wordy. *Do not worry!* This is a practitioner's guide. After you wade through the concepts contained in this chapter, the book will take you step by step through the process of completing an FBA. But, first things first—let us begin.

### Strategy One: Understand the Basics

Over the years, we have read and studied different viewpoints on the ramifications involved in defining FBA. The Center for Effective Collaboration and Practice (CECP) considers FBA to be “a problem-solving process for addressing student problem behavior.” They go on to include that this process uses strategies and techniques that lead to understanding the purpose of an individual's behavior. (This is from the helpful CECP website at <http://cecp.air.org/fba/>. They are funded by the Office of Special Education Programs and several other government agencies.) Our cue is taken from this problem-solving process. As practitioners, we have come to define FBA as a multilayered method of determining the function or intent of a behavior. It is a systemized approach that allows the practitioner to answer the question, “What purpose does this behavior serve?” Within the context of supporting an

individual with behavioral challenges, the question typically focuses on the aberrant or interfering behavior.

## ***Functional Behavioral Assessment and Behaviorism***

Let us rewind the clock now. The FBA approach has a history with deep roots in the fields of learning and behavior. Behaviorism or behavioral psychology is the cornerstone to this vast field of theory, experiment, and application. Behaviorism asserts that behavior is learned. So, what is learned can essentially be unlearned and replaced with alternative behavior. Pioneering research in this field includes works by John B. Watson (1913), Ivan Pavlov (1927), Edward L. Thorndike (1911), and B. F. Skinner (1953).

You might remember from a child development class or a general psychology course the controversial “Little Albert” experiment by John B. Watson. In this study, Watson demonstrated the impact of conditioning on an 11-month-old boy. In brief, the child was presented with a white rat and then an iron rod was loudly clanged causing the child to cry. This process was repeated until the child began to cry when the white rat was presented without an accompanying noise. Subsequently, the boy cried when a white rabbit, a dog, and even fur were presented to him.

Now, what was Watson attempting to do? He was attempting to demonstrate that through the introduction of a stimulus, he could create a specific response. Although controversial, Watson seemed to have successfully “conditioned” the boy to express a fear response. Whenever the 11-month-old was presented with a furry animal or object, he cried. In this regard, Watson appeared to have successfully paired a stimulus (furry animal or object) with a response (crying).

In Watson’s day, the popular psychological perspective focused on internal urges. Through his experimental work, Watson was attempting to show that human behavior was not caused by internal drives. He was attempting to establish that environment impacted the formulation of behaviors. This environmental impact could be manipulated to then create a change in the individual. In the journal *Psychological Review*, Watson (1913) wrote:

Psychology as the behaviorist views it is a purely objective experimental branch of natural science. Its theoretical goal is the prediction and control of behavior. Introspection forms no essential part of its methods, nor is the scientific value of its data dependent upon the readiness with which they lend themselves to interpretation in terms of consciousness. The behaviorist, in his efforts to get a unitary scheme of animal response, recognizes no dividing line between man and brute. (p. 162)

Watson, known as the father of behaviorism, was not the only pioneer in the field. In the area of conditioning, Ivan Pavlov and B. F. Skinner are two key figures. You might remember that conditioning is pairing a stimulus with a response. This should sound somewhat familiar based on the preceding paragraphs. For a brief review and a quick reminder, we will cover the two most basic types of conditioning: classical and operant.

a. *Classical conditioning:*

Ivan Pavlov is probably best known for his conditioning dogs to salivate at the sound of a bell.

Step 1: A naturally occurring stimulus is paired with an unconditioned response.

<i>Food</i>	<i>Salivation</i>
<i>Unconditioned stimulus</i>	<i>Unconditioned response</i>

Step 2: A neutral stimulus is paired with the naturally occurring stimulus.

*Bell + Food = Salivation*

This is repeated until the neutral stimulus (bell) begins to prompt the unconditioned response (salivation) without the naturally occurring stimulus (food) present.

