

Chapter 2

Assessment Case Studies from Adolescence to Adulthood

Abstract Applied Behavior Analysis (ABA) is the scientific study of human behavior. The principles and processes of ABA, including those involved in the assessment of behavior, can be used to gain insight and understanding into human behavior across the life span. In Chap. 1, behavior assessment principles, processes, and practices were explored through five case scenarios involving preschool- and school-age children in home, school, clinical, and community settings. In Chap. 2, the behavior assessment process is explored with adolescents and adults in a range of settings and contexts including high school and employment. In adolescence and adulthood, peer relationships, independence, empowerment, and self-sufficiency become increasingly important. The outcome of behavior assessment therefore is not only to design and implement a behavior-change program to reduce a specific problematic behavior, but also to create the conditions for the individual to be successfully independent in the context in which he or she is learning (e.g., high school, college, and university), living (e.g., apartment, house, and supportive living arrangement), or working (e.g., employment placement). For behavior analysts, this requires a dual focus on shorter-term outcomes such as the reduction of presenting problem behaviors and longer-term outcomes such as knowledge and skill acquisition. The environment–behavior relationship that is the hallmark of ABA allows behavior analysts to maintain an optimistic and hopeful view of the future for each individual they are supporting—recognizing that once environmental and experiential factors are identified through assessment, behavior change and improved outcomes are within reach for everyone, irrespective of age and stage of life.

Keywords Adolescence · Adulthood · Assessment · Behavior assessment · ABA · Life span · Peer relationships · Learning · Living · Environment–behavior relationship · Experiential factors

CASE: i-A6

“Emily’s worrying is keeping her awake.”

Setting: Home Age Group: Adolescence

LEARNING OBJECTIVE:

- Analyze graphic displays of behavior.

TASK LIST LINKS

- **Measurement**
 - (A-06) Measure percent of occurrence.
 - (A-10) Design, plot, and interpret data using equal-interval graphs
- **Fundamental Elements of Behavior Change**
 - (D-02) Use appropriate parameters and schedules of reinforcement.
- **Measurement**
 - (H-04) Evaluate changes in level, trend, and variability.
- **Assessment**
 - (I-02) Define environmental variables in observable and measurable terms.
 - (I-03) Design and implement individualized behavioral assessment procedures.
 - (I-05) Organize, analyze, and interpret observed data.

KEY TERMS

- **Acceptance and Commitment Therapy**
 - A third-wave approach to behavior and cognitive therapy that is a type of psychotherapy that focuses on mindfulness, acceptance of problems rather than “fixing” them, and commitment and value-based living (Hayes and Smith 2005).
- **Equal-Interval Graphs**
 - Types of graphs where the x-axis and y-axis are equally spaced compared to graphs, like standard celeration charts that use logarithmic units. Line graphs, bar graphs, and cumulative graphs are usually classified as this type of graph (Mayer et al. 2014).
- **Graphic displays of behavioral data:**
 - In applied behavior analysis, behavior is documented and analyzed through repeated measurement over time. The data gathered are then displayed visually on a graph. A graph is made up of a horizontal axis (the x-axis) that typically represents the passage of time and a vertical axis (the y-axis) that

typically represents a quantifiable dimension of the behavior under observation (Horner et al. 2005).

- **Skills Assessment**

- An assessment that examines an individual’s skills and deficits, allowing the creation of a program that will meet a person’s needs. These can be published skills assessments (i.e., VB-MAPP or ABLLS-R) or unpublished and based on observation. Often skills assessments are done biannually to track progress and determine the next skills to teach (BCOTB 2012).

Emily’s Worrying is Keeping Her Awake

Emily is an 11-year-old girl, treasured by her parents as what they often describe as a responsible, caring, and helpful daughter. She has always had many friends—the same core group since Kindergarten—and is always striving to be one of the near-the-top achievers in her grade six class at the local public school. She tends to spend her spare time either with friends in various athletic pursuits or just “hanging out,” participating in local school and community initiatives such as gathering nonperishable goods for the food bank, helping to house-build in the downtown core, and, of course, helping with her two red-headed, much younger siblings: Michael, aged five, and Sarah, a three-year-old preschooler.

Her parents also laughingly call her a “mother hen.” Since Emily’s mom met her current partner—Emily’s stepfather—she begged almost daily for what she called “babies.” She hounded the happy pair constantly for a baby brother and a baby sister, practiced in her play stroller and her play high chair with her life-sized dolls, and seemed like quite the nurturing little character. This care for others, in Emily’s preadolescence, seems to have broadened even beyond these two longed-for additions to the family, but also to issues around her: what she saw on television, encountered on the Internet, and overheard from others. She spoke with constant concern about medical epidemics, children without parents, and lack of access to food and water. As soon as she became old enough to volunteer—she did!

Emily’s parents continued to watch her with pride—and amazement—as she was out almost every evening and at least one day of the weekend, with her parents, with her friends, with her community organizations, and even with her grandparents! *If Emily were a cheerleader*, her mother thought *she would be the head cheerleader, twisting and turning in the air before landing with perfect precision. I can envision it perfectly!* Everything continued smoothly but busily for months on end, with a few seemingly minor adjustments in the family, like more fast food, eating on the run, and less time for previously enjoyed family leisure activities such as reading together, watching movies together, and concocting fancy meals from newly acquired cookbooks together.

However, the smooth pathway became bumpy over time—and even contained a few jarring speed bumps. Over the past few weeks, just a few months into her grade six school year, Emily’s parents began to notice some difficulties in Emily’s day-to-day functioning that quickly became quite concerning. Often, Emily would not return home until 8:00 or sometimes 9:00 PM, often accompanied by a leader from one of the well-trusted community organizations, leaving her little time to complete her school assignments and help pack her lunch for tomorrow. After she quickly brushed her teeth, washed her face, and put on her pajamas, she would collapse into bed.

Emily’s mother—who usually tucked her in at night on her way to her own bedroom—began to notice Emily repeatedly checking the digital clock glowing in the kitchen. At first, Emily’s mother did not think much of it. However, after watching this happened night after night, she was becoming concerned. Clearly, she was *thinking* about the day’s events and beginning to worry. At first, she would just ask her parents a few questions about an assignment that she completed at school. For example, several weeks ago, on a rare evening at home, as her parents were helping her two younger siblings get into their pajamas and into their beds, Emily interrupted the process and said, “Is it okay if I made a mistake in class today?”, “I am worried I won’t get a good mark when I write my test next week.” After some reassurance from her parents, Emily outwardly appeared to calm down and eventually went off to complete her before-bed routine, walking with a book in her hand.

Since that day, however, at least two—and even three—evenings each week, Emily will express worries to her parents about mistakes she feels she may have made on her coursework. Over the last week, Emily’s worries have ramped up, and her parents are becoming highly concerned, passing looks back and forth, and having private conversations about Emily late into the night. Emily began to persevere on her daily activities, asking her parents repeatedly if she is going to get in trouble at school for a possible mistake on an assignment or activity, or test. She is also lying awake, which is additionally concerning, given that she has always been in the habit of falling asleep after about 10 min of reading in bed, with her light on, the book tossed aside or open on her sleeping face. Quick bedroom checks have indicated that she is taking upward of two hours to fall asleep, which is impacting her parents’ sleep, as they are only sleeping consecutively for short periods of time so that they can check on Emily throughout the night. This has begun to impact both Emily and her parents’ quality and quantity of sleep, resulting in everyone being irritable, tired, and short with one another.

Just yesterday, Emily’s mother received a call at work from Emily’s teacher, saying that Emily fell asleep in class: not just once, but twice. Emily’s mother began to think about the impact on the entire family. Most nights, as her parents are helping Michael and Sara get ready for bed, or are trying to clean up from a busy day with a busy family, Emily frequently interrupts, wanting her parents to talk with her about the day’s events. This has angered Michael and Sara and has resulted in raised voices and clenched fists, and Emily’s parents were having to spend close to an hour each time working hard to de-escalate these situations—far beyond the bounds that they have parented within before.

Emily's parents are worried about Emily and have placed a call to Emily's teacher; however, her teacher did not report any concerns with Emily's behavior or academic achievement at school—other than the unexpected napping. Worried, confused, and unsure how to support Emily and restore the previous calm in their home, Emily's parents have received—and taken—the advice to contact a local behavior consultant. After an initial meeting with Emily's parents, who sat down at the agency, fraught with anxiety, the behavior consultant asked whether Emily would join a behavior-based anxiety group for adolescents that was running in the community. She explained that it is based on applied behavior analysis and **Acceptance and Commitment Therapy**. They enthusiastically agreed.

After the first number of sessions, the direct-support professionals observed and recorded Emily's specific behavior difficulties for a two-week period and then plotted the data collected on a graph. During a meeting, the behavior consultant explained the importance of **graphic displays of behavior data**, which she explained how to graph data, and why the level, trend, and variability of the data collected are important. In graphs like this, the values on the x-axis and y-axis are generally the same, she explained, and they are called **equal-interval graphs**.

Seeing the focus on the anxiety, the consultant also asked the direct-support professional what skills they felt Emily needed to learn and provided them a **skills assessment** to complete. They talked initially that the first skill they would start to collect data on was the number of times Emily responded to peers within 5 s. The direct-support professionals had stated that they had noticed that she often looked consumed in thought and thus took a while to answer or even notice when a peer asked a question. When asking what type of data collection should be used, they responded, "Percentage of occurrence" in unison. "That's right" said the consultant, "We need to ensure that we measure her responses based on the number of opportunities that her peers provide her." The consultant also spoke about schedules of reinforcement, and how daily events and responses together can influence the quantity and intensity in which certain behaviors occur. Together, they decided they would focus on increasing Emily's skills, hoping that everyone in her family might begin to get more rest and be better able to work as a team to resolve the challenges Emily and her family are facing.

