

TRAINABA SUPERVISION CURRICULUM SERIES

VOLUME 1: BCBA REFERENCE MANUAL

Second Edition

Ben Theisen

Free and Open Source Community Edition
Cumulative Records Documentation Society

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This book may be downloaded as a free PDF at [\(website\)](#). This textbook is also available under a Creative Commons license. Source files hosted on Github.

Los Angeles, California, USA.

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About the Maintainer

This book is maintained by Ben Theisen. He earned a PhD in Business Psychology and MBA. He has been a Board Certified Behavior Analyst (#1-10-7323) since 2010. Dr. Theisen is an adjunct professor in the Industrial-Organizational/Business Psychology Department at The Chicago School of Professional Psychology, Los Angeles Campus. He researches occupational characteristics of behavior analysis supervisors. He has a private practice for behavioral and personnel consulting. His hobbies include computer programming, math proofs, action-adventure video games, and exercise.

Preface

This book continues to be a labor of love. It serves as an excuse to incorporate GNU/Linux command line tools into the soul-crushing Microsoft® workflow of many behavioral service providers.

Anyone is welcome to participate in the development of this book and other projects like it. All of the source code, including the latest PDF version, is publicly available.

The code is maintained through Cumulative Records Documentation Society (CRDS), a 501(c)(3) nonprofit. GitHub, a software development organization, has generously provided CRDS with lifelong sponsorship for projects like this one.

The technology choices for this book were a form of artistic expression. These tools promote community in the century-long development of behavior analytic services as a profession. The act of using these tools was meant to be rebellious, if not subversive, against the way large books are usually developed. The technology for this book reflected the do-it-yourself spirit of Skinner's hands-on work with operant chambers. It was pure hip-hop with two turntables and a sampler. It was grunge rock singing love songs in an old garage. It was a \$200 single-subject design study at a university where other departments held out for seven figure grants.

The computers used to build this book were a nod to the traditional applied behavior analysis studies, which could be conducted for cheap with a clipboard and some doctoral students. The best example was an old Lenovo ThinkPad X200, purchased second-hand from Craigslist with cash. This was a statement against consumerism. It said no to "upgrading" to next-generation CPUs that ran the telemetry nightmare known as Windows 10.

For this statement, the X200 was perfect. It was golden-era hip hop in all its sound sampling glory. The laptop had a battery life of 23 minutes and came pre-installed with Hello Kitty stickers on certain keys. The stickers said things like, "return," "shift," and "a." And yes, all stickers were placed correctly. The X200 ran a free and open source operating systems powered by GNU/Linux and approved by the Free Software Foundation.

This book was proudly typeset using L^AT_EX, a free and open source software (FOSS). FOSS was chosen as a nod to B.F. Skinner's writings on culture, in which he voiced the difficulties of communicating non-physical technologies to new audiences. Rather than create a book to be released on a bookshelf, this book was designed from publicly available code. The version control notes were public, so anyone could see the process of creating the book. The goal of these tools was to add a layer of physical technology to a book whose subject was a non-physical technology. Hence, it built on Skinner's vision of better communicating the technology of behavior analysis to general audiences.

L^AT_EX allowed modularization of the book's files. It keeps all the writing sepa-

rate from the files that generate the formatting. This was a nod to the stories of Skinner's lab. As the legends tell, one could hear the operant chambers clacking from various experiments, happening simultaneously though measured and analyzed as separate phenomena. In this book's modular design, each file held its own content. Any content file could easily be removed, modified, or replaced without any impact on other pages.

The books were assembled and written using Vim, a free and open source command line text editor. It was compiled using custom shell scripts in a Bash terminal. Git and GitHub were used for version control. The decision to use a command line editor was a nod to an operant chamber. One need only peck at the keys to write, assemble, and distribute this book. No mouse, trackpad, eyes, or graphic user interface is involved. An experienced operator could complete the process blindfolded. The author suffers from tendonitis and frequent eyestrain from extensive computer use, so the command line technology is a welcome option.

While the specifics of the technology choices for this book may seem gratuitous, the purpose was to inspire behavior analysis professionals to indulge their curiosity in computer programming. The intended message is, roughly, that even an English major can learn to write code if the project is interesting. Perhaps others from non-programming backgrounds will consider this project as an invitation to download and tinker with code.

Please submit errors, additions, improvements, and suggested omissions using the GitHub Issue Tracker. Nothing posted in the modern day mead-halls of Facebook Groups will be read by those who maintain this book.

All readers may use, copy, modify, and distribute this book and its files. Hard copies are available. Custom builds are available for companies, universities, and others. Please contact CRDS for more information about how to use intellectual property for this book or make content contributions. The contact is [postmaster\(at\)cumulativerecords.org](mailto:postmaster@cumulativerecords.org).

The Behavior Analyst Certification Board provided a copyright license for use of the BCBA/BCaBA Task List, 4th and 5th editions. No reprinting of those materials are allowed without the express written consent of the BCBA/BCaBA. Statements of free and open source licensing of this book do not apply to the BCBA/BCaBA Task List, which is the sole property of the Behavior Analyst Certification Board. For more information, visit www.bacb.com.

Some of the content in this book builds upon work from contributors to its first edition. This book represents significant revision, rewriting, and reorganization, to the point that it is a completely different book representing original content. The first edition continues to be available through the GitHub repositories. It has been made publicly available under a Creative Commons 4.0 - Attribution - Sharealike - Noncommercial license since 2017.

Chapter 1

About This Book

This book was made by GNU/Linux computers, under supervision of a BCBA.

The second edition has advantages over the first. Its user license guarantees the freedoms specified under the Creative Commons 4.0 - Attribution - Sharealike - Non-commercial (CC 4.0-BY-SA-NC). The license provides readers with the freedom to use, copy, modify, and distribute the book non-commercially. This is a good thing for behavior analysts because we like to customize everything. Modified and copied versions retain the same freedoms as the original work. There is no need to ask the publisher for permission to reprint the book's contents.

However, no amount of licensing is useful if users have difficulty accessing the full manuscript text in an editable format. This version uses a typesetting system that users can easily customize. It is maintained by Cumulative Records Documentation Society (CRDS), a 501(c)(3) nonprofit. The nonprofit has secured a lifelong sponsorship from GitHub to host the full manuscript and source code. This means you can re-brand with your company name, change the contents or sections, etc. It also means the book can be improved by creating an Issue in GitHub, which a maintainer from the nonprofit can address. Such changes will improve the main version of the book, distributed to all. All previous versions will remain available. The technology has incredible applications for behavior analysts. CRDS is a BACB-authorized continuing education provider and will offer workshops to help users take advantage of these capabilities.

These advancements make the second edition far superior to the traditional "all rights reserved" copyright used in the first edition printings. This edition also offers superior typesetting technology. Content is better due to richer connections to the literature, more performance measures for assessment, and more generality in examples.

The book is distributed freely with paper copies sold at a reasonable price. The profits go to a public charity (CRDS) to advance the contents of the book.

1.1 History of the TrainABA Supervision Curriculum Series

This book originated from a project from TrainABA, a startup organization from 2013-2016. Its goal was to function as a publisher and resource for behavior analysis supervision. It was unsuccessful. When TrainABA closed, the publisher released its works under a Creative Commons 4.0 - Attribution - Sharealike - Non-commercial license. Some of its works survived as a project, such as the free Moodle Course, manuscripts, and SAFMEDs app. These works were donated to CRDS to be developed as a community edition for public use.

1.2 Publisher

The publisher is CRDS, a 501(c)(3) nonprofit based in Los Angeles, California, USA. CRDS produces archive-quality continuing education materials for public use. CRDS employs technical producers and project maintainers to develop and distribute works. CRDS survives on the generosity of its members. If your company uses these materials, we ask that you donate a reasonable amount to support the cause. The donation is to make sure these high-quality materials will continue to be available to your company in the future. To make a donation, or to become a member, please visit <http://cumulativerecords.org>.

1.3 Collaboration Tools

CRDS built this book using collaboration tools from software developers. Anyone can contribute or suggest changes for free. There will be a permanent public record of any such collaboration. We encourage readers to report errors using the Issue Tracker on our GitHub repository. The location is: <https://github.com/cumulativerecords/trainaba-v1-ed2/issues>

1.3.1 Creating New Materials from This Book

Readers can and should extend the book's contents (e.g., build a slideshow to be used where one works or teaches). All readers are invited to suggest changes to this book using the GitHub repository. For readers who have modified the contents to be used where they work or teach, we ask that you submit your materials to CRDS so that we can make them available to other readers. We believe this will afford us the opportunity to have one or two well-developed versions of a work,

which are compatible with the original book. We believe one organized version is better than multiple partially-developed, incompatible but similar works.

1.4 Versions

The typesetting system used to compile this work is very flexible. It can compile a similar version for nearly any page size with a very simple change in code. It is designed to provide maximum flexibility to readers, who are often supervisors and educators with a need to use only certain sections of this work. By downloading the source code, readers are able to pick and choose which sections of the book to compile. They can rebrand the book to indicate that they modified the original version. We encourage readers to tinker with the source code to download modified versions of the work. It is surprisingly easy to make a mobile-friendly version of this book. One can also make a new version for each month in a supervision setting, for example. CRDS is available to provide customizations. To request a custom size or version, contact CRDS at <http://cumulativerecords.org/contact>.

Chapter 2

Introduction

The benefit to TrainABA supervision curriculum is the freedoms its license provides. Behavior analysts can readily assign definitions, examples, performance measures, related tasks, and recommended readings for each task list item. Contents are available in plain text. Modifications are encouraged under the license terms. The book interiors are organized with the L^AT_EX typesetting system to compile custom PDF documents. Later sections of this book describe the Creative Commons 4.0 (CC 4.0) license and how to use it.

TrainABA supervision curriculum was designed in 2015 as a “vanilla base” to be customized by users for specific needs. At the time, the best available plan was to build a project that could distribute updates and releases. The vanilla model was an alternative to using random, apocryphal materials. Unknown sources use unknown licenses, inadvertently inviting infringement of intellectual property. Apocryphal materials are not distributed. When users cannot track modified versions, improved versions may go unnoticed because search engines prioritize older versions. For the second edition, TrainABA moved the project to Cumulative Records Documentation Society (CRDS), a 501(c)(3) nonprofit.

TrainABA has long-term support thanks to its licenses, CRDS, and GitHub. CRDS provides staff to manage the development of TrainABA materials. GitHub, a software development company, provided CRDS with a lifelong donation to its platform. GitHub’s platform gives TrainABA a distribution platform, issue tracker, and version control with releases.

Customizations are expected in professional settings. Supervisors customize materials for cohorts. Interns modify sections as preparation for the exam. Behavioral service providers operate by service hours where speed counts. The license used by TrainABA allows users to bootstrap their own materials by repurposing TrainABA book content, add to it, and redistribute those modifications for non-commercial use. The modified contents can be made available to the general behavior analysis community. All of these activities are lawful under the freedoms

specified in TrainABA's license. Organizations can rely on TrainABA curriculum as a long-term strategy due to the license. TrainABA relies on donations to CRDS to continue developing TrainABA.

The CC 4.0 license offers freedoms for professionals. Traditional copyright licenses require users to obtain written permission from publishers for every use of copyrighted materials. Behavior analysts tend to avoid this step in professional settings. The CC 4.0 license is a better fit. It allows anyone to copy, modify, and redistribute materials for non-commercial use.

This book represents a second edition of the TrainABA Supervision Curriculum system released in 2015.