<i>Bell</i>	<i>Salivation</i>
<i>Conditioned stimulus</i>	<i>Conditioned response</i>

b. *Operant conditioning:*

B. F. Skinner differentiated between a natural response, such as salivation in the presence of food, and a learned response that takes place through both reinforcement and punishment. The respondent begins to link behavior and consequence through operant conditioning. If the respondent finds the consequence desirable or positive, he or she is more likely to repeat the behavior; however, if the respondent finds the consequence too negative or undesirable, he or she is less likely to repeat the behavior. Skinner identified these consequences as reinforcements and punishments. According to Skinner (1953), “The strengthening of behavior which results from reinforcement is appropriately called ‘conditioning’. In operant conditioning we ‘strengthen’ an operant in the sense of making a response more probable or, in actual fact, more frequent” (p. 42).

During the 1950s and the 1960s, many researchers began to move towards developing behavioral change experiments with humans. Numerous studies were completed and an ever-growing body of research was developed. Behavior modification moved to the forefront as experiments demonstrated the impact of consequence on the behavior of human respondents. In the late 1960s, Sidney Bijou began using strategies designed by Skinner. He focused his work in the area of child development. As a result, Bijou was one of several who formalized techniques, such as the antecedent-behavior-consequence (ABC) model. This model allows the observer to gather information to analyze how the antecedent (*what comes before*) and the consequent (*what comes after*) impact the behavior of a respondent. For example, Ms. Mealer passes out the math assignment (*antecedent*). Aaliyah begins to cry (*behavior*). Ms. Mealer comforts Aaliyah and helps her answer the first few questions (*consequence*). Of further impact, Bijou, along with Donald Baer, Todd Risley, James Sherman, and Montrose Wolf, founded the *Journal of Applied Behavior Analysis* in 1968.

Certainly, this brief summary is too limited to detail the many contributions that other researchers and scientists have made. Over the course of decades, the foundational importance of applying behavioral strategies was established. Behavioral modification emerged as a focus to work with the deterrent of unwanted behavior. Although there was great progress in the field, an actual format for conducting an experimental functional analysis was not introduced until 1982, when the influential article by Iwata, Dorsey, Slifer, Bauman, and Richman was published. Dixon et al. (2012) write, “The seminal 1982 paper by Iwata et al. offered an elegant yet powerful format for conducting experimental assessments of the function of maladaptive behaviors, and the three decades that have passed since its publication have seen the basic format used across a variety of other populations, settings, and behaviors.” The format outlined in the article is still in use today.

Currently, research and application can be found in the fields of experimental analysis of behavior and applied behavior analysis. Experimental analysis of behavior is the scientific approach to studying the relationship between behavior and environment. As the name implies, it is experimental in nature and takes place in a controlled environment. The Behavior Analyst Certification Board (BACB) defines behavior analysis as “both an applied science that develops methods of changing behavior and a profession that provides services to meet diverse behavioral needs. Briefly, professionals in applied behavior analysis engage in the specific and comprehensive use of principles of learning, including operant and respondent conditioning, in order to address behavioral needs of widely varying individuals in diverse settings” (<http://www.bacb.com/index.php?page=2>).

In the modern world, perhaps much of this thinking is now commonplace. The influential experiments of Pavlov, Watson, and Skinner are now part of our collective understanding. What was once new and untried is now scientific history. In this day and age, we might have grown accustomed to not just hearing about, but actually using an ABC chart to collect data. Although public schools are not filled with sanitized laboratories stocked with clanging rods and white rats, evidence of behavior change instruments is readily found. Classrooms are filled with reinforcers and consequences, such as sticker charts and changing a student’s color based on adherence to classroom rules. It seems then that the proverbial groundwork was substantially laid, and with this, FBA was introduced into the public educational system.

## ***Functional Behavioral Assessment and Education***

FBA became an official expectation of the public educational system in 1997 with Public Law 105-17. The Individuals with Disabilities Education Act Amendments of 1997 was the first time an FBA was mandated by the government. In 2004, this law was amended to form the Individuals with Disabilities Education Improvement Act (IDEA) 2004. IDEA 2004 is the current federal law upheld today; it went into effect on July 1, 2005.