The Response: Principles, Processes, Practices, and Reflections

Principles

(Q1) From the case above, identify two target behaviors. How would you define, in observable and measurable terms, the two behaviors you have selected? How would you rate each behavior on the following matrix (Table 2.1)?

(Q2) Explain why developing a hypothesis about the schedules of reinforcement surrounding the behaviors selected for observation is an important part of the assessment process (Fig. 2.1).

Table 2.1 Sample rating matrix (Pearson Education, 2007)

Behavior of interest	
Is the behavior dangerous to the individual or those around the individual?	<input type="checkbox"/> No <input type="checkbox"/> Slightly <input type="checkbox"/> Significantly
Has the behavior been occurring for a long time? Is it a recurring problem?	<input type="checkbox"/> No <input type="checkbox"/> Somewhat <input type="checkbox"/> Yes
Will changing the behavior effect the learners access to reinforcement in a beneficial manner (quantity, quality, access to, etc)?	<input type="checkbox"/> No <input type="checkbox"/> Possibly/slightly <input type="checkbox"/> Significantly
Has this behavior been targeted for change in the past by a behavior consultant and been unsuccessful?	<input type="checkbox"/> No <input type="checkbox"/> Between 1 and 3 times <input type="checkbox"/> More than 3 times

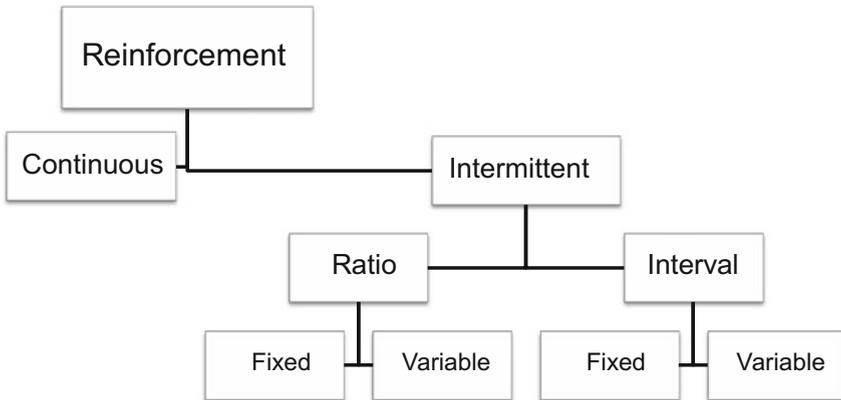
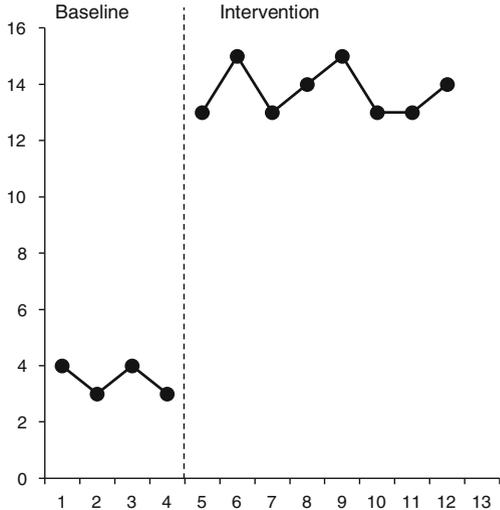
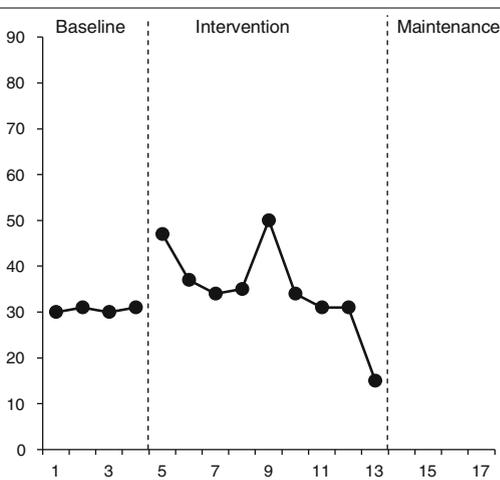


Fig. 2.1 Schedules of reinforcement (Pearson Education, 2007)

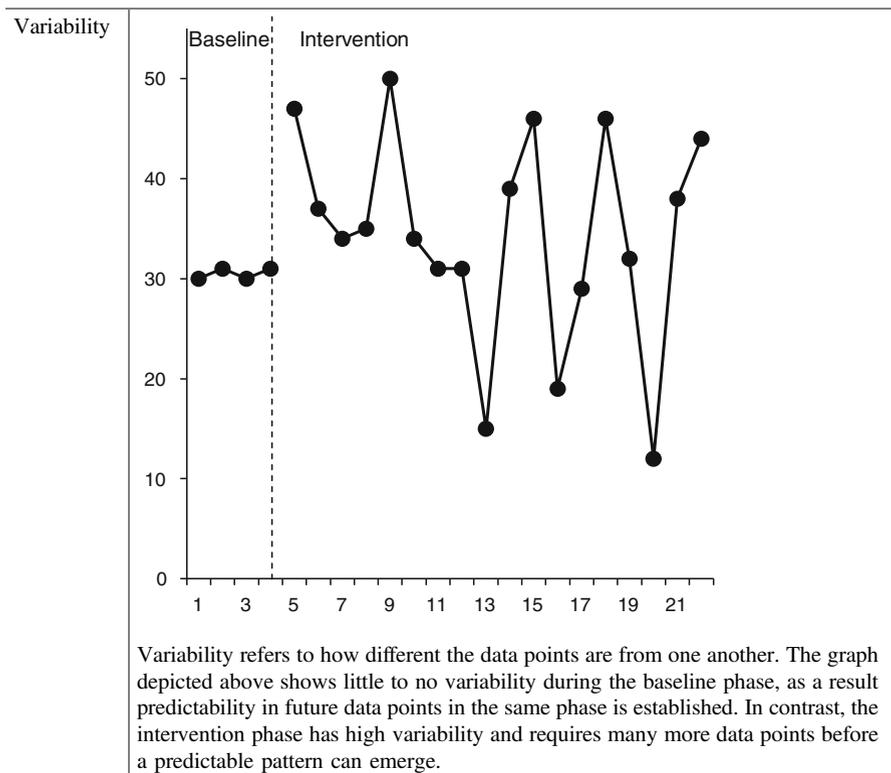
(Q3) Define how the three aspects of the visual analysis of a graph (level, trend, variability) are important to determine whether the behavior change is significant (Table 2.2).

Table 2.2 Graphs portraying the three aspects of visual analysis (Cooper et al. 2007)

<p>Level</p>	 <p>Changes in the level of data are determined by comparing the phases and data vertically. In the above example, there is a jump in the data from baseline to intervention in terms of the level.</p>
<p>Trend</p>	 <p>Trend is the direction or path the data are going in. There are three options, increasing, decreasing, or no trend. Data trends can also be stable or variable. The example above depicts no increasing trend in the baseline phase, followed by a decreasing trend in intervention phase, and no trend in the maintenance phase.</p>

(continued)

Table 2.2 (continued)



Processes

(Q4) Research published skills assessments that you could use with Emily. What other informal assessments could you use to assess her skills?

(Q5) Research Acceptance and Commitment Therapy—a popular treatment for anxiety, based on the third wave of behaviorism. How could this program be implemented with Emily? How is it similar/dissimilar to ABA?

Practices

(Q6) Using the attached graph in Fig. 2.2, what might you hypothesize regarding the behaviors depicted, per day? Please include a summary of the level, trend, and variability of the data.

(Q7) After the behavior consultant and Emily’s parents implement an intervention, would they start a new graph, or could it be noted on the graph that a change has occurred? If so how could this be done?

For more information see http://www.kipbs.org/new_kipbs/fsi/files/graphingtips.pdf

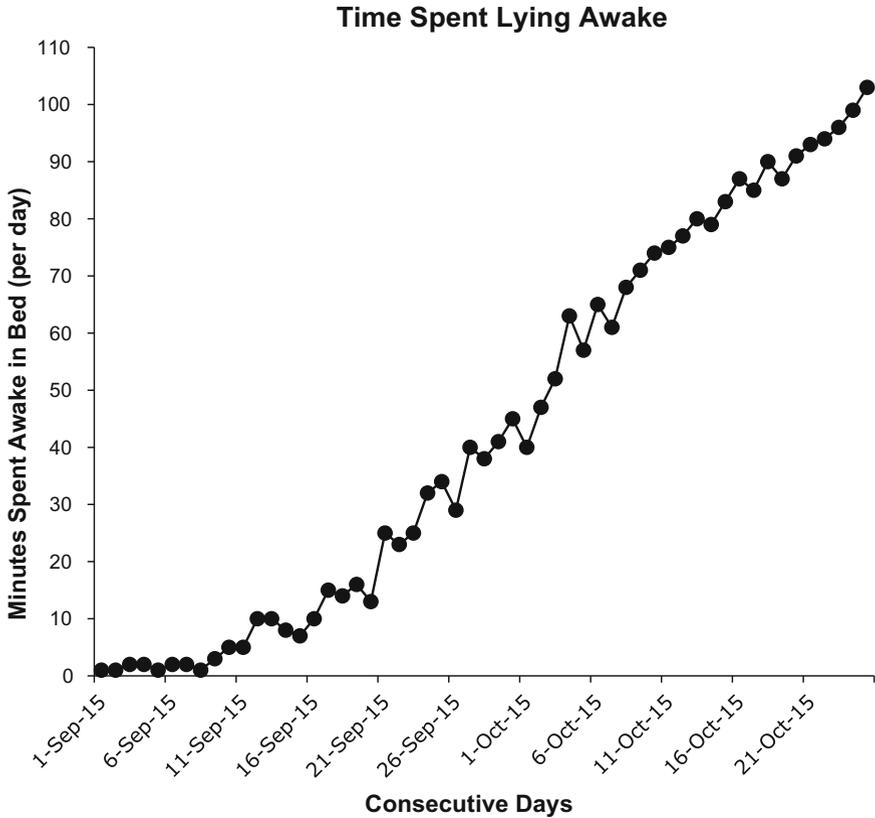


Fig. 2.2 The number of minutes Emily spent lying awake per day, in her bed, from September 1, 2015, to October 25, 2015

(Q8) Using Fig. 2.1 above, what current schedule of reinforcement is in place? Is this maintaining or decreasing the behavior? What would be your suggested schedules or reinforcement when you start the intervention and once the intervention is in place?