The items listed below reflect the initial features of the TrainABA Supervision Curriculum systems. All of these have been made available for a number of years under open source licenses. The volumes include:

1. TrainABA Supervision Curriculum: BCBA Reference Manual (Volume 1)
2. TrainABA Supervision Curriculum: Independent Fieldwork (Volume 2)
3. TrainABA Supervision Curriculum: RBT Credential (Volume 3)

Target outcomes include:

- Grow management teams with less challenges
- Get from start to finish with a page-by-page, week-by-week program (from supervision contract to fieldwork to BACB® application)
- (Removed because the BACB® created an alternative) Find systems to help you track supervision hours and signature forms to email to the BACB®
- Use Individual and Group meeting agendas
- Save time by bootstrapping materials from TrainABA contents
- Check pre-assigned homework
- Track ongoing progress on the 4th Edition Task List™ assessment
- Prepare for BACB®-exam with test topics built into fieldwork
- Organize essential supervision materials and meetings in one place, accessible by mobile or desktop devices

TrainABA was a BACB®-Approved Continuing Education (ACE) provider from 2014-2016. It specialized in responding to supervision-related problems that were complex and time-consuming. A different ACE provider was selected to provide TrainABA-related continuing education events beginning in 2019. Its name is Cumulative Records Documentation Society (CRDS).

The 4th Edition Task List™ face sheets were organized by “segments” to make it easier to complete and check homework assignments. Segments were a special term created for the first edition. “Modules” is a more universal term conveying the same meaning. The second edition uses the term modules in place of segments.

TrainABA Supervision Curriculum: Independent Fieldwork contains exercises for the supervisee to complete in a week-by-week progression that cover all 168 items on the 4th Edition Task List with the following:

1. Individual meeting agendas
2. Group meeting agendas
3. Ongoing homework assignments
4. 4th Edition Task List™ assessment

Remember that documentation guidelines are not included in the TrainABA supervision curriculum. Follow procedures provided directly by the board.

Chapter 3

Supervision Taxonomy

In this chapter:

1. What is ABA supervision?
2. A Taxonomy of ABA supervision
3. BACB® Influence in the Development of Formal Behavior Analysis Supervision

What is ABA Supervision?

Most definitions indicate that it is the act of providing supervision or oversight, involving directing in relation to execution and performance.

Supervision in Management

“Supervision” is most used in relation to business administration, in the realm of management. Human supervisors are employed to supervise humans and systems.

Supervision of Humans and Systems

It would be unusual to use the term “supervisor” to describe a machine that monitors information (including that generated by a human), or to describe a human that oversees information generated solely by a machine. The typical use of the word, “supervisor” implies a human to human interaction related to execution or performance.

Supervision in ABA Settings

The words, “execution” and “performance” are commonly used in business settings and could be used within the context of behavior analysis. However, more precise language further locates “supervision” in the field of applied behavior analysis. A manager at a typical business corporation “supervises” an employee to monitor performance and execution of tasks. In ABA settings, managers would more likely say they, “supervise staff to measure how effectively they implement a behavioral plan.”

Direct vs. Indirect ABA Supervision

One might also describe ABA supervision as, “Overseeing direct implementation”

or “following the procedures. An ABA subordinate may be evaluated on procedural integrity, procedural drift, and other direct measures of staff performance. The client’s progress may be a direct measure of the subordinate’s performance. However, client progress is an indirect measure of supervision efficacy. Increase of Management Problems in ABA Organizations

The proliferation of autism behavior services has accompanied the rise in management problems at private practice ABA agencies, centers, and special education school settings. Management at such organizations have not widely adopted management practices to solve the repetitive problems occurring at the workplace in daily operations. What maintains management problems? The organization’s decision makers:

1. Do not know how to identify the problem.
2. Do not know how to solve it.
3. Have attempted solutions in the past, believing they exhausted possible solutions.
4. Lack resources such as consultants and management workshops.

The above reasons are potential barriers if all resources are equal. However, more important barriers include time constraints, lack of money to pay consultants, and a tendency to focus on work that is expressly billable as opposed to management strategies, which require time, creativity, and a willingness to gather and analyze data over time to find “what works” at a particular organization using an experimental approach. What Is Being Done

It is perhaps surprising that behavior analysis professionals are not leading the managerial movement to solve such problems, given the curious nature of behavior analysis professionals and their propensity for solving problems in the world around them.

A Taxonomy of ABA Supervision

In the 8 Hour Supervisor Training workshops, TrainABA moderators generally introduce the supervision taxonomy by addressing the “big picture” of policy-level issues governing the professional practice of applied behavior analysis. The presenter posits that such policy both necessitated and helped define how ABA supervision would be practiced. Policy varies across countries, states, and provinces, and various funding sources share properties with specific differences.

As such, we acknowledge that no single “source,” whether an academic, private, or government model created ABA supervision. It has evolved with the proliferation of professional behavior analytic services for individuals with developmental disabilities, namely autism. ABA supervision existed prior to the formation

of the Behavior Analyst Certification Board®(BACB®) in 1999. However, the BACB®has grown. It has served as the primary centralized regulatory organization for professional ABA services.

After introductions, the workshop presenter often asks the following set of questions:

1. How Does Policy Influence How Funding Sources Choose Providers?
2. How do funding source requirements influence the professional practice of applied behavior analysis services?

In the USA, the answer is generally that policy is written and a licensing body enforces compliance. However, the professional practice of behavior analysis is currently experiencing an early stage developmental period. More states are passing legislation. Some states are still in the process of licensure for ABA professionals.

Generally, the process involves policy language for licensure that acknowledges the BACB®certification credential and identifies an established licensing board to regulate practitioners. Other practices, such as psychology, have their own licensing boards and may opt to include behavior analysts within their board.

Other service delivery professions, such as psychology, have similar requirements as the BACB®, such as required education, supervised experience (1500 hours), ethical compliance code, continuing education requirements, etc.

As states adapt to the growing demand for professional behavior analytic services, many have acknowledged the BACB®certification as a requirement for billing. The BACB®is not a licensing body but serves as the central regulatory body for certified professional behavior analysts. It is the authoritative body for certification and credentialing in professional ABA services around the world. The BACB®is an influential global organization. Its international impact has been possible, in part, because it is not bound by a specific state or federal government. Such would not be the case if the BACB®was created as a licensing organization in Florida, its state of origin. The BACB®is currently headquartered in Littleton, Colorado, USA. Its strong influence in shaping the practice of professional behavior analysis services merits a prominent role in a taxonomy for ABA supervision today.

- Licensing body standardizes practitioner KSAs, ethics, practice (medicine, psychology, counseling, etc.).
- If no licensing body available, some authoritative body for certification or credentialing assumes that role (BACB in 1998).

BACB®Influence in the Development of Formal Behavior Analysis Supervision

In recent years, the BACB®has established a model for the professional delivery of behavior analytic services for insurance providers. It involved a hierarchy upon which a BCBA or BCBA-D oversees a BCaBA, who supervises a behavior technician. It is common practice for companies to omit the BCaBA. In such cases, the BCBA or BCBA-D may oversee the behavior technicians directly.

Individuals with BACB®certification are not required to supervise. Some certified practitioners work directly with clients, particularly in group home settings and other consulting situations where monthly hours are low and hiring a direct implementation professional would not be appropriate. However, the global rise in autism diagnoses has warranted a high demand for appropriate structure of professional behavior analytic services that serve children with autism. Such services are delivered in homes, schools, and centers. Applied behavior analysis practitioners typically train and supervise professionals who implement behavior analytic programming directly with staff.

Generally, the certificant acts as a supervisor who analyzes data, conducts most or all elements of the assessment, designs and develops behavioral programming, and reports on progress. It is typical for ABA certificants to function in a supervisory role under such a service delivery model. However, not every certificant supervises staff.

Most, but not all certificants, supervise clinical staff. Some work directly with clients or in research roles.

The BACB®established the BCBA, BCBA-D and BCaBA credentials in its early years.

In the summer 2014, the BACB®introduced the Registered Behavior Technician (RBT) Credential. This was a standardized credential for individuals who provided direct implementation of behavior analysis programs.

It should be noted that some confusion over terminology has arisen among practitioners as the RBT credential is becoming more common.

A rule-of-thumb:

“Certification” is for Supervisors and “credentialing” is for Direct Implementation staff.

The ABA Supervision taxonomy, therefore, applies to individuals who either hold or are candidates for BACB®certification. RBT Credentialees are supervised by individuals who hold a BACB®certification. However, credentialees do not supervise.

We draw this distinction to help define and locate the meaning of an ABA supervisor. The following chart identifies the basic difference in requirements for supervisors – ABA certification – versus those they supervise – RBT credentialees.

(This book is NOT for developing behavior technicians.)

Behavior Technicians

ABA Credential

- RBT Training
- High school diploma
- RBT 40 hour Training
- RBT Assessment
- Fingerprints/RBT application

Ongoing Quality Assurance

- Ethical/Disciplinary Standards
- Ongoing supervision

*BCaBAs require ongoing supervision from a BCBA or BCBA-D

The following chart depicts the typical arrangement for ABA service delivery for an organization whose staff hold BACB® credentials.

In the above chart, where is the candidate – the intern who is accruing hours toward satisfaction of her or his credential application criteria?

Suppose the position is called the supervisor intern. Is the supervisor intern billable? Herein lies the problem – or solution – for many ABA professionals around the world.

Consider an *intern supervisor*, a clinical supervisor who does not hold a certification and is actively accruing supervision hours while working for a behavioral services provider. The position exists in underserved areas where demand for behavioral services is higher than the supply of certified practitioners.

How does a behavioral service provider bill for the worker? Policy may be available to guide decision-making. Funding sources may offer guidelines. The challenge at the policy-level is to provide enough legislation to safeguard clients with qualified service providers. Legislation that is too rigid makes it difficult for companies to “keep the lights on,” or meet minimum expenses to turn a profit. Often, practitioners assume that a company is making a lot of money because they see clients, employees, laptops, trainings, catered lunches, and office space. Yet organizations in the ABA industry must exercise restraint and deliberation for their business practices. For example, what happens when a company can only be paid for services provided by a BCBA, yet all the BCBA's in the area are gainfully employed?

Say a local university observes the growing demand for professional behavior analysts has increased. That university creates a certification program as a hybrid or standalone master's degree that satisfies the university hours required by the BACB. A few years pass. The university has graduated its first class. Yet the

university does not have a practicum and it is the responsibility of the graduates to complete their supervised experience hours. What would the students do? They would reach out to local companies for employment – after all, it will soon be time to repay student loans – in hopes that a company can provide a training system for the individual.

The recent graduate may face a mixed landscape, shaped by the contingencies the company faces for promoting and/or billing for that supervisor intern. There are a few common scenarios:

- Two local funding sources reimburses companies ONLY for supervision hours performed by a BCBA.
- One source formally allows the agency to have the supervision hours performed at the rate of a Behavior Technician (lower rate).
- The other source does not reimburse work performed by a non-credentialed supervisor. They will discontinue services unless all supervisor hours are performed by a credential holder.

Case Study: Associated Aardvarks for Autism (AAA)

Associated Aardvarks for Autism (AAA) was a fictitious ABA agency. Their directory was tasked with deciding whether to offer an internship program for university graduates of a local ABA master's program. AAA would select one intern to pilot the program. The internship was meant to fulfill the 1,500 hours of supervised experience toward the BCBA® credential. AAA hoped the program would result in developing a new supervisor who could be on the AAA team, rising from the ranks of the company. This supervisor would, AAA presumed, be more loyal to AAA in appreciation for the internship. Also, the intern would have learned how to get things done at AAA. These were attractive characteristics that were almost impossible to find from outside BCBA®s, which were in scarce supply anyway.