So, what does all of this mean? When a student is identified as having a disability, IDEA 2004 gives them certain rights and protections (Wilmshurst and Brue 2010). A child with a disability has a right to a free appropriate public education (FAPE) and to be educated in the least restrictive environment (LRE). Students who exhibit challenging behaviors are more likely to have more restrictive placements in school when compared to peers (Becker et al. 2011; Bradley et al. 2008; Sanford et al. 2011; Smith et al. 2011). LRE is the legal guarantee that when a student's placement is considered, he or she will be educated with their nondisabled peers to the greatest degree that is appropriate. As part of federal law, a child with a disability has an individualized education program (IEP) that is developed annually. If a student with a disability is found to have behaviors that impede his or her learning or the learning of others, the IEP team must consider the development of a behavior intervention plan (BIP). The BIP needs to include positive behavior supports and interventions. Although IDEA 2004 does not mandate the format or requirements of a BIP, effective plans often include interventions, reinforcers, and consequences. One significant benefit to adding a BIP is that once it has been developed by an IEP team, it is a legal document. Furthermore, it mandates a measure of uniformity and consistency in which everyone who works with the student will respond to the identified target behavior.

Let us pause here for just a moment. Do not worry—if this is a lot of information to digest, we are going to cover this territory again. In fact, Chap. 13 is all about writing BIPs. For now, it is important to understand that if a student with a disability has interfering behaviors, the student's IEP team has the responsibility to consider the development of a BIP. Let us emphasize the word *consider*.

In order for a BIP to be effective, the team needs to understand the interventions and strategies necessary for behavior change. Each child is different, and strategies need to be individualized. Even successful strategies do not work with everyone. How does the IEP team know what to address in the BIP? The best way to determine this is to complete an FBA. As noted, we define an FBA as a multilayered method of determining the function or intent of a behavior. It is a systemized approach that allows the practitioner to answer the question, "What purpose does this behavior serve?"

Prior to the development of a BIP, the team should develop an FBA. Although the FBA provides crucial information to guide the BIP, it is not required by law in this instance. Let us explain it another way: When a student's behavior impedes his or her learning or the learning of others, the IEP team will consider developing a BIP. The FBA is important to the BIP, but the IEP team is not required by federal law to complete an FBA prior to the development and subsequent implementation of a BIP.

So, is an FBA ever mandated by federal law? According to IDEA 2004, an FBA is required when a student with an IEP has a disciplinary change of placement for behavior that is determined to be a manifestation of the student's disability. Note the following regarding these actions (you can read more at <http://idea.ed.gov>):

“1. *Consecutive suspensions past 10 days*: On the 11th day in a row, services must be provided and a manifestation determination is required. (Often a student will exceed 10 days awaiting expulsion proceedings.) If this misbehavior is determined to be a manifestation of his or her disability, an FBA is required; otherwise, it is not required following the manifestation determination.

2. *Cumulative suspensions past 10 days in a school year*: The principal or other responsible person is required to determine if this series of removals constitutes a pattern resulting in a de facto *change in placement* because: 10 days were exceeded, this misconduct is substantially similar to previous behaviors and other factors such as length of each removal, proximity of removals, and total amount of time of cumulative removals suggests this suspension is subjecting the student to a change in placement. If it is concluded that this suspension does constitute a pattern (that is, a de facto change in placement), then a manifestation determination must be conducted. If the behavior is a manifestation of the student's disability, then an FBA must be conducted unless the school district had conducted an FBA before the behavior that resulted in the “change of placement” had occurred. They must then implement a behavior intervention plan for the student. If a behavior intervention plan already has been developed, the team must then review the behavior intervention plan, and modify it, as necessary, to address the problematic behavior.”

In summary, IDEA 2004 mandates the implementation of an FBA when (1) a student has been suspended for past 10 consecutive days or past 10 cumulative days in a school year, and (2) the IEP team determines that the misbehavior in the past 10 consecutive days is a manifestation of the student's disability, or (3) the pattern of misconduct in the past 10 cumulative days constitutes a pattern that has essentially created a change of placement for the student. That resulting pattern is then determined to be a manifestation of the student's disability.