Reflections

(Q9) In addition to being the subject of the behavioral observations, how might you include Emily in the consent, decision-making, and data collection processes? Why is it important, from both an ethical and clinical perspective, for Emily to be included in the process (Reference Ethics Box 2.1, Behavior Analyst Certification Board, 2014)?

Ethics Box 2.1

Professional and Ethical Compliance Code for Behavior Analysts

- 2.0 Behavior Analysts' Responsibility to Clients.
Behavior analyst has a responsibility to operate in the best interest of clients. The term client as used here is broadly applicable to whomever behavior analysts provide services, whether an individual person (service recipient), a parent or guardian of a service recipient, an organizational representative, a public or private organization, a firm, or a corporation.
- 2.09 Treatment/Intervention Efficacy.
(c) In those instances where more than one scientifically supported treatment has been established, additional factors may be considered in selecting interventions, including, but not limited to, efficiency and cost-effectiveness, risks and side effects of the interventions, client preference, and practitioner experience and training.
- 4.02 Involving Clients in Planning and Consent.
Behavior analysts involve the client in the planning of and consent for behavior-change programs.

(Q10) In addition to the school personnel, who else might Emily's family ask about the behavioral changes they have seen in Emily? Why is it important to get a well-rounded depiction of Emily's behavior (Reference Ethics Box 2.2, Behavior Analyst Certification Board, 2014)?

Ethics Box 2.2

Professional and Ethical Compliance Code for Behavior Analysts

- 2.09 Treatment/Intervention Efficacy.
(a) Clients have the right to effective treatment (i.e., based on the research literature and adapted to the individual client). Behavior analysts always have the obligation to advocate for and educate the client about scientifically supported, most-effective treatment procedures. Effective treatment procedures have been validated as having both long-term and short-term benefits to clients and society.
- 3.01 Behavior-Analytic Assessment.
(a) Behavior analysts conduct current assessments prior to making recommendations or developing behavior-change programs. The type of assessment used is determined by the clients' needs and consent, environmental parameters, and other contextual variables. When behavior analysts are developing a behavior-reduction program, they must first conduct a functional assessment.

Additional Web Links

Kansas Institute for Positive Behavior Support—Data Collection and Measurement Resources:

<http://www.kipbs.org/kmhpbs/resources/data-collection-and-measurement.html>

The Assessment of Functional Living Skills

<https://www.partingtonbehavioranalysts.com/page/afls-74.html>

Acceptance and Commitment Therapy

<https://contextualscience.org/act>

CASE: i-A7

Sam’s Struggles with “Real-Life” Friends

Setting: Home/School Age Group: Adolescence

LEARNING OBJECTIVE:

- Create an event recording data collection process.

TASK LIST LINKS:

- **Measurement**
 - (A-01) Measure frequency (i.e., count).
 - (A-03) Measure duration.
 - (A-05) Measure interresponse time (IRT).
 - (A-12) Design and implement continuous measurement procedures (e.g., event recording).
 - (A-14) Design and implement choice measures.
- **Measurement**
 - (H-01) Select a measurement system to obtain representative data given the dimensions of the behavior and the logistics of observing and recording.
 - (H-02) Select a schedule of observation and recording periods.
- **Intervention**
 - (E-08) Use the matching law and recognize factors influencing choice.
 - (E-09) Arrange high-probability request sequences.
 - (E-11) Use pairing procedures to establish new conditioned reinforcers and punishers.

KEY TERMS

- **Event Recording**

- Event recording, also referred to as frequency recording, is a direct count of behaviors. This is often used to measure the number of times a specific target behavior occurs during a predetermined observation period (Ault and Bausch 2014, p. 53).

- **Gait**

- Gait refers to the pattern of limb movement observed in humans and animals. In humans, gait refers to the ways humans move, either naturally (e.g., walking, jogging, running) or specialized through training (e.g., dancing, martial arts, and military marching) (Schwartz et al. 2008).

- **Reliable**

- In applied behavior analysis, reliability of measurement refers to the consistency of measurement over time, or the extent to which repeated measurement of the same target behavior result in similar values (Horner et al. 2005).

- **Social Skills**

- Social skills refer to any skills, verbal and nonverbal, that involve interacting or communicating with others. Examples of social skills include interpersonal skills such as sharing and turn-taking, conflict resolution skills such as dealing with winning and losing and apologizing, and problem-solving skills such as asking for help (Reichow and Volkmar 2010).

- **Valid**

- In applied behavior analysis, validity of measurement refers to the extent to which behavior measurement data are directly relevant and related to the behavior selected for change (Cooper et al. 2007; Horner et al. 2005).

Sam’s Struggles with “Real-Life” Friends

Sam, Sam, or “Sam1212” his online persona, thought he had friends. But did he? Thirteen-year-old Sam has always been a huge fan of what his parents call “screen time” but what he calls “life.” As soon as he returns home from school—as soon as he leaves the outer door of the school, really—Sam is onto screens. His parents are unaware of some of his screen time, as they simply do not have a chance to see it. As soon as he crashes through the heavy steel doors of the school but before they slam shut heavily behind him, for example, he is onto his first screen. Like all the students in his school, his cell phone is his constant companion, and it is out of his pocket, into his hands, password expertly thumb-keyed in with a one-handed grasp immediately

(not only in this situation, but during any potential "down time" at school). Anyone close enough to Sam could have heard him sigh heavily at this moment, annoyed that his battery was almost totally drained. But not wanting to lose a moment of time, he moved ahead, starting his walk home with a steady if awkward **gait**, head down, fingers busy, oblivious to the goings-on of the social world around him.

Though many of his peers were similarly checking their phones, it was without the same purpose and intensity that Sam was utilizing. Most of his peers were gathered in groups, waiting for a bus, a ride, or for extracurricular activities to begin. They would glance down at their cell phone screens, laugh, or share their screen with a friend for a moment, look at one another, and burst into laughter together. Sam was not engaged in this social world—the social world infused with technology—he was engaged only in his screen, scrolling back and forth between programs, texting, commenting, and updating his online life. He had no more of an emotional reaction than the quirk of a raised eyebrow, and no social interaction was possible at the pace of his walking which gave others a strong "Stay away!" message, as clearly obvious as if it were written on a placard being carried through the gathered after-school crowds.

At home, the story was similar. Although Sam's mother—a healthcare professional with varied 12-h shifts on weekdays and often through the weekends—had paid careful attention to screen-time recommendations throughout Sam's childhood she had basically given up at this point, figuring that Sam was doing what the rest of his peers were doing. For a few years throughout grades seven and eight, life at home and school had moved along fairly smoothly while Sam's screen time was not challenged. His teachers, for example, accommodated a variety of needs in his diverse classrooms. For example, they would often display a choice board for major projects, and one of these choices was usually technology-based. Guess what Sam chose? They typically allowed students to work independently, or in pairs or groups. Guess which Sam chose?

But one day when Sam's mother returned home from a long shift at 2 clock in the morning during the school week, weary and ready for bed, she stopped short as soon as she locked the front door of their home behind her. There was Sam, still up, still wide awake, and still buzzing with activity. He had the television going to his favorite 24-h news station, he had his computer on with a video clip playing, he had his cell phone resting against it with some sort of online game on the go, and his earphones trailed to his tablet computer where it was clearly not his homework displayed on the screen. In shock and surprise, she called his name, and tapped his shoulder, and asked Sam "What are you **DOING?**" To her great dismay, Sam leapt up, screamed at her for interfering, shut and locked his screens, haphazardly stacked them, left the television blaring, and stalked off to his tiny basement bedroom—where Sam was not officially allowed to engage in screen activity. This moment was the moment of change for Sam's mother, where many thoughts and concerns clicked into place, where memories scrolled through her head, and a strong resolve emerged. *This is not good enough to be my son's life, she thought. He can't even have a conversation anymore. It's like he has lost every **social skill** I worked so hard to teach him. I know that many children and adults with a slight*

developmental disability like Sam's have a tough time socially, but it has to be better than this. I don't think he even has one real friend anymore. She quickly scratched down a reminder to call the local treatment center and went to bed, where she spent the remainder of her short night tossing, turning, and worrying.

The next week, Sam's mother arrived at the treatment center, along with the school's vice-principal (also the head of special education) and Sam's geography teacher. The behavior analyst working with Sam's mother greeted them warmly, well-prepared for this conversation, after having spent a lengthy period of time on the phone with Sam's mother following this recent late-night trauma.

It was clear to the behavior analyst that the goal articulated by Sam's mother in a more scattered and emotional manner—not surprising for the situation at hand—was to reduce his use of technology and increase his friendships “in real life.” The behavioral analyst, however, was not yet sure how much technology was in use on a day-to-day basis, and how much time Sam spent engaged in real-life friendships. He was also unsure as to where likely gaps in his social skills lay, which could have led to the change from technology as a preference and a reward, to technology as a foundational way of interacting with the world. Perhaps, he thought, technology functioned as a replacement for the complex social situations that emerge in adolescence. Perhaps Sam would benefit from learning some new skills in one of the social skills-focused groups in our center. With these thoughts, notes, and follow-up research in mind, he invited Sam's mother and Sam's teacher to sit down with him.