AAA's Accountant

AAA's director asked the accounting department to create Table 2.1, which summarized cashflow for the internship. The accountant assumed they would hire the intern at \$45,000. That included a 50-week year at 30 hour/week, for which half of the hours were to be provided as direct implementation of behavioral programming. The engagement culminated in a complete 1,500-hour internship, satisfying the requirements toward the BACB®'s credentialing application.

The 30 hours per week led to the quickest possible completion of the supervised experience hours for the ABA credential internship. The accountant interviewed the clinical director and was informed that the BACB® permitted up to 50% of intern hours for direct implementation. What were the other hours? The accountant asked about scheduling meetings, billing, drive-time, and planning meetings that

were not clinical. Unfortunately, those things were considered “non-clinical” of “administrative” hours. They could not be counted toward the intern’s credentialing hours.

The accountant knew that at least half of the intern’s hours needed to be clinical but could not be direct implementation of behavioral programming. For that reason, the accountant only calculated 15 hours per week of billable work for the intern to serve as a behavior technician. He knew the other half included program development, report writing, parent education, and staff training. The company had one funding source that allowed interns to bill for these services. However, two other funding sources required the full credential for reimbursement. For that reason, the accountant described the “other 50%,” as he called it, as a gray area category that may or may not be billable. But how could he help offset more of the cost of internship, so the company would not have to pay so much money out of pocket?

Funding Sources

The accountant considered the types of reimbursement contingencies the company faced. The most lenient funding sources allowed the company to bill for the intern’s program development and report writing, generally under the supervision of a credentialed individual. Other funding sources will not pay for any supervisor hours performed by a non-credentialed ABA professional. The most conservative funding sources only reimburse for supervision performed in the presence of the client by a credentialed ABA professional.

In the AAA Company for Table 2.1, the funding source allowed only direct implementation hours to be billed by the intern. These hours are performed by a behavior technician and take the form of direct service.

The accountant recommended AAA to minimize the out-of-pocket expense of the internship by assigning a salaried individual as the supervisor for the 75 hours a supervisor would need to spend supervising that intern. The director asked how much money that would save.

Estimating Supervision Costs

The accountant created Table 2.2 to estimate costs if the intern’s supervisor would have been paid hourly. The table reflected \$45 per hour for the supervisor wage. It was a safe estimate considering the BACB® and Association of Professional Behavior Analysts (APBA) 2012 study which showed that most supervisor hours were reimbursed \$40-50 per hour. The accountant found those data in a BACB® newsletter from 2012. The director forwarded those emails to him regularly. He was glad to have the opportunity to show he had read them.

Billing for Parent Education Groups

AAA also recognized that the intern could run Parent Education Groups as part

of their 50% of non-direct implementation hours. Fortunately, AAA could be reimbursed for these hours. It was not a huge savings, but it neutralized some of the costs of the intern's hourly rate. The Parent Education Groups only added 4 hours per week to the Intern's workload.

Consulting the Clinical Director

The accountant approached the clinical director for ideas on the rest of the internship hours. It looked like AAA needed to meet the 30 hours per week in the agreement but they were short. Adding 1.5 hours per week of supervision, 4 hours for parent education, and 15 hours of direct implementation left a deficit of 9.5 hours to fill. The company met those hours by scheduling the intern for staff training, along with program development and report writing for clients on the intern's direct implementation caseload.

Putting It Together

As a result, the intern was able to satisfy a requirement toward the BACB® credential application and was paid \$45,000 for the year. Admittedly, it was not a huge amount of money for someone with a master's degree. The intern felt it was fair because she was only asked to work 30 hours per week. There were some travel time hours and expenses, which were handled separately in compliance with law. The company ultimately lost \$12,750 for the year.

AAA knew they would lose the money this year but hoped the intern would pass the credentialing exam soon and stay with AAA, billing at a full supervisor rate. That would allow AAA to earn a higher reimbursement rate for the hours the supervisor worked. More importantly, it meant AAA could add some clients from their waiting list, placing these clients on the new supervisor's caseload.

A Risk for the Company

AAA recognized that the main incentive for a company to sponsor an intern was the possibility of serving more clients once the intern earned the credential. It was a gamble for AAA. Not every intern passed the credentialing exam. In this case, they requested transcripts from the possible interns they were considering. They wanted an intern with the highest possible grades because they believed previous academic performance suggested a history of work habits and a higher likelihood of having acquired the skills needed to pass the credential exam.

Final Decision

AAA knew that other ABA agencies in the area were using contracts to keep interns at their companies for long enough to recoup the cost of the internship. They weighed the pros and cons of contracts but chose to revisit that issue at a later date.

Ultimately, they were ambivalent about the internship. The director said, "If someone told you to pay \$12,750 today and there was only a 58% you could get that money back in 2 years, would you invest?" She was referring to passing rates

on the exam. The clinical director looked up the university pass rates for graduates of that local program and found that 60% of graduates passed the exam on the first try.

These data did not impress the director. The decision was made to offer the internship as a trial. The clinical director selected a salaried supervisor and put pressure on her to make sure the intern learned the BACB® 4th Edition Task List fully. “If she doesn’t pass the exam, I’m holding you responsible,” said the clinical director. The supervisor accepted the challenge and implemented the procedures in Section 2 of the TrainABA supervised experience book. Years later, the intern had passed the exam on her first attempt and was successfully managing a caseload of 12 clients. She was a success story. AAA realized that not all internship stories have happy endings.

See the following pages for Table 2.1 and 2.2 to see what the accountant gave the director at AAA.

Resources for the Supervised Experience Process Items in Bold are required by the BACB® for credentialing. Non-bold items are supplemental materials.

Supervisee

1. Contract 2. BACB.com module a. “Registration” (See page 23) 2. Clients (generally) 3. 4th Ed. Task List 4. Experience Verification Forms 5. Supplementary Materials 6. Homework

Supervisor

1. Contract 2. BACB.com module 3. Clients 4. 4th Ed. Task List a. Assessment b. Meeting agendas 2. Experience Verification Forms 3. Supplementary Materials 4. Homework 5. Create Performance Management Plan a. Personal Development b. Modeled after IEP, BSP, PBIP 2. Ongoing Payment a. Company b. University c. Private pay 2. Time Retainer 3. Technology a. Journals, online videos, etc. 4. Communication a. Synchronous: Phone, streaming webcam, video chat b. Asynchronous: Email, recorded audio/video

Beyond the Taxonomy

Have you located yourself as an ABA supervisor in the taxonomy? Can you write the steps of the Supervised Experience Process? If not, please review the charts above. The goal of this chapter was to identify the type of supervision you offer, or plan to offer, as a supervisor in the field of applied behavior analysis.

The next chapter identifies pre-requisites needed for supervising certification candidates. It includes checklists to identify the requirements.

Rules and Guidelines for Supervision of BACB® Experience Hours

This document reflects the BACB®’s recent supervision standards, effective January 1, 2015.

BACB® Rules for Supervision

1. Each supervisee must have a valid supervision contract. Multiple exemplars and comprehensive guidelines are available at bacb.com 2. Each supervisor must have completed both of the following by December 31, 2014. a. Complete 8 Hour Supervisor Training from a BACB®ACE provider (Available from TrainABA as a live webinar) b. Complete an online, competency-based supervision module on BACB.com c. Complete 3 CEUs for supervision for every recertification cycle 3. Each supervision period is 2 consecutive weeks 4. Ratio of Independent Fieldwork to Direct Supervision must be no less than 5% by the end of the 2 week period (You MUST provide Direct Supervision 5% or more of their Independent Fieldwork by the end of each 2-week period.) 5. Per 2 week supervision period, no more than 50% of supervision can be direct care. The other 50%+ must be behavior analytic in nature 6. Start/end dates may not be more than 5 years apart. 7. Supervision must be face to face. Real-time video is okay. Think of Google Hangouts, FaceTime, Skype, etc. 8. 5% of 1500 hours = 75 hours of independent fieldwork experience 9. Supervision hours may be counted toward total experience hours 10. No more than 50 percent of supervision (per 2-week period) can be in a group format 11. Group maximum = 10 supervisees 12. You do not need to provide Direct Supervision every week 13. Must meet at least once for every 2 week period 14. Content must be behavior analytic (Do not discuss billing, travel time, non-clinical scheduling, etc.)

Mathematical Assumptions

- Supervisors must provide 5% of 1,500 Independent Fieldwork hours = 75 hours
- Supervision period is two weeks in duration • (75 hours total) DIVIDED BY (maximum of 3 hours per 2-week period) = 25 meetings, one per 2 weeks
- Up to 50% of supervised experience hours can be delivered in group format
- Therefore, deliver group supervision meetings that are 1.5 hours in duration, once per 2 week period
- Also provide individual supervision for 1.5 hours in duration for each 2 week period
- Given the math above, Train ABA recommends you make group supervision meetings 1.5 hours long (90 minutes) for full time staff. We built the agendas around the 90 minute model
- If your supervisees do not work 30 hours per week during both weeks of the 2-week supervision period, you will need to adjust the math to provide exactly 5% of the hours they provided. See rules below.

Rules for Calculating How Many Hours Your Supervisee Has Completed

1. Your supervisee must work at least 10 and up to 30 hours during both weeks of each 2-week supervision period
2. You must provide supervision for 5% of these hours
3. You do not need to provide exactly 50% of group supervision every 2-week period, but we use that model for this protocol because it makes the math easier
4. When your supervisee works less than the expected amount of hours for a week or 2-week period, adjust your supervision hours to equal 5% of their hours worked
5. If they work more than 30 hours in one week, the company can pay wages but

the BACB® will not recognize extra hours

Registration Process

There is a new BACB® requirement for supervisees to “register” before beginning Experience Hours. It was first mentioned in the BACB®’s September 2012 Newsletter. The Supervisor must complete the module immediately if she has not already done so. All supervisees must complete the process at the outset of the supervised fieldwork.

The registration process has two steps:

1. Create a login at bacb.com®
2. In that login, complete the same Supervision Policies Module required by individuals who wish to supervise those accruing Experience Hours. In plain English, your supervisees must complete the same supervision module as you. Additionally, they are expected to do it at the outset of supervision. Some supervisees may not know of this requirement. Please advise your supervisees to complete this module immediately. It takes approximately 1.5 hours and is available free of charge.

NOTE: Supervisees need only complete the module once, regardless of how many approved supervisors with whom they have completed Supervised Experience.

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Chapter 4

Refresher: Supervisor Workshop

This chapter contains key takeaways from the general 8-Hour Supervisor Training Workshop curriculum.

The BACB®8-Hour Supervisor Training Workshop curriculum has 6 sections:

1. Purpose of Supervision
2. Features of Supervision
3. Behavioral Skills Training
4. Delivering Performance Feedback
5. Evaluating the Effects of Supervision
6. Ongoing Professional Feedback

These sections are summarized briefly in visuals and charts below. This chapter is meant to serve as a refresher for the concepts presented in the 8-Hour Supervisor Training workshop. It is not a substitute for the workshop. These materials were taken from the TrainABA 8-Hour Supervisor Training Workshop.

4.1 Purpose of Supervision

“The purpose of supervision is to improve and maintain the behavior-analytic, professional and ethical repertoires of the supervisee and facilitate the delivery of high-quality services to his/her clients.” –BACB®8-Hour Curriculum Training Outline, 2012

4.2 Features of Supervision

The following items were considered appropriate supervision activities according to the BACB's initial supervision curriculum.