Although not legally required in every behavioral instance, IDEA 2004 does consider the use of an FBA as *best practice*. In education, *best practice* could be considered the consistent and effective implementation of successful methodologies. As a practitioner using protocols for behavior, using a protocol to fidelity is best practice. If a student is identified as having behaviors that might impede his or her learning or the learning of others, choosing to assess the student and implement effective behavioral change strategies is demonstrating best practices. Utilizing an FBA as an assessment tool in evaluation and developing a BIP would be deemed best practices.

Additionally, IDEA 2004 does not define the specific guidelines for the development of an FBA. Just as with the BIP, it is vague in the expectations for what an FBA will include. For this reason, the FBA may look very different from state to state, and even from district to district. Within the USA, states can differ significantly in the requirements regarding public education. Some states have chosen to impose greater regulations than those mandated by IDEA 2004 for their schools. In these states, they have outlined more specific requirements, content, and expectations of the FBA and BIP. Even in the area of legislation, each state chooses what they will require beyond the mandates found in IDEA 2004. An advantage to requiring or even legally mandating the use of an FBA or a BIP is that it helps to bring uniformity to the process in these regions. Without these requirements, the vagueness of IDEA 2004 language regarding the FBA and BIP leaves some areas open

for interpretation. State-specific information regarding FBA and BIP requirements should be accessible through each state's Department of Education. If you work for a school system and need to clarify if your area has paperwork or forms that are required for an FBA or a BIP, you can contact your school district's Special Education Department to inquire. We have included contact information for your state's Department of Education and Office of Special Education in Appendix A.

## Strategy Two: Understand the Scope

As noted, FBA is not something that is used in just an experimental manner. FBA is an ongoing tool that is promoted across settings and even required by federal law within the school system. To utilize this tool, it is important to understand the terminology associated with FBA. So, let us widen the scope from the roots of the FBA to the actual meaning of the letters: *F—B—A*.

**Function** The basic premise of creating an FBA is that through a series of methods, one can determine the relationship between two events: a behavior and a consequence (Iwata et al. 2000). When the impact is studied and understood, a functional relationship can be identified between the two. For instance, 5-year-old Alex is standing and screaming in front of the television. His father turns the channel to cartoons. Alex quits screaming. In this scenario, there is a functional relationship between Alex's screaming behavior and the television channel being changed to cartoons. In the future, when Alex wants to watch cartoons, it is likely that he will stand in front of the television and scream. If this scenario is repeated, the screaming behavior is reinforced. Thus, it becomes more likely that every time Alex wants to watch cartoons, he will display the screaming behavior.

However, the scenario could have been different. Alex wants to watch cartoons. He is screaming in front of the television. His father enters the room and attempts to get Alex to verbalize what he wants. It is unsuccessful and Alex continues to scream. At this point, Alex's father does not turn on the television. Instead, he sends Alex to his room. For Alex, the event is unsuccessful. His screaming behavior did not gain access to the cartoons he wanted to watch. Therefore, the screaming behavior would not have been reinforced. If this scenario is repeated, the screaming behavior would most likely decrease.

When determining the functional relationship between behavior and consequence, it is important to ascertain the impact the two have on each other. Understanding the degree of relationship allows the consequence to be manipulated successfully, thus allowing for impacting behavior change.

**Behavior** As noted, there is an underlying assumption in behaviorism that all behavior is learned. This is an important foundational understanding. Without it, there would be no reason to conduct an FBA. Furthermore, any behavior can be



assessed. In most instances, it is the interfering or negative behavior that seems to warrant assessment. One of the ways we have found to effectively teach behavior to practitioners is to start with our senses.

For a moment, listen carefully. What do you hear? Is it the sound of traffic? Is it a barking dog? Now, look up from this book. What do you see? Is it a computer screen? Is it your work desk? Think about what you have experienced over the past 2 h. What was that experience like? What is the world like around you? What do you see people doing? What do you hear people doing? How would you describe that to someone on the phone, or even in a different country?