The behavior analyst addressed Sam's mother first. “You mentioned that you were concerned about Sam's social skills,” he reflected. “I agree that social skills are hugely important at any age, but also that they can get really complicated at Sam's age. Before suggesting any next steps to how we can work on some of his areas of need, though, I think it's really important to do an assessment and to collect some data, so his areas of need become very clear to us. We want to be sure that we are accurate about these needs before we move ahead. If we do an assessment and we collect data, we can also see if change is happening quite clearly. It's good that there are three of you here, because this means we have multiple points of view and our conclusions are more likely to be right.” Noting that Sam's teacher and mother were both nodding so far, he continued: “While I was preparing for our consultation today, I pulled out an assessment of social skills which I thought would work well for Sam.” The behavior analyst displayed “The Social Skills Checklist” (Mackinnon and Krempa 2005), with Sam's name already filled out. “We can use this both before and after any interventions we decide to do, to see whether there is any change in his social skills.” The behavior analyst believed that for Sam, they can probably start with Level 3, which looks at more complex skills, like “corrects others nicely or politely overlooks mistakes” (p. 39). The behavior analyst went on to explain “the great thing about this assessment is that not only is it fairly informal—so we can do it together—but also that it looks at social skills in three types of situations: individual situations, in groups, and in the natural setting like the home or classroom. In addition, we need to be sure we really know how often Sam is interacting with friends in real life and how often he is tuning into a screen for interaction. For this data collection, I thought we could use this **event recording**

sheet, which will tell us how many times each day that Sam is doing both of those things. Then, we have to make sure we have trained observers to collect this data while making sure it is **valid**—that it measures what it is supposed to measure—and that it is **reliable**—that we all measure the same thing time after time.”

“Well, what do you think? Should we give it a go?” Asked the behavior analyst.

Sam's mom was nodding her head rapidly, while Sam was nodding rather sheepishly. The behavior analyst continued, “I want you two to work together to look very closely at screen time at home. For example, I have created some other easy-to-use data sheets for you to observe and record the duration of screen times, and the interresponse times—the amount of time between using one device and another. This will be good for us to set goals from and for you to engage in some self-management as well. Do you think you can do this all day, between the two of you, for the next seven days, until we meet again?” Again, Sam was nodding less than enthusiastically, and he could tell that his mom was very on board with these plans. What could be better?

The Response: Principles, Processes, Practices, and Reflections

Principles

(Q1) Explain the importance of validity, reliability, and accuracy of measurement (Fig. 2.3).

(Q2) Why might indirect and discontinuous measurement pose threats to the validity of the measurement (Fig. 2.4).

(Q3) Why might poor observer training and reactivity pose threats to the reliability of the measurement?

Reliability, validity and accuracy

Reliability

- Consistant measurement

Validity

- Accumulated data is relevant to what is being measured

Accuracy

- Degree of correctness for the data obtained

Fig. 2.3 Reliability, validity, and accuracy

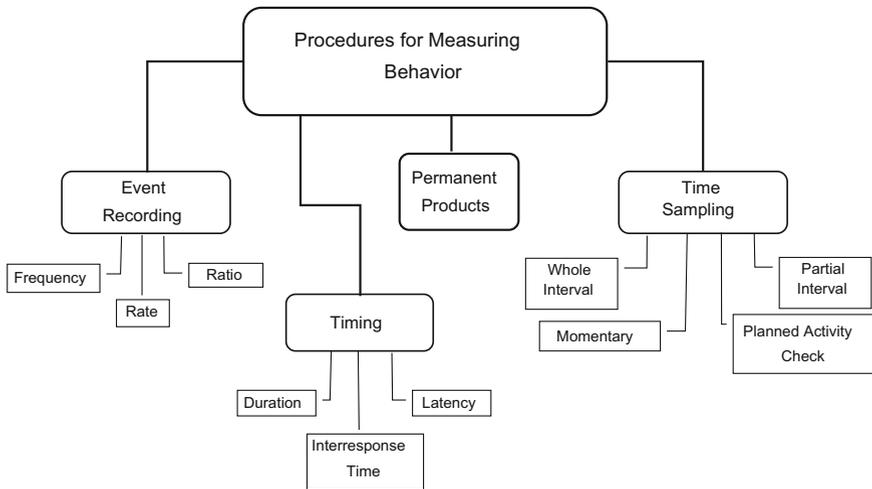


Fig. 2.4 Procedures for measuring behavior

Processes

- (Q4) Explain how you would approach observer training with Sam and his parents through the data collection process, ensuring the validity, reliability, and accuracy of the measurement.
- (Q5) How could you check for, and maintain, the validity, reliability, and accuracy of the measurement over time?

Practices

- (Q6) List at least three types of devices and/or creative strategies you could use for event recording in this case example? For each device listed, identify the strengths and limitations of each (Table 2.3).
- (Q7) How do you think a choice board could be effective with Sam and what principles could you use to ensure a balance between choice and other productive activities in Sam’s life?
- (Q8) As the behavior consultant, you may be interested in the total amount of time Sam spends interacting with technology. What is this measurement called and how would it best be displayed on a graph?

Table 2.3 Devices and strategies for event recording

Event recording devices
• Pencil and paper
• Wrist counters
• Hand-tally digital counters
• Abacus wrist and shoestrings counters
• Masking tape
• Pennies, buttons, pebbles, and paperclips
• Pocket calculators

Reflections

(Q9) What are the strengths and limitations of event recording as a method to measure behavior?

(Q10) How might you overcome the limitations you have identified?

Additional Web Links

Social Skills for Adolescents and Adults: <http://www.autism.org.uk/socialskills>

Building Social Skills: A Resource for Educators:

www.gov.pe.ca/photos/original/BldSocSkills_11.pdf

CASE: i-A8

Olivier's Challenges with Self-Control

Setting: Home/School **Age Group:** Adolescence

LEARNING OBJECTIVE:

- Design a mediator-based behavior assessment process.

TASK LIST LINKS

Extinction and plan for extinction

- **Behavior-Change Considerations**
 - (C-02) State and plan for the possible unwanted effects of punishment.
 - (C-03) State and plan for the possible unwanted effects of extinction.
- **Fundamental Elements of Behavior Change**
 - (D-18) Use extinction
- **Assessment**
 - (I-01) Define behavior in observable and measurable terms.
 - (I-03) Design and implement individualized behavioral assessment procedures.
 - (I-05) Organize, analyze, and interpret observed data.
- **Implementation, Management, and Supervision**
 - (K-02) Identify the contingencies governing the behavior of those responsible for carrying out behavior-change procedures and design interventions accordingly.
 - (K-03) Design and use competency-based training for persons who are responsible for carrying out behavioral assessment and behavior-change procedures.
 - (K-05) Design and use systems for monitoring procedural integrity.
 - (K-06) Provide supervision for behavior-change agents.

KEY TERMS

- **Attention Deficit/Hyperactivity Disorder**
 - Attention deficit/hyperactivity disorder (AD/HD) is a brain disorder characterized by difficulty staying focused and paying attention, difficulty controlling behavior, and hyperactivity. The key behaviors associated with AD/HD are inattention, hyperactivity, and impulsivity (National Institute for Mental Health 2012).
- **Extinction**
 - A method whereby a behavior’s maintaining reinforcers are withheld. Because of this elimination of reinforcement, behaviors may increase in the form of an extinction burst before the behavior decreases because of no longer having access to reinforcement (Iwata et al. 1994).
- **Mediator Model**
 - A mediator model, or a mediator-based approach to the implementation of behavior interventions, involves a third party or “mediator,” such as a parent or a teacher, implementing an intervention program with the individual experiencing the presenting behavior difficulties. In this approach, the behavior consultant or behavior analyst conducts a behavior assessment and develops an intervention program, but does not directly implement the program with their client. Instead, the consultant or analyst focuses on enhancing the knowledge and skills of a “mediator” to implement the program. Behavior change in the individual experiencing the presenting difficulties therefore is mediated by the individual implementing the intervention (Minnesota Northland Association for Behavior Analysis 2012).
- **Procedural Adherence**
 - Procedural adherence, or sometimes referred to as procedural fidelity or treatment integrity, refers to the extent to which an intervention procedure is implemented exactly as planned (Cooper et al. 2007).

Olivier’s Challenges with Self-control

“Again? Really?” Olivier’s father sighed with frustration, sitting down heavily on the family’s living room sofa. “Seriously?” he continued, not noticing that he was shaking his head slowly from side to side, eyes downcast at he looked at what his son had given to him.

He was loosely holding an orange card, a well-used laminated square of construction paper with WARNING written boldly in black marker. “Who exactly gave this to you, and what exactly does it mean, this time?” Olivier’s dad asked with sounds of helplessness and hopelessness in his voice.

"It wasn't my fault! You know that!" yelled Olivier, loudly enough to scare the family cat out from under the sofa where the small family was seated. "I was at that basketball game, you know, at the rec center? The ones they have every Friday. We were winning all along, but then we started to lose—of course," he intoned dramatically, rolling his eyes for effect. "It wasn't going well, and we—well I—had to do something, right?"

Olivier's father ignored what seemed to be a rhetorical question, though he had answered many such questions over the last few years of Olivier's adolescence since his diagnosis of **attention deficit/hyperactivity disorder**. Now, with Oliver turning 15, he had hoped things might get better. He tried to bring the conversation along: "And what was that something?" He waited for the answer, cringing inside, already responding emotionally to what he was sure was a repeat of the same issues they had—his son had—been experiencing over and over as of late. While he waited, he thought back to the report they had received about Olivier when he was nine.

"It's AD/HD," the psychologist had said. "I am sure of it. He has all of the symptoms; he is not missing even one. His behaviors that make me think this is the correct diagnosis are happening at home, at school, and sometimes in the community. They have been happening—you said—since he was a toddler. You must be exhausted!"

If I wasn't then, I sure am now! Olivier's dad reflected. *I feel like I have tried to provide punishment with him in every way possible—and consistently—but none of it seems to make even a bit of difference in these types of defiant behaviors.* Frustrated with the lingering few successes and mostly dismal failures, he sorted through the magnets and paper on the fridge and came up with the contact information for a behavior therapist. *Now, this is a call I had hoped to never make,* he thought with disappointment, *but it can't be helped. There is really nothing left to try.* He left a message for the behavior therapist and began the process of waiting, wondering what would come first: a call, a meeting, and a solution, or another warning (or worse) from the basketball coach, the referee, a teammate, or a parent?