- Focus on developing new ABA skills
- Use BACB® Fourth Edition Task List
- Follow 7 Dimensions of Behavior Analysis (BATCAGE) (Baer, Wolf, & Risley, 1968)
- Give supervisees multiple sites, varied experiences, different supervisors
- Conducting assessments to determine the need for behavioral intervention
- Designing, implementing, & systematically monitoring skill-acquisition and behavior- reduction programs
- Oversee implementation of behavior-analytic programs by others
- Training, designing behavioral systems, and performance management
- Using behavioral skills training to Model and rehearse various behavior analytic skills and procedures.
- Engaging in role-play scenarios in natural and contrived situations for various skills
- Other items directly related to ABA

The following items were considered inappropriate supervision activities according to the BACB's initial supervision curriculum. These items represent inappropriate supervision activities. They are non-examples of content for group supervision meetings.

- Attending meetings with little or no behavior-analytic content
- Scheduling, travel time, billing
- Using unproven or non-behavior analytic interventions
- Non-behavioral administrative activities, non-behavioral assessments (diagnostic or intellectual assessments)

4.3 Features of Supervision

(Chart pending).

4.4 Using Behavioral Skills Training

Why is Behavioral Skills Training (BST) popular in ABA supervision now?

In 2012, the Behavior Analyst Certification Board® created a document called the “Supervision Training Curriculum Outline.” It contained the required topics for Approved-Continuing Education (ACE) providers who would provide the 8-Hour Supervisor Training curriculum. Section (3) of this (6) section document was titled, “Behavioral Skills Training (BST).”

BST is found in various JABA articles and books by behavior analysts. Perhaps the best example of BST is found in Raymond Miltenberger’s 2011 textbook, “Behavior Modification Principles and Procedures.”

An 8-step BST procedure is outlined on the following page.

4.4.1 Behavioral Skills Training

(Note: This chart needs to be revised for the LaTeX edition.)

1. Provide a rationale for why the target skills are to be trained
2. Provide a succinct, written description (instructions) of the target skills
3. Scripts are included in this document. Be sure to provide a script to employees.
4. Provide a detailed, vocal description (instructions) of the target skills
5. a. Trainer reads script aloud to trainee
6. 4. Demonstrate (model) each of the target skills
7. a. Trainer is first to role play, demonstrating correct behavior for trainee
8. b. Include examples and non-examples
9. c. If training scenario is a non-example, trainer deviates from script and scenario is terminated with positive feedback.
10. 5. Require trainee to practice (rehearse) each target skill
11. a. Trainee role plays scenarios from the list

12. b. Include examples and non-examples
13. c. If training scenario is a non-example, trainee deviates from script and scenario is terminated with positive feedback
14. 6. Provide positive and corrective feedback to supervisee
15. a. Provide it vocally, immediately following trainee role play
16. b. Deliver positive feedback to trainee throughout training, aiming for 4:1 ratio
17. c. Deliver corrective feedback directly.
18. 7. Repeat the previous step until supervisee performs each target skill correctly
19. 8. Assess application and generalization of skills to new targets, clients, and settings, when appropriate

4.5 Delivering Performance Feedback

Corrective Feedback

1. 1. Provide an empathy statement
2. 2. Describe ineffective performance
3. 3. Provide a rationale for desired change in performance
4. 4. Provide instructions and demonstration for how to improve designated performance
5. 5. Provide opportunities to practice the desired performance
6. 6. Provide immediate feedback

4.6 Evaluating the Effects of Supervision

Evaluate supervision with evidence-based, intervention specific criteria for:

- • Client performance
- • Staff performance

- • Supervisory behavior

Ongoing Professional Development

1.03 Professional Development (+RBT)

Behavior analysts who engage in assessment, therapy, teaching, research, organizational consulting, or other professional activities maintain a reasonable level of awareness of current scientific and professional information in their fields of activity, and undertake ongoing efforts to maintain competence in the skills they use by reading the appropriate literature, attending conferences and conventions, participating in workshops, and/or obtaining Behavior Analyst Certification Board certification. –BACB Professional and Ethical Compliance Code, Ver. 9/23/2014

The supervisor should be able to describe the following methods for his/her ongoing professional development as a supervisor

- Creating a continuous learning community to enhance supervisory and training behavior
- Regular review of resources and research for best practices in supervision

The supervisor should be able to describe the following methods for his/her ongoing professional development as a supervisor and to the supervisee:

- Supervisory study groups
- Attending conferences
- Seeking peer review
- Seeking mentorship
- Regular review of resources and research relevant to supervisee's area of practice
- Seeking consultation when necessary

Chapter 5

A-01 Measure frequency (i.e., count).

5.1 Definition

Frequency - “A ratio of count per observation time; often expressed as count per standard unit of time and calculated by dividing the number of responses recorded by the number of standard units of time in which observations were conducted (Cooper, Heron, & Heward, 2007, p. 85).”*

5.2 Example

1. Hand Raising - A student is sitting in an hour long class. The student raises his hand 3 times to ask and answer questions during the class. The bell rings once and the student goes to his next class. Frequency of hand raising is 3 per hour.

5.3 Assessment

1. Ask your supervisee to identify the frequency of hand raising above.
2. Ask your supervisee to create another example and non-example of his/her own.
3. Have supervisee measure a frequency of a behavior on the job or in a role play.
4. Have supervisee graph the frequency measured on the job or in a role play.

5.4 Relevant Literature

- Alang, S., McAlpine, D., McCreedy, E., & Hardeman, R. (2017). Police brutality and black health: Setting the agenda for public health scholars. *American journal of public health*, 107(5), 662–665.
- Baer, D., Wolf, M., & Risley, T. (1987). Some still-current dimensions of applied behavior analysis. *Journal of Applied Behavior Analysis*, 20(4), 313–327.
- Clayton, D. (2018). Black lives matter and the civil rights movement: A comparative analysis of two social movements in the united states. *Journal of Black Studies*, 49(5), 448–480.

5.5 Related Lessons

I-01 Define behavior in observable and measurable terms.

H-01 Select a measurement system to obtain representative data given the dimensions of the behavior and the logistics of observing and recording.

FK-47 Identify the measurable dimensions of behavior (e.g., rate, duration, latency, interresponse time).

5.6 Footnotes

* Alternatively, frequency is not always defined synonymously with rate throughout the discipline of behavior analysis. Catania (2013, p. 443) defines frequency as “total responses over a fixed time, over a session of variable duration or, in trial procedure, over a fixed number of trials.” Cooper, Heron, & Heward (2007) functionally defines “count” as Catania defines “frequency.”

Chapter 6

A-02 Measure rate (i.e., count per unit time).

6.1 Definition

Rate - “A ratio of count per observation time; often expressed as count per standard unit of time and calculated by dividing the number of responses recorded by the number of number of standard units of time in which observations were conducted” (Cooper, Heron, & Heward, 2007, p. 85).*

6.2 Examples

1. Eating Chips: A young child is sitting at a table where there is a bag of potato chips. They eat 8 chips, stand up, and walk to the living room to watch TV for the rest of the hour. Rate of chip eating is 8 per hour.
2. Basketball Dribbles: Child is playing basketball for 30 minutes. Dribbles 7 times and then practices foul shots. He shoots 15 times and between each shot he dribbles 3 times. Frequency of dribbling is 52 dribbles per 30 minutes.

6.3 Assessment

1. Ask your supervisee to identify the frequency of chip eating or basketball dribbles in examples.
2. Have supervisee measure a frequency of a behavior on the job or in a role play.

6.4 Relevant Literature

- Alang, S., McAlpine, D., McCreedy, E., & Hardeman, R. (2017). Police brutality and black health: Setting the agenda for public health scholars. *American journal of public health*, 107(5), 662–665.
- Baer, D., Wolf, M., & Risley, T. (1987). Some still-current dimensions of applied behavior analysis. *Journal of Applied Behavior Analysis*, 20(4), 313–327.
- Clayton, D. (2018). Black lives matter and the civil rights movement: A comparative analysis of two social movements in the united states. *Journal of Black Studies*, 49(5), 448–480.

6.5 Related Lessons

I-01 Define behavior in observable and measurable terms.

H-01 Select a measurement system to obtain representative data given the dimensions of the behavior and the logistics of observing and recording.

FK-47 Identify the measurable dimensions of behavior (e.g., rate, duration, latency, interresponse time).

6.6 Footnotes

* Alternatively, rate is not always defined synonymously with frequency throughout the discipline of behavior analysis. Catania (2013) defines rate as “responses per unit time” (p. 458) but frequency as “total responses over a fixed time, over a session of variable duration or, in trial procedure, over a fixed number of trials” (p. 443) Cooper, Heron, & Heward (2007) functionally defines “count” whereas Catania defines “frequency.”

Chapter 7

A-03 Measure duration.

7.1 Definition

Duration – “A measure of the total extent of time in which a behavior occurs” (Cooper, Heron, & Heward, 2007, p. 79).

7.2 Examples

1. Sarah gets a fancy new piece of furniture from one of those Swedish companies. When it arrives, Sarah realizes that it is not assembled. She reads the complicated set of directions and begins putting it together at 2:12pm. Armed with a screwdriver and an Allen wrench, she consistently works to put it together until 3:43pm. Phew! Maybe next time she will order the one that comes fully assembled! The duration of the project was 1 hour and 31 minutes.
2. Benny gets a new yo-yo for his birthday and plays with it for 20 minutes after eating his cake and ice cream. He puts it down to play tag with his sister. The duration of yo-yo playing is 20 minutes.

7.3 Assessment

1. Ask your supervisee to identify the duration of furniture assembly from the example above
2. Ask your supervisee to create another example and non-example of his/her own

3. Have your supervisee measure the duration of another behavior on the job or in role-play.
4. Have the supervisee graph the duration of another behavior measured on the job or in a role-play.

7.4 Relevant Literature

- Alang, S., McAlpine, D., McCreedy, E., & Hardeman, R. (2017). Police brutality and black health: Setting the agenda for public health scholars. *American journal of public health*, 107(5), 662–665.
- Baer, D., Wolf, M., & Risley, T. (1987). Some still-current dimensions of applied behavior analysis. *Journal of Applied Behavior Analysis*, 20(4), 313–327.
- Clayton, D. (2018). Black lives matter and the civil rights movement: A comparative analysis of two social movements in the united states. *Journal of Black Studies*, 49(5), 448–480.

7.5 Related Lessons

H-01 Select a measurement system to obtain representative data given the dimensions of the behavior and the logistics of observing and recording.

I-01 Define behavior in observable and measurable terms.

FK-47 Identify the measurable dimensions of behavior (e.g., rate, duration, latency, interresponse time).

Chapter 8

A-04 Measure latency.

8.1 Definition

Latency - “A measure of temporal locus; the elapsed time from the onset of a stimulus (e.g., task direction, cue) to the initiation of a response” (Cooper, Heron, & Heward, 2007, p. 80).

8.2 Examples

1. Hitting the snooze button or hitting the break
2. Example: Gertrude is not a morning person. Her alarm goes off at precisely 5:30AM. She hears the annoying wail but doesn't respond immediately. After 32 seconds of beeping, she whacks the snooze button, rolls over and goes back to sleep. Latency to turning off the alarm is 32 seconds.
3. Example: Marty is driving down a country road. Out of nowhere a herd of deer dart out in front of his car. It takes Marty 5 seconds from the time he first sees the deer to hit the break. Latency from the time the deer are spotted to applying pressure to the break is 5 seconds.
4. Non-example: Gertrude is not a morning person. Her alarm goes off at precisely 5:30 AM. She does not respond to its annoying wailing and continues to sleep despite the noise. The alarm stops on its own 1 hour later.