- *What can be seen, heard, or experienced?* Behaviorism focuses on external factors. It is the way people act, behave, and react that can be studied, not what they think or feel. Therefore, the FBA approach focuses on external factors. Let us go back to Aaliyah. She is crying as the math assignment is handed out. A behavioral focus would be to observe the antecedent, behavior, and consequence. What is it that is seen? As for behavior, it is Aaliyah's crying. The tears are rolling down her cheeks. Let us look at Alex. Can we see screaming? No. Can we hear or experience screaming? Yes. Screaming is the behavior that Alex is exhibiting.
- *What cannot be seen, heard, or experienced?* The behavior to be addressed in the FBA will be seen, heard, or experienced. Although there are influences that might impact behavior that are internal, these influences are not behaviors. These influences might be a physical illness or a level of cognitive functioning. In an FBA, these will be considered, but not as behavior. In regard to behavior, the FBA will not focus on internal states, conditions, or moods. These cannot be seen. For those of you who might say, "Aha! We can see Aaliyah's mood. She is crying," let us clarify a little more. It is the *crying* you can see; it is not the mood. Perhaps if Aaliyah were to enter counseling, her therapist would identify some type of anxiety that is linked to math. Maybe Aaliyah would begin to process her feelings in regard to math and her crying episodes. It is possible this will be effective for Aaliyah. Yet, in compiling and quantifying data in the classroom, it is only what can be observed that is studied or gathered. And an FBA is a method to gather, compile, study, and subsequently alter behavior that can be seen.

**Assessment** FBA is an evaluative process with an intended outcome. The outcome is a hypothesis that reports the functional relationship between behavior and consequence. The implication of this hypothesis will allow for variables to be manipulated and supports to be implemented to maintain, increase, or decrease behavior (Jolivette et al. 2000). Within this process, there are also methods that will be used to gather, study, and compile the behavioral data. These include records reviews, direct observations, interviews, inventories, evaluations, and questionnaires. The compilation of this entire process manifests itself in the form of an FBA.



## Strategy Three: What to Do

Throughout this book, there will be guidance on how to write an FBA. Prior to delving into each area, we are going to sharpen your vocabulary by introducing you to or reminding you about the language used in the FBA approach. We also want to highlight areas that you will focus on during this process. To underscore some of these points, we are introducing them to you now:

1. *Respondent*—For the purposes of this section, let us consider the subject a *respondent*. For instance, Aaliyah or Alex would be the individual whose behavior has become problematic. In considering the respondent, there are numerous factors that impact behavior. Although we might not be attempting to change these factors, they will need to be considered nonetheless.
  - *Physiological*—Does the respondent have mental health issues, illness, genetic disorders, chronic conditions, other types of impairments or difficulties that are impacting the targeted behavior?
  - *Cultural*—Are there different social, responsive, behavioral, or influential differences between the respondent and the environment in which the targeted behavior is occurring?
  - *Pharmacological*—Is the respondent prescribed medication or treatment that is impacting the targeted behavior?
2. *Distant setting events*—This might be a new phrase to your vocabulary. If so, a distant setting event is an unexpected or unique situation that helps to increase or decrease the likelihood of a behavior. These events do not happen immediately before the behavior occurs (such as an antecedent). Rather, they are distant (such as the morning or evening before), or they can be ongoing. These events are sometimes called slow triggers, noted for their lack of immediacy when impacting behavior. Although slow or distant, these setting events still impact the behavioral responses of the respondent. Here are some of those events:
  - *Life events*—Has something significant happened that impacts the respondent's behavior, such as a death, traumatic event, etc.?
  - *Disruptive events*—Has something changed in the respondent's routine? Did the respondent miss the bus? Is it the respondent's birthday? Did the respondent's dog run away the night before?
  - *Physiological events*—Is the respondent sick? Is the respondent hurting or aching from an event, such as falling down?
3. *Context*—The context is the circumstances in which the behavior occurs.
  - *Where?* Setting—inside classroom, playground, office, cafeteria, hallway
  - *Who?* People present—peers, teachers, parents, administrative staff, paraprofessionals
  - *When?* Time of day—morning, afternoon, a specific time, a specific season
  - *What?* Events/occurrence factors—curriculum, actions (test being returned, transitioning, given a directive, etc.)