"Well, this is quite a disappointment," Olivier's father summed up for the behavior therapist, at the end of their first hour-long consultation, less than two weeks after his initial, inquiring phone call. "I wasn't expecting to have homework. I was expecting a solution to all of this."

"To figure out a solution that is highly likely to be effective," responded the behavior therapist calmly, "we both need to know the whole picture of what is going on. But even before we proceed with collecting data, we have to find out what the most important behavior of interest is: the one that is socially significant for Olivier and needs to decrease the very most of all of the issues you have described for me today. **Extinction** is usually a preferred method, but we need to determine if this is the method we want to take by collecting data to begin. First, talking to everyone involved is a really good idea for us to be able to make sure we are focusing on the right issue. Then, we will work on assessments. After that, we will make a plan and I will work with you in building skills to help change Olivier's challenging behavior. This is called a **mediator model**. It really makes sense, since you are the person who spends the most time with Olivier. One of the first things you said to me when you initially arrived was that you were "done." You said you

didn't know what else to try. But you also said you hadn't talked with Olivier's coach, teachers—even his mother—in months. Working through this process, I will give you strategies and skills, but it is a process, and takes time and steps, as well as knowing what is going on with Olivier in all areas of his life right now."

Fast-forwarding yet another few weeks, Olivier's father leafed through the notes scratched into his coil notebook during a variety of hurried conversations about Olivier. He translated his rough comments and read them out loud to the behavior therapist:

- "Olivier's coach said that he has 'frequent outbursts' and argues with pretty much everyone on the team, including him and the assistant coach, but also the parents watching, the other players on either team, and pretty much anyone who interacts with him on or off of the court. He said this happened 'especially when things don't go his way.'"
- "The assistant coach told me that he has actually received quite a few warnings and penalties but this one—the one (the only one) that he brought home that started all this—was the very last one. If he gets one more, the assistant coach assured me that he would be kicked out of the program. He said that he would 'be sure to arrange it.'"
- "His mother said she is seeing the same kind of things when he visits, but she can't really tell what sets him off. She said that his issues come 'out of the blue' these days."
- "Like you suggested, I also talked to Olivier. He told me that he really, really likes playing basketball, and he wants to 'get along with everyone' but he also said that 'people keep doing things to annoy him.'"

Olivier's father closed his notebook, leaned over the behavior therapist's desk, and excitedly said, "That's done. Now what?" The behavior therapist competently and patiently reviewed all the steps in the assessment part of the future intervention plan with Olivier's father. "Now we can carefully define Olivier's behavior that is need of change. That is a huge help! Next, we need to talk about gathering specific information—or data—to help decrease Olivier's challenging behavior. But first, let's go back to what you said when we first met. You told me that you 'provided punishments' for Olivier but that they didn't make any difference. Let's talk about what punishment means, and how we can get some really solid evidence to determine if our interventions are making a difference. The key is to collect some numbers—again, some data—showing when, where, why, and how often, this challenging behavior is happening. Like I said before, extinction, or not providing reinforcement for his behaviors will help to decrease it, but it's a process that takes time, and things may get worse before they get better. We have to plan for what may happen when his behavior no longer gets reinforced. With us all working as a team, we are going to find a way to be successful. With you being really well trained in all of this, we will be able to get really good **procedural integrity**: we are going to be able to do things the right way! I think you are far from 'done' and that there are many reasons to move ahead with this assessment to help Olivier enjoy basketball, his peers, and other social situations with much more success, and many fewer challenging behaviors."

The Response: Principles, Processes, Practices, and Reflections

Principles

(Q1) Explain why the procedure of extinction could be used in this case and comes to the consultant's mind immediately. What are some downfalls of using extinction in this case?

(Q2) Explain why the procedures used by Olivier's father in response to Olivier's behavior may not be resulting in a decrease or increase in the problem behaviors.

Processes

(Q3) In a mediator model, training mediators to correctly implement an intervention program or procedure is critical. Identify how the implementation of extinction needs to be trained to the parents. What warnings do you need to provide them when implementing the procedure (Fig. 2.5)?

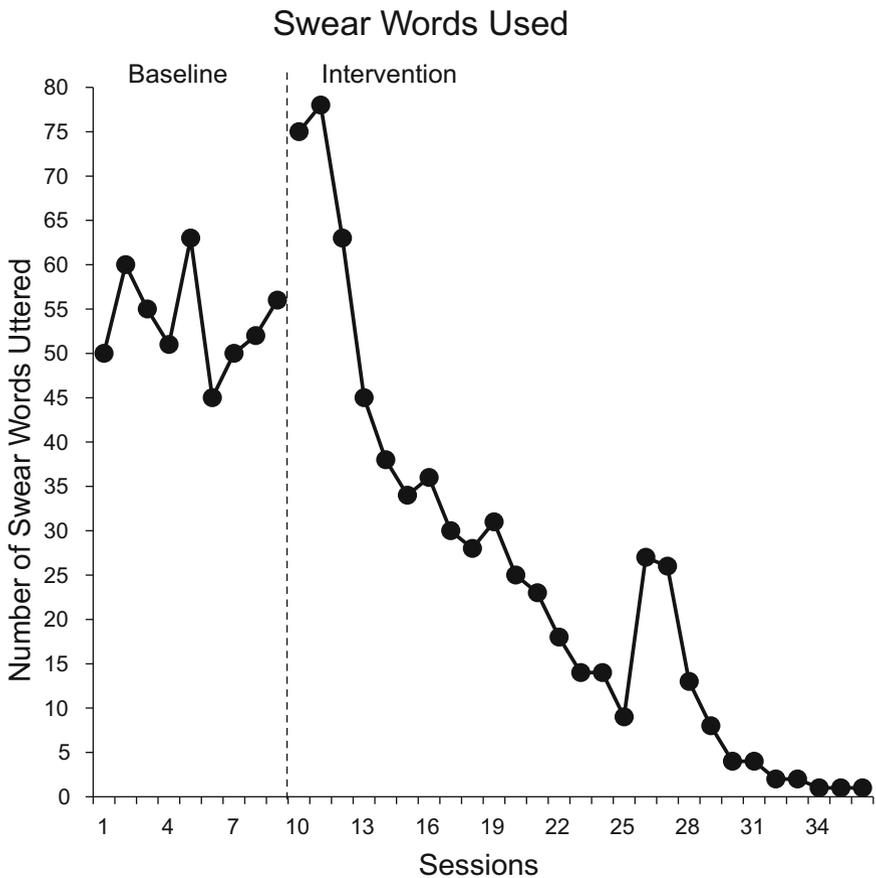


Fig. 2.5 Graph of Olivier's swear word use over time. Graph displays an extinction burst as well as spontaneous recovery

Table 2.4 Sample mastery criteria

Master criteria
• Zero incidences of target behavior over 1 week
• 80 % accuracy over 3 consecutive days
• 90 % accuracy over 2 consecutive days
• 4/5 steps completed accurately
• 5 min over 3 consecutive days

(Q4) Explain how you might know when Oliver’s parents have mastered the procedure to be implemented (Table 2.4).

(Q5) What dimension of behavior (frequency, rate, duration, latency, or inter-response time) would you be most interested in Olivier’s parents gathering? Why would this data be useful? How could it be used to measure progress in the future?

(Q6) What method of training would you use to train Olivier’s parents on data collection? How could you ensure consistency across both parents?

Practices

(Q7) Outline how you would measure procedural adherence over the course of the intervention program? Explain why it is important to measure procedural adherence repeatedly over the course of an intervention program, and not just in the early stages of a program (Table 2.5).

(Q8) What might you do if, based on the data collected, you begin to notice that certain procedures are not being implemented exactly as outlined?

Table 2.5 Sample procedural integrity (treatment fidelity) checklist (Hall et al., 2016)

Stay, play, and talk procedural integrity checklist			
	Never implemented (0–30 %)	Partially implemented (30–90 %)	Fully implemented (90–100 %)
The program implementer directs the identified child and peers toward one another (physically and in conversation)			
The program implementer prompts peers to use the stay, play, and talk skills and interacts with the identified child in 90 % of situations			
The program implementer prompts the identified child to respond to the peers if necessary or he or she does not respond within 5 s			
The program implementer prompts the peers to reinforce the identified child if the peers do not do it automatically			
The program implementer reinforces the peers for interacting with the identified child in 90 % of situations			
The program implementer provides children with reinforcers for completing the identified skills			

Reflections

(Q9) Forming a cohesive intervention team in which all mediators are implementing the intervention program consistently and correctly is an important part of mediator-based behavior consultation. At times, the way in which a mediator might be interacting with the individual experiencing the behavior difficulties might be contributing to the occurrence of the presenting behavior problems (e.g., unknowingly providing reinforcement in response to a problematic behavior). How might you address this with a mediator without compromising the rapport you have worked to develop?

(Q10) There are different reasons why an individual's motivation might change, for example, establishing operations and abolishing operations. How do these principles differ? Considering Olivier, how might they offer an explanation for his behavior?

Additional Web Links

AD/HD Clinical Practice Guidelines

<http://www.cdc.gov/ncbddd/adhd/guidelines.html>

Punishment as a component of classroom management: <http://www.education.com/reference/article/classroom-management/#C>

What Makes Extinction Work?

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1297782/pdf/jaba00007-0133.pdf>

CASE: i-A9

Miguel used to skip to school, but now, he is skipping school

Setting: School Age Group: Adolescent

LEARNING OBJECTIVE:

- Synthesize behavior and psychoeducation assessment data and formulate a hypothesis about why an identified target behavior is occurring.