8.3 Assessment

1. Ask your supervisee to identify the latency of a few responses of your choosing.

2. Ask your supervisee to create another example and non-example of his/her own.
3. Have your supervisee measure the latency to another behavior on the job or in role-play.

8.4 Relevant Literature

- Alang, S., McAlpine, D., McCreedy, E., & Hardeman, R. (2017). Police brutality and black health: Setting the agenda for public health scholars. *American journal of public health*, 107(5), 662–665.
- Baer, D., Wolf, M., & Risley, T. (1987). Some still-current dimensions of applied behavior analysis. *Journal of Applied Behavior Analysis*, 20(4), 313–327.
- Clayton, D. (2018). Black lives matter and the civil rights movement: A comparative analysis of two social movements in the united states. *Journal of Black Studies*, 49(5), 448–480.

8.5 Related Lessons

- H-01 Select a measurement system to obtain representative data given the dimensions of the behavior and the logistics of observing and recording.
- I-01 Define behavior in observable and measurable terms.
- FK-47 Identify the measurable dimensions of behavior (e.g., rate, duration, latency, interresponse time).
- A-05 Measure interresponse time (IRT).
- A-05 Measure interresponse time (IRT).
- I-01 Define behavior in observable and measurable terms.
- H-01 Select a measurement system to obtain representative data given the dimensions of the behavior and the logistics of observing and recording.
- A-06 Measure percent of occurrence.
- I-01 Define behavior in observable and measurable terms.
- H-01 Select a measurement system to obtain representative data given the dimensions of the behavior and the logistics of observing and recording.
- A-07 Measure trials to criterion.
- H-01 Select a measurement system to obtain representative data given the dimensions of the behavior and the logistics of observing and recording.
- H-03 Select a data display that effectively communicates relevant quantitative relations.
- A-08 Assess and interpret interobserver agreement.
- A-01 Measure frequency (i.e., count).

- A-09 Evaluate the accuracy and reliability of measurement procedures.
- B-02 Review and interpret articles from the behavior-analytic literature.
- G-06 Provide behavior-analytic services in collaboration with others who support and/or provide services to one's clients.
- H-02 Select a schedule of observation and recording periods.
- I-01 Define behavior in observable and measurable terms.
- I-05 Organize, analyze, and interpret observed data.
- J-09 Identify and address practical and ethical considerations when using experimental designs to demonstrate treatment effectiveness.
- K-05 Design and use systems for monitoring procedural integrity.
- A-09 Evaluate the accuracy and reliability of measurement procedures.
- A-01 Measure frequency (i.e., count).
- A-02 Measure rate (i.e., count per unit time).
- A-03 Measure duration.
- A-04 Measure latency.
- A-05 Measure interresponse time (IRT).
- A-06 Measure percent of occurrence.
- A-07 Measure trials to criterion.
- A-08 Assess and interpret interobserver agreement.
- 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.
- A-10 Design, plot, and interpret data using equal-interval graphs.
- 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.
- H-03 Select a data display that effectively communicates relevant quantitative relations.
- H-04 Evaluate changes in level, trend, and variability.
- H-05 Evaluate temporal relations between observed variables (within & between sessions, time series).
- J-15 Base decision-making on data displayed in various formats.
- A-11 Design, plot, and interpret data using a cumulative record to display data.
- A-10 Design, plot, and interpret data using equal-interval graphs.
- 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.
- H-03 Select a data display that effectively communicates relevant quantitative relations.
- H-04 Evaluate changes in level, trend, and variability.

- H-05 Evaluate temporal relations between observed variables (within & between sessions, time series).
- A-12 Design and implement continuous measurement procedures (e.g., event recording).
- A-09 Evaluate the accuracy and reliability of measurement procedures.
- H-01 Select a measurement system to obtain representative data given the dimensions of the behavior and the logistics of observing and recording.
- I-01 Define behavior in observable and measurable terms.
- FK-47 Identify the measurable dimensions of behavior (e.g., rate, duration, latency, interresponse time).
- FK-48 State the advantages and disadvantages of using continuous measurement procedures and discontinuous measurement procedures (e.g., partial- and whole-interval recording, momentary time sampling).
- A-13 Design and implement discontinuous measurement procedures (e.g., partial & whole interval, momentary time sampling).
- A-12 Design and implement continuous measurement procedures (e.g., event recording).
- H-01 Select a measurement system to obtain representative data given the dimensions of the behavior and the logistics of observing and recording.
- I-01 Define behavior in observable and measurable terms.
- FK-47 Identify the measurable dimensions of behavior (e.g., rate, duration, latency, interresponse time).
- FK-48 State the advantages and disadvantages of using continuous measurement procedures and discontinuous measurement procedures (e.g., partial- and whole-interval recording, momentary time sampling).
- A-14 Design and implement choice measures.
- I-07 Design and conduct preference assessments to identify putative reinforcers.
- J-04 Select intervention strategies based on client preferences.
- B-01 Use the dimensions of applied behavior analysis (Baer, Wolf, & Risley, 1968) to evaluate whether interventions are behavior analytic in nature.
- B-04 Use withdrawal/reversal designs.
- B-05 Use alternating treatments (i.e., multielement) designs.
- B-06 Use changing criterion designs.
- B-07 Use multiple baseline designs.
- B-09 Use combinations of design elements.
- B-11 Conduct a parametric analysis to determine the effective values of an independent variable.
- H-04 Evaluate changes in level, trend, and variability.
- I-01 Define behavior in observable and measurable terms.
- B-02 Review and interpret articles from the behavior-analytic literature.

B-01 Use the dimensions of applied behavior analysis (Baer, Wolf, & Risley, 1968) to evaluate whether interventions are behavior analytic in nature.

H-04 Evaluate changes in level, trend, and variability.

I-05 Organize, analyze, and interpret observed data.

FK-04 Empiricism

FK-09 Distinguish between the conceptual analysis of behavior, experimental analysis of behavior, applied behavior analysis, and behavioral service delivery.

FK-33 functional relations

Chapter 9

B-03 Systematically arrange independent variables to demonstrate their effects on dependent variables.

9.1 Definitions

Independent Variable - “The variable that is systematically manipulated by the researcher in an experiment to see whether changes in the independent variable produce reliable changes in the dependent variable. In applied behavior analysis, it is usually an environmental event or condition antecedent or consequent to the dependent variable. Sometimes called the intervention or treatment variable” (Cooper, Heron, & Heward, 2007, p. 697).

Dependent Variable - “The variable in an experiment measured to determine if it changes as a result of the manipulations of the independent variable; in applied behavior analysis, it represents some measure of a socially significant behavior” (Cooper et al. 2007, p. 693).

Dependent variables must be operationally defined to allow for consistent assessment and replication of the assessment process, measured repeatedly within and across controlled conditions, recording is assessed for consistency across the experiment using inter-observer agreement, and dependent variables must be socially significant to the individual or those around them. (Horner, Carr, Halle, McGee, Odom, & Wolery, 2005)

Experimental control is achieved when predicted change in the dependent variable (i.e., the behavior) covaries with manipulations of the independent variable (i.e., the intervention) showing the effectiveness of the independent variable on the dependent variable of a participant. (Horner et al., 2005)

9.2 Example

1. A student consistently disrupts group activities. When given visuals for appropriate behavior (i.e., quiet voice, calm body) paired with gestural redirection, disruptive behavior in group lessons decreases. The teacher then takes the visuals away for a week to see if fading these supports would be an option. The gestural redirection for inappropriate behavior is still in place. The student's disruptive behavior remains low. When the redirection is removed the following week. The student engages in increased disruptive behavior during this week, so the teacher decides to continue the gestural prompts and the disruptive behavior decreases again.
2. Non-example: A student with attention deficits consistently disrupts group activities. His teacher occasionally uses the visuals for appropriate behavior outlined in the BSP and the disruptive behavior does not decrease.

9.3 Assessment

1. Give supervisees article abstracts on single subject research. Have them identify the dependent variable and independent variable for the study.
2. Have supervisees identify the independent and dependent variables in the example listed above.
3. Have supervisees read Horner et al., (2005) The Use of Single-Subject Research to Identify Evidence-Based Practice in Special Education and complete a brief summary of the article and ask them to identify what compromises the integrity of a functional relationship and define the quality indicators outlined for effective single-subject research.

9.4 Relevant Literature

Alang, S., McAlpine, D., McCreedy, E., & Hardeman, R. (2017). Police brutality and black health: Setting the agenda for public health scholars. *American journal of public health*, 107(5), 662–665.

- Baer, D., Wolf, M., & Risley, T. (1987). Some still-current dimensions of applied behavior analysis. *Journal of Applied Behavior Analysis*, 20(4), 313–327.
- Clayton, D. (2018). Black lives matter and the civil rights movement: A comparative analysis of two social movements in the united states. *Journal of Black Studies*, 49(5), 448–480.

9.5 Related Lessons

- B-04 Use withdrawal/reversal designs.
- B-05 Use alternating treatments (i.e., multielement) designs.
- B-06 Use changing criterion designs.
- B-07 Use multiple baseline designs.
- B-09 Use combinations of design elements.
- B-11 Conduct a parametric analysis to determine the effective values of an independent variable.
- H-04 Evaluate changes in level, trend, and variability.
- I-01 Define behavior in observable and measurable terms.
- B-04 Use withdrawal/reversal designs.
- B-03 Systematically arrange independent variables to demonstrate their effects on dependent variables.
- J-09 Identify and address practical and ethical considerations when using experimental designs to demonstrate treatment effectiveness.
- B-05 Use alternating treatments (i.e., multielement) designs.
- B-03 Systematically arrange independent variables to demonstrate their effects on dependent variables.
- J-09 Identify and address practical and ethical considerations when using experimental designs to demonstrate treatment effectiveness.
- B-06 Use changing criterion designs.
- B-04 Use withdrawal/reversal designs.
- B-05 Use alternating treatments (i.e., multielement) designs.
- B-07 Use multiple baseline designs.
- B-09 Use combinations of design elements.
- B-11 Conduct a parametric analysis to determine the effective values of an independent variable.
- H-04 Evaluate changes in level, trend, and variability.
- I-01 Define behavior in observable and measurable terms.
- B-07 Use multiple baseline designs.
- B-03 Systematically arrange independent variables to demonstrate their effects on dependent variables.
- B-04 Use withdrawal/reversal designs.

- B-08 Use multiple probe designs.
- B-09 Use combinations of design elements.
- B-10 Conduct a component analysis to determine the effective components of an intervention package.
- B-11 Conduct a parametric analysis to determine the effective values of an independent variable.
- E-01 Use interventions based on manipulation of antecedents, such as motivating operations and discriminative stimuli.
- H-03 Select a data display that effectively communicates relevant quantitative relations.
- I-05 Organize, analyze, and interpret observed data.
- FK-33 functional relations
- B-08 Use multiple probe designs.
- B-03 Systematically arrange independent variables to demonstrate their effects on dependent variables.
- B-07 Use multiple baseline designs.
- 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.
- H-04 Evaluate changes in level, trend, and variability.
- I-05 Organize, analyze, and interpret observed data.
- FK-36 response generalization
- B-09 Use combinations of design elements.
- B-03 Systematically arrange independent variables to demonstrate their effects on dependent variables.
- B-07 Use multiple baseline designs.
- H-01 Select a measurement system to obtain representative data given the dimensions of the behavior and the logistics of observing and recording.
- I-05 Organize, analyze, and interpret observed data.
- B-10 Conduct a component analysis to determine the effective components of an intervention package.
- B-03 Systematically arrange independent variables to demonstrate their effects on dependent variables.
- B-11 Conduct a parametric analysis to determine the effective values of an independent variable.
- B-03 Systematically arrange independent variables to demonstrate their effects on dependent variables.
- FK-33 functional relations
- C-01 State and plan for the possible unwanted effects of reinforcement.
- D-01 Use positive and negative reinforcement.