4. *Three-term contingency* (stimulus-response-stimulus)—Developed from the work of B. F. Skinner, the three-term contingency is also referred to as the ABCs of behavior. This model explains how the environment elicits behavior and how the consequences of behavior can affect the future occurrence of behavior.
5. *Antecedent*—This is the preceding stimulus. It is the event, experience, or circumstance that happened just before the behavior. (It will involve some or all of the variables listed under context.) For example, Aaliyah's teacher, Ms. Mealer, hands out the math assignment.
6. *Consequence*—This is the event, experience, or circumstance that happened right after the behavior (reinforcers or punishers). Aaliyah's teacher, Ms. Mealer, comforts Aaliyah and helps her answer the first few questions.
7. *Function*—The function of the behavior is what purpose it serves the respondent. We have seen this presented many different ways. Primarily, the function of the behavior has one of the following purposes:
  - *To gain/obtain*
  - *To avoid/escape*

We are going to expand on that in this book. We are going to further include the following purposes:

- *To access*
- *To communicate*

What is the respondent trying to access, avoid/escape, communicate, or gain/obtain?

## Strategy Four: Application

The following should be considered a brief overview of the steps that will be explained in detail throughout this book. One difficulty that you might find within the public school system is the lack of uniformity in procedural expectations regarding the FBA process. We realize that there will be many instances when you will be mandated to use a specific format or meet a procedural demand. In light of this, here are the steps that we feel best sum up this process.

*Who should conduct FBA?* There are two ways to conduct an FBA: a team approach or a specialist approach.

- The team approach is a collaborative effort among individuals working directly with the student or client.
- A specialist approach would be conducted by a professional within an area of specialization, such as a psychologist, school psychologist, behavior analyst, behavior specialist, or behavior counselor. This approach would still entail the involvement of those working directly with the student, but would be mostly limited to providing the specialist with collected data, history and information, and interviews.

*What is the systematic process for developing an FBA?*

***Process***

1. Identify target behaviors
2. Identify the context in which the behaviors occur
3. Collect data on the respondent (indirect and direct)

***Purpose***

4. Analyze the data
5. Develop a hypothesis (function)

*What happens after the FBA is completed?*

***Planning***

6. Implement an intervention plan (replacement behaviors, supports, interventions, and strategies)
7. Evaluate the progress of the respondent

***Prevention***

8. Create a climate, culture, and community where prevention is possible
9. Change plan as needed

**Strategy 5: What *Not* to Do**

When writing an FBA, here are a few things you do *not* want to do.

- *Skip a step*—Each step of the development is important. Missing a step will impact the reliability and validity of the FBA.
- *Forget the parental consent*—If you work in the school setting, the FBA is an evaluation. Therefore, to complete one, you need parental consent.
- *Ignore state and federal regulations*—Be sure to check with your state to determine the most current rules and regulations regarding implementing an FBA. You can access federal regulations for the IDEA 2004 at <http://idea.ed.gov/>.

- *Report inaccurate information*—Whenever observing a student or interviewing an involved individual, be sure to provide accurate and objective information.

## A Before-You-Proceed Checklist

1. Understand the parameters that define behavior.
2. Understand the applications for the words function, behavior, and assessment.
3. Know the definitions for the following words or phrases: distant setting events, context, antecedent, and consequence.
4. Recognize that the function of a behavior serves to access, avoid/escape, communicate, or gain/obtain.

### Author Takeaways

*Takeaway from Stephanie, the behavior specialist:*

It is important to remember that a recurring problematic behavior is rarely isolated to one instance or factor. Identifying the contextual elements that impact behavior is not only important but also necessary to impact behavioral change. This process takes more than just one observation. It requires the assessor to gather and examine data from many sources. Accuracy and effectiveness is built on objectivity and multiple sources of information. The FBA will be compromised when building on solitary sources and opinions only.

*Takeaway from Alan, the school psychologist:*

An FBA is a process—it is not something that you are going to learn right away and complete quickly. It takes a great deal of preparation to get ready for an FBA, and it takes strong insight and analytical skills in order to make sense of the data. When doing an FBA, take into consideration the time commitment needed for this process. School psychologists conducting FBAs must also consider their testing workload, meetings they have scheduled, and consultation commitments.

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