TASK LIST LINKS

- **Experimental Design**
 - (B-02) Review and interpret articles from the behavior-analytic literature.
 - (B-10) Conduct a component analysis to determine the effective components of an intervention package.
- **Fundamental Elements of Behavior Change**
 - (D-01) Use positive and negative reinforcement.
 - (D-02) Use appropriate parameters and schedules of reinforcement.
- **Assessment**
 - (I-04) Design and implement the full range of functional assessment procedures.

KEY TERMS

- **Avoidance Contingency**
 - As a form of negative reinforcement, an avoidance contingency occurs when a response prevents or postpones the presentation of a stimulus (Cooper et al. 2007).
- **Escape Contingency**
 - As a form of negative reinforcement, the individual escapes from a stimulus or a response is terminated (Kahng et al. 2003).
- **Establishing Operation**
 - In applied behavior analysis, establishing operations are antecedent variables that alter the effectiveness of behavioral consequences to function as reinforcers or punishers. Establishing operations can increase the probability of a behavior by enhancing the perceived value of a particular outcome and in turn then increase an individual's motivation to display behaviors that will provide access to that outcome (Michael 2000).
- **Intervention Package**
 - Also called a comprehensive treatment model, where a group of practices are strategically designed as part of an approach to specifically highlight and target a specific behavior or disorder (Wong et al. 2014).
- **Learning Disability**
 - Learning disabilities are a group of disorders that are lifelong and are characterized by a gap between a person's expected achievement and their performance. Individuals with learning disabilities may have average or above-average intelligence, but struggle with their performance at school, home, community, or workplace. Learning disabilities can affect areas such as listening, reading, speaking, writing, spelling, and mathematics (National Centre for Learning Disabilities 2014).
- **Negative Reinforcement**
 - In applied behavior analysis, negative reinforcement is said to have occurred when there is an increase in the future frequency of a behavior, following the termination, reduction, or removal of a stimulus (Cooper et al. 2007).

Miguel Used to Skip TO School, But Now He Is SKIPPING School!

Miguel is 17 years old. In the school system, this seems quite mature, but in the context of his entire expected life span, he is still quite young. Miguel, however, is taking decision-making into his own hands much of the time. Just last week, for

example, only one short month into the new school year, his parents received a phone call from the principal at Main Street High School, which his father answered with trepidation, in the midst of his busy work day. The principal, Ms. Roberts, jumped right into the conversation, not wasting any time on pleasantries, which immediately raised Miguel's father's level of anxiety. Ms. Roberts expressed concerns about Miguel's recent absences from class. *Absences?* Miguel's father thought, raising one eyebrow while he waited for more.

"Over the last two weeks," Ms. Roberts listed in a dispassionate manner, "Miguel has missed more than seven classes, with most of these absences occurring during Mr. Hill's grade 12 English class." She further noted that on one occasion, she personally witnessed Miguel actually leaving the school at a time when he was expected to be in class. "Even though Miguel is almost 18 and he can soon make his own decisions, we are not there, yet. I would like you, and your wife, to meet me, quite soon, so we can try to figure out how best to support Miguel not only with his impending graduation, but getting the most of this last year that he can. We want him to reach his potential, not just get through the year."

That evening, Miguel's parents did what they used to call "preparing for battle." They sat together at the kitchen table with the last 10 years or so of his assessments, reports, IEPs, and more spread out over their round kitchen table, while Miguel was reportedly "doing homework" in his room. Although their table could hold eight people in a pinch, it was covered from edge-to-edge with paper, often piled up high, as well as spread out wide. Their first area of focus was looking over Miguel's comprehensive psychoeducational assessment that was now a few years old. Its major finding was something they had seen and heard many times before: Miguel had a **learning disability**. While he could express himself well verbally at and often above grade level and was measured as having above-average intelligence, he struggled with written expression: reading, writing, and spelling. In the past, terms such as dyslexia and dysgraphia were used to explain his diagnosis, but his latest report just noted that he has "characteristics that are consistent with a learning disability."

Just last month, his parents moved the family to a new community, after Miguel's mother started a new job. Unfortunately, this coincided with Miguel's final year of high school; however, they made a family decision that the opportunity and the significant pay raise were both too good to give up. Miguel did not know this, but it also allowed his parents to put away even more funds to be available for his future, post-secondary education. But the practical reality was that this meant that Miguel had to leave the school he has become used to (and the school and its faculty that knew him well) and start at a new school for that all-important final year of high school.

Several years ago, at his previous school, Miguel began to display similar behavior difficulties, avoiding work in class and skipping classes altogether. Miguel's parents went over this while leafing through the fairly thick sheaf of disciplinary reports. After many meetings with his teachers, his principal, and the resource staff, including a behavior consultant and the school's guidance counselor, a support plan had been put in place for Miguel and his somewhat challenging behaviors began to improve. This support plan involved a combination of adaptive

instruction—through which in-class activities were adapted to draw more on Miguel’s areas of strengths and extra supports such as more time to complete assignments were implemented—and changes in the way his teachers interacted with him, such as focusing on increasing positive interactions and offering more praise and encouragement following each of his successes. Combined, this **intervention package** resulted in Miguel enjoying time in class, and his parents had even noticed him becoming more confident in himself, they recalled. However, they never figured out which part of the intervention package was causing the changes or was most effective—they had not completed a component analysis. Miguel was doing so well that when the family moved last month, his parents decided that they would not tell the school about his diagnosis. They felt that Miguel had gained the skills and the confidence he needed to be successful and no longer needed the supports that were in place at his old school. Miguel had agreed, feeling that that he could do it and that he did not want to be singled out in a new school. *Perhaps all of us were wrong.*

Next, they pulled out the notes that had carefully taken at one of his interdisciplinary meetings last year. “Remember,” recalled Miguel’s mother, “back before we implemented that support plan that worked so well? That behavior consultant had some really good ideas: data-supported ones, of course. She observed so much of Miguel’s behavior that we thought she was a going to solve all of our problems at once! She is the one who told us that Miguel’s repeated school-skipping could be explained by the principle of **negative reinforcement.**” Miguel’s mother underlined this phrase with her finger in her notes, tapping it for emphasis. “She told us that there was a very clear pattern, when Miguel was finding certain classes very difficult, not going to class meant the end of that so-called unpleasant experience. She went on to explain that these experiences are acting as an **establishing operation**, increasing the value of escaping, or avoiding the class and the work that went with it and that it is because of this **escape contingency** or **avoidance contingency** that Michael’s behaviors are not only continuing, but increasing in frequency. Remember how it was all like a different language then, and we had to practice and learn all of this new vocabulary to understand what was happening?” They stopped reminiscing for a moment, quietly recalling this time of hope and success. Their eyes met as they felt a simultaneous wave of fear and silently wondered: *Is this what is happening all over again? Are we right back to where we started that very long year ago?*

When they arrived at the school meeting together the next day, after both arranging time off work, Miguel and his parents listened carefully and attentively as the principal and his English teacher recited their lists of concerns in a well-practiced way. Mr. Hill noted that each time he assigns a task in class, Miguel is doing other things and not completing assignment. “It’s pretty frustrating,” Mr. Hill interjected. “Your behaviors are getting in the way and getting my other students off-track, too. I have tried reprimanding you, Miguel, for talking and joking with other students, for playing on your cell phone, for leaving class without permission, and even for tearing up your assignment papers.” As he spoke and “ticked off” each of Miguel’s offenses on his left hand, his tone rose and became a

little aggressive. “Things really escalated last week when you began to tease a peer in class when you were supposed to be writing an essay. When you began hitting and punching each other, which led to wrestling on the floor, I had to call for help from the office to have the two of you physically removed. Never before in my career have I had to do such a thing!” Mr. Hill went on to say that each time these behaviors had been occurring, he had been giving Miguel a verbal reprimand and sending him to the office on his own. He does not understand why these behaviors are not stopping and instead are increasing. “After this particular situation, Miguel, you haven’t even come to class anymore. I just do not know why you are choosing to act this way.”

Principal Robert smoothly picked up the conversation and said that she would like to call in a behavior analyst to conduct an assessment of Miguel’s behavior. Miguel’s parents locked eyes and laughed wryly: “That’s just what we were *thinking*. But first we do have some information to share with you, that I don’t think you have, yet, in your files about Miguel. When we were looking over his documents, we came across this one and thought, *Uh oh!* Because of his problems with reading, he has is used to using assistive technology in class, but is also a little embarrassed about it, and certainly would never ask you for it. Unfortunately, with the move, I think this information didn’t get passed on to you. Here, we’ll read this bit.” Miguel’s mother pulled out the much-folded document—a psychoeducational assessment—and read:

It is recommended that Miguel utilize educational software to assist with multiple educational demands that meet his educational and cognitive profile. Text-to-speech software will decrease demands for reading, working memory, comprehension, and processing speed.

With one potential solution on table, the tension in the room dissipated, and, in that moment, those caring for Miguel became a team. Now, willingly—and with new hope—Miguel’s parents began to openly share information about Miguel’s learning disability, his past assessments, and past behavioral challenges.

The Response: Principles, Processes, Practices, and Reflections

Principles

(Q1) Drawing on a specific example from this case, use the Antecedent-Behavior-Consequence template in Table 2.6 below to illustrate how the principle of negative reinforcement may offer an explanation for the presenting problem behavior (Table 2.6).

(Q2) *Thinking* further about the example that you used in question #1, would you classify this as an escape or attention-seeking contingency? Please explain your selection.

Table 2.6 Antecedent behavior consequence template

Date and Time	Location	Antecedent	Behavior	Consequence

Process

(Q3) *Thinking* further about the problem behavior that you outlined in questions #1 and #2, how might the attached psychoeducational assessment in Fig. 2.6 findings inform your hypothesis as to why this behavior may be occurring (Fig. 2.6)?

(Q4) Based on the diagram in Fig. 2.7, what pathway do you think the team at the previous middle school had taken when implementing an intervention? Do you think that the intervention they chose was truly based on the function of the behavior? In the current scenario, what could be completed to determine the function of the behavior and ensure the correct intervention is implemented?