- D-02 Use appropriate parameters and schedules of reinforcement.
- D-21 Use differential reinforcement (e.g., DRO, DRA, DRI, DRL, DRH).
- E-11 Use pairing procedures to establish new conditioned reinforcers and punishers.
- I-07 Design and conduct preference assessments to identify putative reinforcers.
- J-04 Select intervention strategies based on client preferences.
- J-05 Select intervention strategies based on the client's current repertoires.
- J-06 Select intervention strategies based on supporting environments.
- J-07 Select intervention strategies based on environmental and resource constraints.
- J-11 Program for stimulus and response generalization.
- C-02 State and plan for the possible unwanted effects of punishment.
- C-02 State and plan for the possible unwanted effects of punishment.
- D-16 Use positive and negative punishment.
- D-17 Use appropriate parameters and schedules of punishment.
- D-19 Use combinations of reinforcement with punishment and extinction.
- E-07 Plan for behavioral contrast effects.
- FK-31 behavioral contingencies
- C-03 State and plan for the possible unwanted effects of extinction.
- D-02 Use appropriate parameters and schedules of reinforcement.
- D-18 Use extinction.
- D-19 Use combinations of reinforcement with punishment and extinction.
- E-01 Use interventions based on manipulation of antecedents, such as motivating operations and discriminative stimuli.
- E-08 Use the matching law and recognize factors influencing choice.
- D-01 Use positive and negative reinforcement.
- C-01 State and plan for the possible unwanted effects of reinforcement.
- D-02 Use appropriate parameters and schedules of reinforcement.
- D-16 Use positive and negative punishment.
- D-17 Use appropriate parameters and schedules of punishment.
- D-19 Use combinations of reinforcement with punishment and extinction.
- D-20 Use response-independent (time-based) schedules of reinforcement (i.e., non-contingent reinforcement).
- D-21 Use differential reinforcement (e.g., DRO, DRA, DRI, DRL, DRH).
- E-10 Use the Premack principle.
- E-11 Use pairing procedures to establish new conditioned reinforcers and punishers.
- F-02 Use token economies and other conditioned reinforcement systems.
- FK-14 respondent conditioning (CS-CR)
- FK-15 operant conditioning
- FK-17 unconditioned reinforcement

FK-18 conditioned reinforcement
 FK-19 unconditioned punishment
 FK-20 conditioned punishment
 FK-21 schedules of reinforcement and punishment
 FK-23 automatic reinforcement and punishment
 D-02 Use appropriate parameters and schedules of reinforcement.
 . D-19 Use combinations of reinforcement with punishment and extinction.
 D-20 Use response-independent (time-based) schedules of reinforcement (i.e., non-contingent reinforcement).
 D-21 Use differential reinforcement (e.g., DRO, DRA, DRI, DRL, DRH).
 FK-21 schedules of reinforcement and punishment
 FK-40 matching law
 FK-41 contingency-shaped behavior
 D-03 Use prompts and prompt fading.
 D-04 Use modeling and imitation training.
 D-05 Use shaping.
 D-06 Use chaining.
 D-07 Conduct task analyses.
 D-08 Use discrete-trial and free-operant arrangements.
 E-01 Use interventions based on manipulation of antecedents, such as motivating operations and discriminative stimuli.
 E-02 Use discrimination training procedures.
 E-13 Use matching-to-sample procedures.
 FK-24 stimulus control
 D-04 Use modeling and imitation training.
 D-04 Use modeling and imitation training.
 D-05 Use shaping.
 D-01 Use positive and negative reinforcement.
 D-05 Use shaping.
 D-21 Use differential reinforcement (e.g., DRO, DRA, DRI, DRL, DRH).
 D-06 Use chaining.
 A-07 Measure trials to criterion.
 D-03 Use prompts and prompt fading.
 D-04 Use modeling and imitation training.
 D-05 Use shaping.
 E-01 Use interventions based on manipulation of antecedents, such as motivating operations and discriminative stimuli.
 E-02 Use discrimination training procedures.
 I-01 Define behavior in observable and measurable terms.
 J-03 Select intervention strategies based on task analysis.

- FK-10 behavior, response, response class
 - D-07 Conduct task analyses.
 - D-03 Use prompts and prompt fading.
 - D-05 Use shaping.
 - D-06 Use chaining.
 - D-08 Use discrete-trial and free-operant arrangements.
 - A-01 Measure frequency (i.e., count).
 - A-02 Measure rate (i.e., count per unit time).
 - A-07 Measure trials to criterion.
 - D-03 Use prompts and prompt fading.
 - E-01 Use interventions based on manipulation of antecedents, such as motivating operations and discriminative stimuli.
 - E-12 Use errorless learning procedures.
 - H-01 Select a measurement system to obtain representative data given the dimensions of the behavior and the logistics of observing and recording.
 - FK-10 behavior, response, response class
 - FK-11 environment, stimulus, stimulus class
 - D-09 Use the verbal operants as a basis for language assessment.
 - D-10 Use echoic training.
 - D-11 Use mand training.
 - D-12 Use tact training.
 - D-13 Use intraverbal training.
 - D-14 Use listener training.
 - FK-43 Echoics
 - FK-44 Mands
 - FK-45 Tacts
 - FK-46 Intraverbals
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- D-10 Use echoic training.
 - D-01 Use positive and negative reinforcement.
 - . D-04 Use modeling and imitation training.
 - FK-43 Echoics
 - D-11 Use mand training.
 - FK-44 Mands
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- D-12 Use tact training.
 - D-12 Use tact training.
 - FK-45 Tacts
 - D-13 Use intraverbal training.
 - D-13 Use intraverbal training.

FK-46 Intraverbals
D-14 Use listener training.
D-10 Use echoic training.
D-13 Use intraverbal training.
FK-43 Echoics
FK-44 Mands
FK-45 Tacts
FK-46 Intraverbals
D-15 Identify punishers.
D-16 Use positive and negative punishment.
D-17 Use appropriate parameters and schedules of punishment.
J-02 Identify potential interventions based on assessment results and the best available scientific evidence.
J-10 When a behavior is to be decreased, select an acceptable alternative behavior to be established or increased.
FK-19 unconditioned punishment
FK-20 conditioned punishment
FK-21 schedules of reinforcement and punishment
FK-23 automatic reinforcement and punishment
D-16 Use positive and negative punishment.
D-01 Use positive and negative reinforcement.
D-17 Use appropriate parameters and schedules of punishment.
D-19 Use combinations of reinforcement with punishment and extinction.
E-11 Use pairing procedures to establish new conditioned reinforcers and punishers.
G-07 Practice within one's limits of professional competence in applied behavior analysis, and obtain consultation, supervision, and training, or make referrals as necessary.
J-10 When a behavior is to be decreased, select an acceptable alternative behavior to be established or increased.
FK-19 unconditioned punishment
D-17 Use appropriate parameters and schedules of punishment.
D-16 Use positive and negative punishment.
D-15 Identify punishers.
D-19 Use combinations of reinforcement with punishment and extinction.
E-11 Use pairing procedures to establish new conditioned reinforcers and punishers.
G-07 Practice within one's limits of professional competence in applied behavior analysis, and obtain consultation, supervision, and training, or make referrals as necessary.

- J-10 When a behavior is to be decreased, select an acceptable alternative behavior to be established or increased.
- FK-19 unconditioned punishment
- D-18 Use extinction.
- C-03 State and plan for the possible unwanted effects of extinction.
- D-18 Use extinction.
- D-19 Use combinations of reinforcement with punishment and extinction.
- J-06 Select intervention strategies based on supporting environments.
- J-07 Select intervention strategies based on environmental and resource constraints.
- J-09 Identify and address practical and ethical considerations when using experimental designs to demonstrate treatment effectiveness.
- J-10 When a behavior is to be decreased, select an acceptable alternative behavior to be established or increased.
- D-19 Use combinations of reinforcement with punishment and extinction.
- B-10 Conduct a component analysis to determine the effective components of an intervention package.
- C-01 State and plan for the possible unwanted effects of reinforcement.
- C-02 State and plan for the possible unwanted effects of punishment.
- C-03 State and plan for the possible unwanted effects of extinction.
- D-01 Use positive and negative reinforcement.
- D-02 Use appropriate parameters and schedules of reinforcement.
- . D-15 Identify punishers.
- D-16 Use positive and negative punishment.
- D-17 Use appropriate parameters and schedules of punishment.
- D-18 Use extinction.
- D-20 Use response-independent (time-based) schedules of reinforcement (i.e., non-contingent reinforcement).
- D-21 Use differential reinforcement (e.g., DRO, DRA, DRI, DRL, DRH).
- I-06 Make recommendations regarding behaviors that must be established, maintained, increased, or decreased.
- I-07 Design and conduct preference assessments to identify putative reinforcers.
- J-02 Identify potential interventions based on assessment results and the best available scientific evidence.
- J-10 When a behavior is to be decreased, select an acceptable alternative behavior to be established or increased.
- D-20 Use response-independent (time-based) schedules of reinforcement (i.e., non-contingent reinforcement).
- B-04 Use withdrawal/reversal designs.
- C-01 State and plan for the possible unwanted effects of reinforcement.
- D-02 Use appropriate parameters and schedules of reinforcement.

- D-21 Use differential reinforcement (e.g., DRO, DRA, DRI, DRL, DRH).
- J-02 Identify potential interventions based on assessment results and the best available scientific evidence.
- D-21 Use differential reinforcement (e.g., DRO, DRA, DRI, DRL, DRH).
- C-01 State and plan for the possible unwanted effects of reinforcement.
- D-02 Use appropriate parameters and schedules of reinforcement.
- . D-19 Use combinations of reinforcement with punishment and extinction.
- F-07 Use functional communication training.
- I-07 Design and conduct preference assessments to identify putative reinforcers.
- J-02 Identify potential interventions based on assessment results and the best available scientific evidence.
- E-01 Use interventions based on manipulation of antecedents, such as motivating operations and discriminative stimuli.
- E-09 Arrange high-probability request sequences.
- FK-26 unconditioned motivating operations
- FK-27 conditioned motivating operations
- FK-29 distinguish between the discriminative stimulus and the motivating operation

- E-02 Use discrimination training procedures.
- D-08 Use discrete-trial and free-operant arrangements.
- E-01 Use interventions based on manipulation of antecedents, such as motivating operations and discriminative stimuli.
- E-03 Use instructions and rules.
- E-13 Use matching-to-sample procedures.
- J-11 Program for stimulus and response generalization.
- FK-11 environment, stimulus, stimulus class
- FK-24 stimulus control
- FK-25 multiple functions of a single stimulus
- FK-35 stimulus discrimination
- E-03 Use instructions and rules.
- D-01 Use positive and negative reinforcement.
- . D-16 Use positive and negative punishment.
- K-02 Identify the contingencies governing the behavior of those responsible for carrying out behavior-change procedures and design interventions accordingly.
- FK-30 distinguish between motivating operation and reinforcement effects
- FK-31 behavioral contingencies
- FK-33 functional relations
- FK-41 contingency-shaped behavior
- FK-42 rule-governed behavior

- E-04 Use contingency contracting (i.e., behavioral contracts).
- K-02 Identify the contingencies governing the behavior of those responsible for carrying out behavior-change procedures and design interventions accordingly.
- FK-42 rule-governed behavior
- E-05 Use independent, interdependent, and dependent group contingencies.
- C-01 State and plan for the possible unwanted effects of reinforcement.
- D-01 Use positive and negative reinforcement.
- . D-02 Use appropriate parameters and schedules of reinforcement.
- D-19 Use combinations of reinforcement with punishment and extinction.
- D-21 Use differential reinforcement (e.g., DRO, DRA, DRI, DRL, DRH).
- E-04 Use contingency contracting (i.e., behavioral contracts).
- F-02 Use token economies and other conditioned reinforcement systems.
- E-06 Use stimulus equivalence procedures.
- E-06 Use stimulus equivalence procedures.
- E-13 Use matching-to-sample procedures.
- FK-11 environment, stimulus, stimulus class
- FK-12 stimulus equivalence
- FK-13 reflexive relations (US-UR)
- FK-24 stimulus control
- FK-28 transitive, reflexive, surrogate motivating operations
- FK-35 stimulus discrimination
- E-07 Plan for behavioral contrast effects.
- C-02 State and plan for the possible unwanted effects of punishment.
- D-15 Identify punishers.
- D-16 Use positive and negative punishment.
- D-17 Use appropriate parameters and schedules of punishment.
- J-10 When a behavior is to be decreased, select an acceptable alternative behavior to be established or increased.
- K-02 Identify the contingencies governing the behavior of those responsible for carrying out behavior-change procedures and design interventions accordingly.
- FK-38 behavioral contrast
- FK-40 matching law
- E-08 Use the matching law and recognize factors influencing choice.
- A-14 Design and implement choice measures.
- E-09 Arrange high-probability request sequences.
- D-01 Use positive and negative reinforcement.
- D-02 Use appropriate parameters and schedules of reinforcement.
- E-01 Use interventions based on manipulation of antecedents, such as motivating operations and discriminative stimuli.
- E-10 Use the Premack principle.

- E-10 Use the Premack principle.
- D-01 Use positive and negative reinforcement.
- D-02 Use appropriate parameters and schedules of reinforcement.
- I-07 Design and conduct preference assessments to identify putative reinforcers.
- E-11 Use pairing procedures to establish new conditioned reinforcers and punishers.
- C-01 State and plan for the possible unwanted effects of reinforcement.
- D-01 Use positive and negative reinforcement.
- D-02 Use appropriate parameters and schedules of reinforcement.
- E-02 Use discrimination training procedures.
- F-02 Use token economies and other conditioned reinforcement systems.
- I-07 Design and conduct preference assessments to identify putative reinforcers.
- J-04 Select intervention strategies based on client preferences.
- J-11 Program for stimulus and response generalization.
- FK-14 respondent conditioning (CS-CR)
- FK-16 respondent-operant interactions
- FK-18 conditioned reinforcement
- FK-21 schedules of reinforcement and punishment
- FK-27 conditioned motivating operations
- FK-34 conditional discriminations
- E-12 Use errorless learning procedures.
- D-03 Use prompts and prompt fading.
- D-04 Use modeling and imitation training.
- FK-24 stimulus control
- E-13 Use matching-to-sample procedures.
- D-03 Use prompts and prompt fading.
- D-08 Use discrete-trial and free-operant arrangements.
- E-02 Use discrimination training procedures.
- E-06 Use stimulus equivalence procedures.
- E-12 Use errorless learning procedures.
- F-01 Use self-management strategies.
- B-03 Systematically arrange independent variables to demonstrate their effects on dependent variables.
- F-02 Use token economies and other conditioned reinforcement systems.
- I-01 Define behavior in observable and measurable terms.
- I-06 Make recommendations regarding behaviors that must be established, maintained, increased, or decreased.
- J-01 State intervention goals in observable and measurable terms.
- J-02 Identify potential interventions based on assessment results and the best available scientific evidence.

- J-10 When a behavior is to be decreased, select an acceptable alternative behavior to be established or increased.
- FK-18 conditioned reinforcement
- FK-20 conditioned punishment
- FK-31 behavioral contingencies
- F-02 Use token economies and other conditioned reinforcement systems.
- C-01 State and plan for the possible unwanted effects of reinforcement.
- D-01 Use positive and negative reinforcement.
- D-02 Use appropriate parameters and schedules of reinforcement.
- D-19 Use combinations of reinforcement with punishment and extinction.
- D-21 Use differential reinforcement (e.g., DRO, DRA, DRI, DRL, DRH).
- E-04 Use contingency contracting (i.e., behavioral contracts).
- E-05 Use independent, interdependent, and dependent group contingencies.
- I-07 Design and conduct preference assessments to identify putative reinforcers.
- FK-18 conditioned reinforcement
- FK-21 schedules of reinforcement and punishment
- FK-31 behavioral contingencies
- FK-41 contingency-shaped behavior
- F-03 Use Direct Instruction.
- A-07 Measure trials to criterion.
- D-03 Use prompts and prompt fading.
- D-08 Use discrete-trial and free-operant arrangements.
- J-02 Identify potential interventions based on assessment results and the best available scientific evidence.
- J-11 Program for stimulus and response generalization.
- J-12 Program for maintenance.
- J-14 Arrange instructional procedures to promote generative learning (i.e., derived relations).
- F-04 Use precision teaching.
- A-01 Measure frequency (i.e., count).
- A-07 Measure trials to criterion.
- F-03 Use Direct Instruction.
- 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.
- H-03 Select a data display that effectively communicates relevant quantitative relations.
- H-04 Evaluate changes in level, trend, and variability.
- H-05 Evaluate temporal relations between observed variables (within & between sessions, time series).

- J-15 Base decision-making on data displayed in various formats.
- FK-33 functional relations
- F-05 Use personalized systems of instruction (PSI).
- F-01 Use self-management strategies.
- F-04 Use precision teaching.
- J-14 Arrange instructional procedures to promote generative learning (i.e., derived relations).
- F-06 Use incidental teaching.
- B-03 Systematically arrange independent variables to demonstrate their effects on dependent variables.
- D-04 Use modeling and imitation training.
- D-05 Use shaping.
- D-11 Use mand training.
- J-06 Select intervention strategies based on supporting environments.
- J-11 Program for stimulus and response generalization.
- FK-44 Mands
- F-07 Use functional communication training.
- D-02 Use appropriate parameters and schedules of reinforcement.
- D-03 Use prompts and prompt fading.
- D-04 Use modeling and imitation training.
- D-05 Use shaping.
- D-10 Use echoic training.
- D-11 Use mand training.
- D-21 Use differential reinforcement (e.g., DRO, DRA, DRI, DRL, DRH).
- E-01 Use interventions based on manipulation of antecedents, such as motivating operations and discriminative stimuli.
- I-03 Design and implement individualized behavioral assessment procedures.
- I-04 Design and implement the full range of functional assessment procedures.
- F-08 Use augmentative communication systems.
- D-03 Use prompts and prompt fading.
- D-04 Use modeling and imitation training.
- D-05 Use shaping.
- F-07 Use functional communication training.
- G-01 Review records and available data at the outset of the case.
- G-01 Review records and available data at the outset of the case.
- G-02 Consider biological/medical variables that may be affecting the client.
- G-03 Conduct a preliminary assessment of the client in order to identify the referral problem.
- G-04 Explain behavioral concepts using nontechnical language.
- G-05 Describe and explain behavior, including private events, in behavior-analytic

(nonmentalistic) terms.

G-06 Provide behavior-analytic services in collaboration with others who support and/or provide services to one's clients.

G-07 Practice within one's limits of professional competence in applied behavior analysis, and obtain consultation, supervision, and training, or make referrals as necessary.

I-03 Design and implement individualized behavioral assessment procedures.

I-04 Design and implement the full range of functional assessment procedures.

K-01 Provide for ongoing documentation of behavioral services.

G-02 Consider biological/medical variables that may be affecting the client.

G-01 Review records and available data at the outset of the case.

G-03 Conduct a preliminary assessment of the client in order to identify the referral problem.

G-06 Provide behavior-analytic services in collaboration with others who support and/or provide services to one's clients.

G-07 Practice within one's limits of professional competence in applied behavior analysis, and obtain consultation, supervision, and training, or make referrals as necessary.

FK-13 reflexive relations (US-UR)

FK-26 unconditioned motivating operations

G-03 Conduct a preliminary assessment of the client in order to identify the referral problem.

I-01 Define behavior in observable and measurable terms.

I-02 Define environmental variables in observable and measurable terms.

J-01 State intervention goals in observable and measurable terms.

G-04 Explain behavioral concepts using nontechnical language.

G-06 Provide behavior-analytic services in collaboration with others who support and/or provide services to one's clients.

I-06 Make recommendations regarding behaviors that must be established, maintained, increased, or decreased.

J-06 Select intervention strategies based on supporting environments.

J-07 Select intervention strategies based on environmental and resource constraints.

K-01 Provide for ongoing documentation of behavioral services.

K-03 Design and use competency-based training for persons who are responsible for carrying out behavioral assessment and behavior-change procedures.

K-08 Establish support for behavior-analytic services from direct and indirect consumers.

K-09 Secure the support of others to maintain the client's behavioral repertoires in their natural environments.

G-05 Describe and explain behavior, including private events, in behavior-analytic

(nonmentalistic) terms.

FK-07 Environmental (as opposed to mentalistic) explanations of behavior

FK-08 Distinguish between radical and methodological behaviorism.

FK-31 behavioral contingencies

FK-33 functional relations

G-04 Explain behavioral concepts using nontechnical language.

I-01 Define behavior in observable and measurable terms.

I-02 Define environmental variables in observable and measurable terms.

G-06 Provide behavior-analytic services in collaboration with others who support and/or provide services to one's clients.

G-04 Explain behavioral concepts using nontechnical language.

G-07 Practice within one's limits of professional competence in applied behavior analysis, and obtain consultation, supervision, and training, or make referrals as necessary.

G-08 Identify and make environmental changes that reduce the need for behavior analysis services.

I-06 Make recommendations regarding behaviors that must be established, maintained, increased, or decreased.

J-11 Program for stimulus and response generalization.

J-14 Arrange instructional procedures to promote generative learning (i.e., derived relations).

K-03 Design and use competency-based training for persons who are responsible for carrying out behavioral assessment and behavior-change procedures.

K-08 Establish support for behavior-analytic services from direct and indirect consumers.

K-09 Secure the support of others to maintain the client's behavioral repertoires in their natural environments.

G-07 Practice within one's limits of professional competence in applied behavior analysis, and obtain consultation, supervision, and training, or make referrals as necessary.

B-02 Review and interpret articles from the behavior-analytic literature.

G-02 Consider biological/medical variables that may be affecting the client.

G-06 Provide behavior-analytic services in collaboration with others who support and/or provide services to one's clients.

K-08 Establish support for behavior-analytic services from direct and indirect consumers.

K-09 Secure the support of others to maintain the client's behavioral repertoires in their natural environments.

G-08 Identify and make environmental changes that reduce the need for behavior analysis services.