Practices

(Q5) In this case, what functional assessment procedures would you use to determine what the function of the behavior is and what interventions are effective or ineffective (Fig. 2.8)?

(Q6) Once a hypothesis as to why a presenting behavior difficulty may be occurring has been formulated, you must decide whether to proceed with an intervention program, or test the hypothesis through a functional analysis—often by exposing the individual to conditions that might evoke the problematic responses. When a behavior may be occurring due to negative reinforcement, is it ethically justifiable to expose the individual to aversive stimuli in order to test the effects of the removal of the stimulus? Why or why not (Fig. 2.9)?

(Q7) In the current case, would you recommend testing of your hypothesis or would you recommend proceeding with an intervention program? Explain your rationale.

A Psychoeducational Assessment - Miguel

Examinee: Miguel Rodriguez

Chronological Age: 12

Referral Question

Miguel was referred by the Office of Student Learning at Eagle Heights Middle School, after the team had suspected educational accommodations were needed for him to achieve in his schoolwork. Miguel’s parents reported that he struggled all of his academic life, and took time extra time to complete most things, if they were completed at all--as usually he ran out of time. Miguel’s teachers and parents have recently reported falling behind in classes and struggling academically. They reported that he has had difficulty with timed tests and although he can verbally report the information, he often does poorly on assignments. The psychoeducational assessment is requested to determine any learning accommodations that would assist Miguel in his college academics.

Current Assessments Administered

- Wechsler Intelligence Scale for Children – V (WISC-V)
- Wechsler Individual Achievement Test- II (WIAT-II)

Assessment Results

Wechsler Intelligence Scale for Children (WISC-V)

Composite Scores	Percentile	Range
Verbal Comprehension	58 th	Average
Visual Spatial	30 th	Average
Working Memory Index	30 th	Average
Fluid Reasoning	58 th	Average
Processing Speed Index	23 rd	Low Average
Full Scale IQ	61 st	Average

Fig. 2.6 A psychoeducational assessment—Miguel

Wechsler Individual Achievement Test- II (WIAT-II)

Subtest	Percentile	Grade Equivalent
Word Reading	5 th	2:6
Mathematics	68 th	7:0
Written Language	59 th	6:2
Oral Language	68 th	7:2

Summary

In combination, the results of this assessment demonstrate that Miguel struggles in reading and writing, and would indicate a Specific Learning Disorder with an impairment in reading (315.00) according to the DSM-5. In combination, it will take Miguel longer to process information. Miguel demonstrates average skills in other areas of written expression, verbal skills, and visual spatial skills.

Based on the results of this assessment, Miguel meets the requirements for educational accommodations. Below are a list of recommended accommodations that would be helpful to assist Miguel in his schoolwork.

Recommendations

1. **Double Time with Breaks**

Miguel would benefit from additional time on tests in order to assist him in processing the information according to his cognitive profile. This would ease his anxiety as he watches peers finish before her. Allowing Miguel breaks during testing would also prevent him from becoming taxed in testing situations.

2. **Utilizing Educational Computer Software**

It is recommended that Miguel utilize educational software to assist with multiple educational demands that meet his educational and cognitive profile. Text-to-speech software will decrease demands for reading, working memory, comprehension, and processing speed.

Fig. 2.6 (continued)

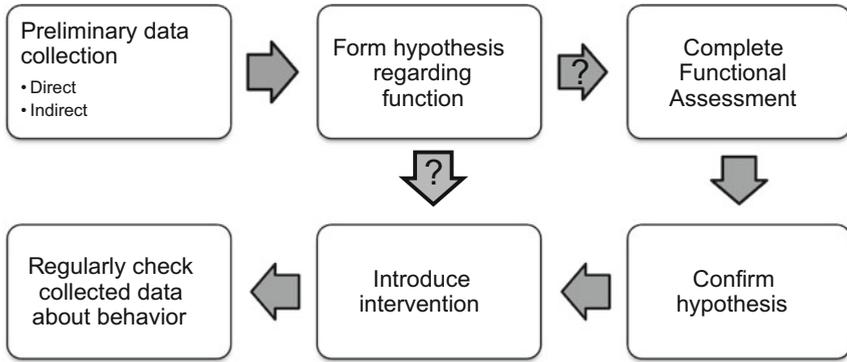


Fig. 2.7 Diagram of the steps towards a behavior intervention plan

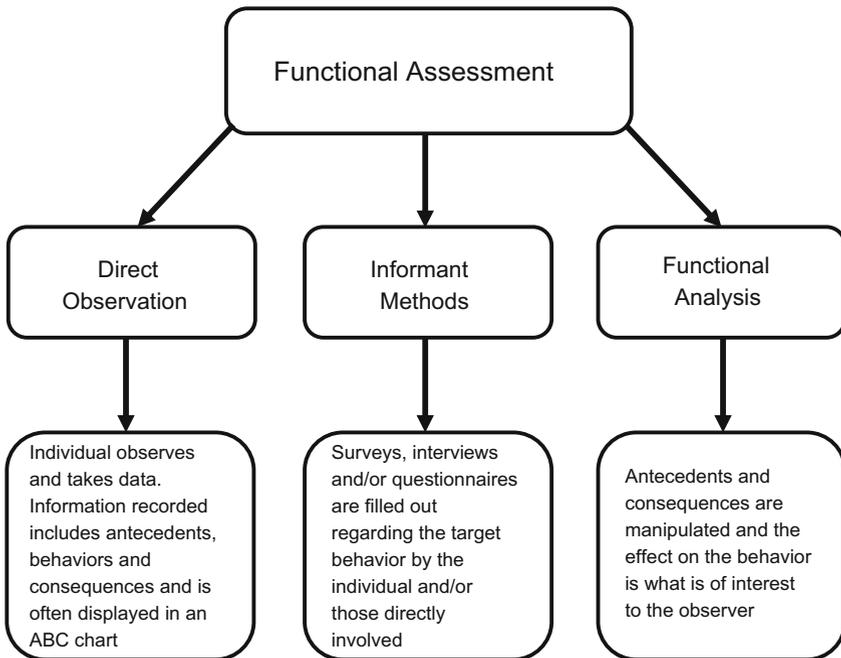


Fig. 2.8 Functional assessment procedures

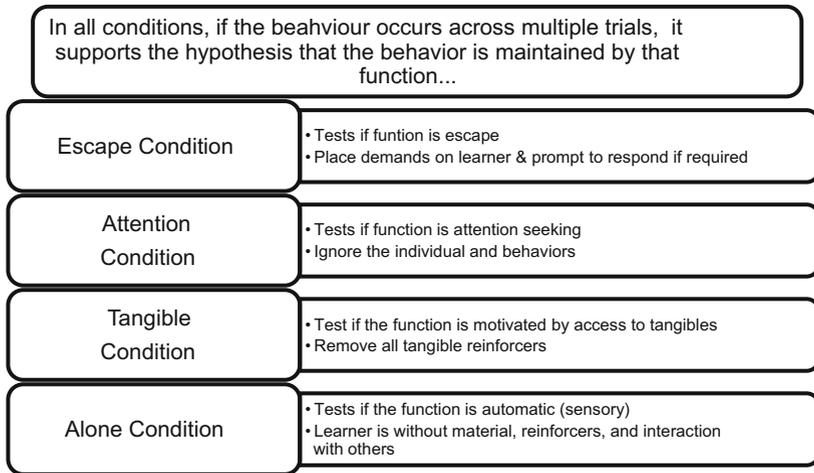


Fig. 2.9 Functional behavior analysis conditions, what it tests and a brief description of what to do during the condition

Reflection

(Q8) Often, as part of the behavior assessment process, a particular target behavior is selected for change among several problematic behaviors being displayed. What might you do if Miguel, his parents, and/or his teachers disagreed with you as to the specific behavior you have prioritized and selected for change as the target behavior?

(Q9) In the following case study, Miguel was included on the meetings, as is his right to attend given his age. Do you think what was said at the meeting was appropriate for him? What could have been done or said differently in the meeting?

(Q10) In the case of Miguel, how much emphasis do you think should be placed on his accommodations for his learning disability versus the functional analysis for his behavior?

Additional Web Links

Supporting Students with Learning Disabilities: A Guide for Teachers

www.bced.gov.bc.ca/specialed/docs/learning_disabilities_guide.pdf

Functional Behavior Assessment

<http://www.educateautism.com/functional-behaviour-assessment/example-of-a-functional-analysis.html>

Children attending IEP Meetings

<https://www.understood.org/en/friends-feelings/empowering-your-child/self-advocacy/should-i-encourage-my-child-to-go-to-iep-meetings>

CASE: i-A10

If Jaz can't get here on time, she is fired!

Setting: Work Place Age Group: Adulthood

LEARNING OBJECTIVE:

- Design a behavior assessment plan.

TASK LIST LINKS

- **Fundamental Elements of Behavior Change**
 - (D-02) Use appropriate parameters and schedules of reinforcement.
 - (D-03) Use prompts and prompt fading.
 - (D-07) Conduct task analyses.
- **Specific Behavior-Change Procedures**
 - (E-03) Use instructions and rules.
 - (E-07) Plan for behavioral contrast effects.
 - (E-08) Use the matching law and recognize factors influencing choice.
 - (E-09) Arrange high-probability request sequences.
 - (E-10) Use the Premack principle.
 - (E-11) Use pairing procedures to establish new conditioned reinforcers and punishers.
- **Behavior-Change Systems**
 - (F-01) Use self-management strategies.
- **Intervention**
 - (J-03) Select intervention strategies based on task analysis.

KEY TERMS

- **Self-Management**
 - Self-management is when an individual themselves applies behavior-change tactics to their own behavior to bring about a desired change in that behavior (Lee et al. 2007).
- **Self-Monitoring**
 - Self-monitoring occurs when an individual observes his or her own behavior and documents the occurrence or absence of an identified target behavior (Ganz and Sigafos 2005).
- **Visual Schedule**
 - A visual schedule provides a visual sequence of events that tell an individual what will occur, and in what order, using pictures or picture symbols (Dettmer et al. 2000).

If Jaz Can't Get Here on Time, She Is Fired!

Jaz's supervisor glanced quickly at her watch once again, silently noting Jaz's lateness to herself and checking off another issue on her mental list of problems in supervising Jaz's supported work placement. Twenty minutes later or so, she did the same thing, this time unable to suppress her raised eyebrows, pursed mouth, and almost imperceptible shaking of her head from side to side. *She has been late SO much this month. That's just not good enough*, she thought. *I don't think anyone should be working here who can't do the job, no matter how much help that person might have—or not have.* Jaz's supervisor recommenced her current task, moving shampoo bottles from an enormous cardboard box lying on the floor to the shelves of the department store. With a careful eye for detail, she tweaked each one, ensuring that they were lined up with great precision. Moving back with her hands on her hips and her head tilted to one side, she examined her work with pleasure. *It looks good*, she judged, *at least until Jaz gets here and takes my work apart. I don't think it's anything to do with any "developmental disability," but more of a way to create chaos wherever she goes, getting the rest of us in trouble. But I guess I need to do my job, too, and my job today is her.* Taking her empty box to the back storage room to break it down with the other recycled products, she continued checking and rechecking her watch. *Jaz is almost an hour late yet again.*

In time—a long time—Jaz appeared, ready for work. Jaz was dressed carefully and neatly in her well-fitting vest with the logo of the department store emblazoned on the back, her name tag clipped securely on the left side of her zipper, and her nonslip black work shoes tightly laced. She stood in front of her supervisor and smiled tentatively, with a soft, "I'm here!"

In turn, her supervisor snorted gently, *thinking, At this point, that's not something to celebrate!* Out loud, she said in return, "Okay, well let's see what's on the list for today." Jaz opened her breast pocket and pulled out her **visual schedule**.

Her schedule of tasks was housed in a mini-binder, with a visual on each page representing one of the tasks that she accomplished at the department store. Every day when she arrives, her first job is to meet with her on-site supervisor of the day and to arrange the visual depictions of her tasks for that shift. Every night when she gets home, she arranges the visuals in order of her personal preference, with her favorites at the front. While riding the bus to the department store, she often takes out the mini-binder and happily gazes at the visual representing her favorite things at work.

When she passed her visual schedule to her supervisor, her supervisor snapped it open and licked her finger in preparation for page-turning. The first visual strategy was a photograph of a small shopping basket with two handles, representing the job of walking through the store in a careful pattern, searching abandoned baskets in the warm, welcoming store, and returning them to the nested stack at the doors to the entrance way. The friendly greeters often gave her a big smile, stopped to say hello, or showed her pictures of their families. The second was a visual of a broom. This task was sweeping the floor of the in-house cafeteria, where Jaz loved to smell the french fries cooking, and was often given a few chicken fingers dipped in honey for her excellent cleaning job. The third visual depicted a spray bottle. This meant that

Jaz was to go to the watch, jewelry, and glasses section to spray and wipe the display cases, where she always enjoying seeing the glass and jewels wink with store lights bouncing off of their surfaces.

But Jaz's supervisor said, "Nope, nope, and nope," as she flicked past those visuals. Then, she snapped open the three tiny metal rings holding them into the binder and put them in the "Done" pocket. "You are late and I already did these jobs," she explained, not unkindly. Rifling through the other choices, she placed these three at front: a photograph of a shopping cart, which meant that Jaz needed to go outside, find stray carts in the parking lot, and push them through the snow, slush, and network of cars to the cart corral; a photograph of the bathroom door, which meant that Jaz must go to the women's washroom and clean up stray bits of paper towel, toilet paper, and garbage and put them away properly; and a visual symbol for "Returns" which means she had to wheel a cart around the store figuring out where returned toys, housewares, and other department store goods belonged.

As soon as she snapped the metal rings shut again and told Jaz, "These are what you need to do today," Jaz snatched the binder, crammed it back in her pocket, and went back to the staff room. She sat down at the staff table nearest to the far, darkened corner of the communal space, and skidded her chair so her knees were touching the wall. "ARGH!" she wailed, rocking rhythmically with her arms clenched around her stomach. This happened to be a day when her support worker was on-site for a visit, which typically happened once every two weeks for Jaz's current needs.

Jaz's support worker was walking from her parked car to the back entrance of the department store, *thinking* about Jaz and Jaz's strengths and needs. *Jaz has done amazingly well, she thought, with this work place program. I used to be here every day—really every moment—to help Jaz with the day-to-day tasks of this part-time position. But now, with her self-management program and self-monitoring process she knows to call me or text me if she has a problem, and when I come in—like today—she is generally pretty happy and engaged in various tasks around the store with which she seems quite comfortable. The visuals have been a huge help to developing independence. Last year, I had to make visual mini-schedules for every "job" she was assigned, but now all she needs are those single visual prompts and she knows the routines of each task. But something has changed, she pondered. On my weekly reports sent by store manager, I am seeing that Jaz has been late for all her shifts in the last two weeks. Sometimes, she is almost an hour late! Often, she seems upset, too—out of the blue (they say)—and the staff doesn't know why. But she is at the point where she is disrupting the customers and the other staff, and it is taking some prolonged and intensive help to get her to calm down enough to work. With those two things combined, Jaz is missing a good chunk of her work day.*

How can we solve this problem? Who can help? Do I need to come more often? What is really going on? She knows that at home they have set a no-late rule, where she loses access to reinforcers if she is late. Why was she late here? She knows, however, that at home she access to many choices and reinforcement all the time for the positive things she does. Here, it is not quite as consistent, and she often does not get reinforced for some of the routine things. These were the thoughts going through the support worker's head, when she entered the store and pulled

open the heavy steel door to the staff room. She was just in time to see Jaz, once again, pull out her visuals of today’s task, stand up with great energy, and throw them angrily into the garbage can. Preparing herself to wail again, she saw the support worker out of the corner of her eye. Although Jaz was not typically physically demonstrative, she raced over to the support worker with her characteristic fast-paced stride and short steps and clasped her in a desperate hug. “What’s wrong?” Jaz’s support worker asked as she began to wonder how she might assess this situation. She thought about where to begin and remembered reading about the relevance of behavior rule and task analysis. *Those might be the right tools to help Jaz out of this tough spot*, she thought with optimism, as she began to prepare.

The Response: Principles, Processes, Practices, and Reflections

Principles

(Q1) Why might the relevance of behavior rule be an important guide in the assessment of Jaz’s behavior?

(Q2) When Jaz’ supervisor states that Jaz shows up 30 min late, or 1 h late, what is she measuring (interresponse time, latency, rate)? Would this be an appropriate measure to use to track progress in the case of Jaz and her work? Why or why not?

Processes

(Q3) Behavior analysts utilize a range of assessment methods including interviews, checklists, tests, and direct observation. What method or methods would you recommend be used in the case example of Jaz? Please explain your selection (Fig. 2.10).

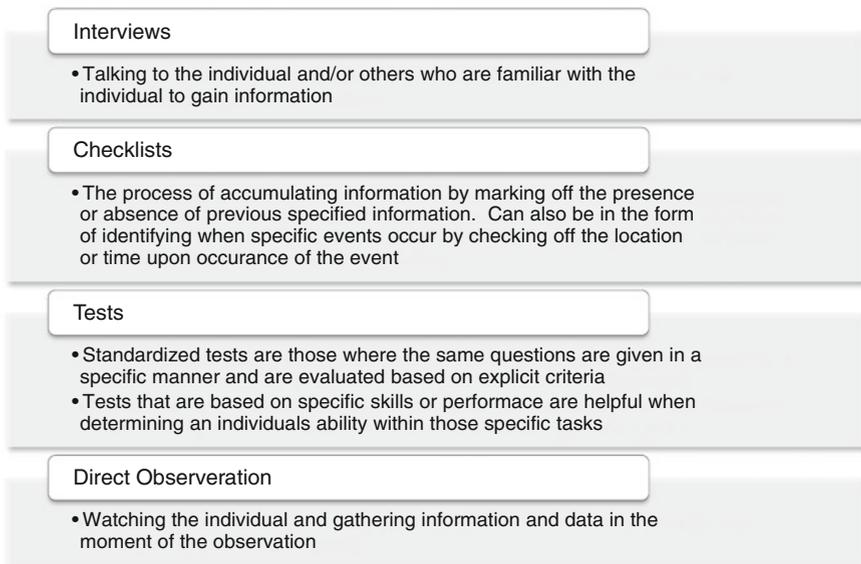


Fig. 2.10 Assessment methods

(Q4) Explain how the behavior contrast effect is used in this case study.

(Q5) Explain how the matching law is used in this case study.

Practices

(Q6) Explain how you would carry out the assessment method or methods selected in question #3.

(Q7) Identify and operationally define a target behavior for Jaz and describe the social significance of the selected behavior.

(Q8) Jaz organizes her visual schedule with jobs she seems to enjoy doing. How could these jobs be organized with less preferred jobs such as tidying the women's washroom, or doing returns? What is this behavior principle called?

Reflections

(Q9) Jaz's work supervisor is encouraging you to teach Jaz to mop the store floors as a priority, simply because this is a need that the store requires. You question whether this is in the best interest for Jaz and, wanting to embrace the scientific method, feel as though you should wait for the assessment evidence to guide you in your decision regarding areas of initial concern. Explain how you would respond to the supervisor's request.

(Q10) What would be important to incorporate in Jaz's work day to continue to make it reinforcing for her?

Additional Web Links

Association for Positive Behavior Support–Developmental Disabilities (focus on adults): http://www.apbs.org/new_apbs/adultRef.aspx

Work support:

<http://www.worksupport.com/index.cfm>

The Matching Law

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3357095/>

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