- B-02 Review and interpret articles from the behavior-analytic literature.
- D-21 Use differential reinforcement (e.g., DRO, DRA, DRI, DRL, DRH).
- E-01 Use interventions based on manipulation of antecedents, such as motivating operations and discriminative stimuli.
- E-03 Use instructions and rules.
- I-03 Design and implement individualized behavioral assessment procedures.
- I-05 Organize, analyze, and interpret observed data.
- I-06 Make recommendations regarding behaviors that must be established, maintained, increased, or decreased.
- J-04 Select intervention strategies based on client preferences.
- J-05 Select intervention strategies based on the client's current repertoires.
- J-06 Select intervention strategies based on supporting environments.
- J-07 Select intervention strategies based on environmental and resource constraints.
- J-08 Select intervention strategies based on the social validity of the intervention.
- J-10 When a behavior is to be decreased, select an acceptable alternative behavior to be established or increased.
- J-12 Program for maintenance.
- K-09 Secure the support of others to maintain the client's behavioral repertoires in their natural environments.
- FK-05 Parsimony
- FK-06 Pragmatism
- FK-23 automatic reinforcement and punishment
- FK-26 unconditioned motivating operations
- FK-33 functional relations
- H-01 Select a measurement system to obtain representative data given the dimensions of the behavior and the logistics of observing and recording.
- A-01 Measure frequency (i.e., count).
- A-02 Measure rate (i.e., count per unit time).
- A-03 Measure duration.
- A-04 Measure latency.
- A-09 Evaluate the accuracy and reliability of measurement procedures.
- A-10 Design, plot, and interpret data using equal-interval graphs.
- D-05 Use shaping.
- H-02 Select a schedule of observation and recording periods.
- H-03 Select a data display that effectively communicates relevant quantitative relations.
- H-04 Evaluate changes in level, trend, and variability.
- H-05 Evaluate temporal relations between observed variables (within & between sessions, time series).
- I-01 Define behavior in observable and measurable terms.

- I-05 Organize, analyze, and interpret observed data.
- K-07 Evaluate the effectiveness of the behavioral program.
- FK-33 functional relations
- FK-41 contingency-shaped behavior
- FK-47 Identify the measurable dimensions of behavior (e.g., rate, duration, latency, interresponse time).
- FK-48 State the advantages and disadvantages of using continuous measurement procedures and discontinuous measurement procedures (e.g., partial- and whole-interval recording, momentary time sampling).
- H-02 Select a schedule of observation and recording periods.
- A-01 Measure frequency (i.e., count).
- A-02 Measure rate (i.e., count per unit time).
- A-03 Measure duration.
- A-04 Measure latency.
- A-05 Measure interresponse time (IRT).
- A-06 Measure percent of occurrence.
- A-07 Measure trials to criterion.
- A-12 Design and implement continuous measurement procedures (e.g., event recording).
- A-13 Design and implement discontinuous measurement procedures (e.g., partial & whole interval, momentary time sampling).
- A-14 Design and implement choice measures.
- FK-47 Identify the measurable dimensions of behavior (e.g., rate, duration, latency, interresponse time).
- FK-48 State the advantages and disadvantages of using continuous measurement procedures and discontinuous measurement procedures (e.g., partial- and whole-interval recording, momentary time sampling).
- H-03 Select a data display that effectively communicates relevant quantitative relations.
- A-10 Design, plot, and interpret data using equal-interval graphs.
- A-11 Design, plot, and interpret data using a cumulative record to display data.
- A-12 Design and implement continuous measurement procedures (e.g., event recording).
- FK-47 Identify the measurable dimensions of behavior (e.g., rate, duration, latency, interresponse time).
- B-03 Systematically arrange independent variables to demonstrate their effects on dependent variables.
- H-04 Evaluate changes in level, trend, and variability.
- H-05 Evaluate temporal relations between observed variables (within & between sessions, time series).

- H-04 Evaluate changes in level, trend, and variability.
- A-10 Design, plot, and interpret data using equal-interval graphs.
- A-11 Design, plot, and interpret data using a cumulative record to display data.
- H-03 Select a data display that effectively communicates relevant quantitative relations.
- H-04 Evaluate changes in level, trend, and variability.
- I-01 Define behavior in observable and measurable terms.
- I-05 Organize, analyze, and interpret observed data.
- FK-47 Identify the measurable dimensions of behavior (e.g., rate, duration, latency, interresponse time).
- H-05 Evaluate temporal relations between observed variables (within & between sessions, time series).
- H-01 Select a measurement system to obtain representative data given the dimensions of the behavior and the logistics of observing and recording.
- H-04 Evaluate changes in level, trend, and variability.
- I-05 Organize, analyze, and interpret observed data.
- J-15 Base decision-making on data displayed in various formats.
- FK-47 Identify the measurable dimensions of behavior (e.g., rate, duration, latency, interresponse time).
- I-01 Define behavior in observable and measurable terms.
- 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.
- I-02 Define environmental variables in observable and measurable terms.
- J-01 State intervention goals in observable and measurable terms.
- FK-47 Identify the measurable dimensions of behavior (e.g., rate, duration, latency, interresponse time).
- I-02 Define environmental variables in observable and measurable terms.
- B-11 Conduct a parametric analysis to determine the effective values of an independent variable.
- I-01 Define behavior in observable and measurable terms.
- I-04 Design and implement the full range of functional assessment procedures.
- J-01 State intervention goals in observable and measurable terms.
- FK-07 Environmental (as opposed to mentalistic) explanations of behavior
- FK-11 environment, stimulus, stimulus class
- FK-33 functional relations
- I-03 Design and implement individualized behavioral assessment procedures.
- B-03 Systematically arrange independent variables to demonstrate their effects on dependent variables.
- E-01 Use interventions based on manipulation of antecedents, such as motivating

operations and discriminative stimuli.

G-01 Review records and available data at the outset of the case.

G-04 Explain behavioral concepts using nontechnical language.

G-05 Describe and explain behavior, including private events, in behavior-analytic (nonmentalistic) terms.

G-08 Identify and make environmental changes that reduce the need for behavior analysis services.

H-02 Select a schedule of observation and recording periods.

I-01 Define behavior in observable and measurable terms.

I-02 Define environmental variables in observable and measurable terms.

I-04 Design and implement the full range of functional assessment procedures.

I-06 Make recommendations regarding behaviors that must be established, maintained, increased, or decreased.

J-01 State intervention goals in observable and measurable terms.

J-02 Identify potential interventions based on assessment results and the best available scientific evidence.

J-10 When a behavior is to be decreased, select an acceptable alternative behavior to be established or increased.

I-04 Design and implement the full range of functional assessment procedures.

B-03 Systematically arrange independent variables to demonstrate their effects on dependent variables.

B-05 Use alternating treatments (i.e., multielement) designs.

E-01 Use interventions based on manipulation of antecedents, such as motivating operations and discriminative stimuli.

H-01 Select a measurement system to obtain representative data given the dimensions of the behavior and the logistics of observing and recording.

H-03 Select a data display that effectively communicates relevant quantitative relations.

H-05 Evaluate temporal relations between observed variables (within & between sessions, time series).

I-03 Design and implement individualized behavioral assessment procedures.

I-05 Organize, analyze, and interpret observed data.

A-10 Design, plot, and interpret data using equal-interval graphs.

A-11 Design, plot, and interpret data using a cumulative record to display data.

B-04 Use withdrawal/reversal designs.

B-05 Use alternating treatments (i.e., multielement) designs.

B-06 Use changing criterion designs.

B-07 Use multiple baseline designs.

B-08 Use multiple probe designs.

B-09 Use combinations of design elements.

- J-15 Base decision-making on data displayed in various formats.
- I-06 Make recommendations regarding behaviors that must be established, maintained, increased, or decreased.
- B-01 Use the dimensions of applied behavior analysis (Baer, Wolf, & Risley, 1968) to evaluate whether interventions are behavior analytic in nature.
- G-03 Conduct a preliminary assessment of the client in order to identify the referral problem.
- G-05 Describe and explain behavior, including private events, in behavior-analytic (nonmentalistic) terms.
- I-01 Define behavior in observable and measurable terms.
- J-01 State intervention goals in observable and measurable terms.
- J-05 Select intervention strategies based on the client's current repertoires.
- J-08 Select intervention strategies based on the social validity of the intervention.
- J-10 When a behavior is to be decreased, select an acceptable alternative behavior to be established or increased.
- J-13 Select behavioral cusps as goals for intervention when appropriate.
- FK-10 behavior, response, response class
- I-07 Design and conduct preference assessments to identify putative reinforcers.
- D-01 Use positive and negative reinforcement.
- I-07 Design and conduct preference assessments to identify putative reinforcers.
- J-04 Select intervention strategies based on client preferences.
- J-01 State intervention goals in observable and measurable terms.
- B-01 Use the dimensions of applied behavior analysis (Baer, Wolf, & Risley, 1968) to evaluate whether interventions are behavior analytic in nature.
- I-01 Define behavior in observable and measurable terms.
- I-02 Define environmental variables in observable and measurable terms.
- FK-07 Environmental (as opposed to mentalistic) explanations of behavior
- J-02 Identify potential interventions based on assessment results and the best available scientific evidence.
- E-01 Use interventions based on manipulation of antecedents, such as motivating operations and discriminative stimuli.
- I-01 Define behavior in observable and measurable terms.
- I-02 Define environmental variables in observable and measurable terms.
- I-04 Design and implement the full range of functional assessment procedures.
- I-06 Make recommendations regarding behaviors that must be established, maintained, increased, or decreased.
- J-01 State intervention goals in observable and measurable terms.
- J-02 Identify potential interventions based on assessment results and the best available scientific evidence.
- J-10 When a behavior is to be decreased, select an acceptable alternative behavior

to be established or increased.

J-03 Select intervention strategies based on task analysis.

D-06 Use chaining.

D-07 Conduct task analyses.

J-02 Identify potential interventions based on assessment results and the best available scientific evidence.

J-05 Select intervention strategies based on the client's current repertoires.

J-04 Select intervention strategies based on client preferences.

E-08 Use the matching law and recognize factors influencing choice.

I-07 Design and conduct preference assessments to identify putative reinforcers.

J-02 Identify potential interventions based on assessment results and the best available scientific evidence.

J-05 Select intervention strategies based on the client's current repertoires.

J-06 Select intervention strategies based on supporting environments.

J-07 Select intervention strategies based on environmental and resource constraints.

J-08 Select intervention strategies based on the social validity of the intervention.

J-05 Select intervention strategies based on the client's current repertoires.

D-09 Use the verbal operants as a basis for language assessment.

G-03 Conduct a preliminary assessment of the client in order to identify the referral problem.

I-03 Design and implement individualized behavioral assessment procedures.

J-03 Select intervention strategies based on task analysis.

I-04 Design and implement the full range of functional assessment procedures.

J-02 Identify potential interventions based on assessment results and the best available scientific evidence.

J-06 Select intervention strategies based on supporting environments.

J-07 Select intervention strategies based on environmental and resource constraints.

J-08 Select intervention strategies based on the social validity of the intervention.

J-06 Select intervention strategies based on supporting environments.

G-08 Identify and make environmental changes that reduce the need for behavior analysis services.

J-07 Select intervention strategies based on environmental and resource constraints.

J-08 Select intervention strategies based on the social validity of the intervention.

J-11 Program for stimulus and response generalization.

J-12 Program for maintenance.

K-07 Evaluate the effectiveness of the behavioral program.

K-09 Secure the support of others to maintain the client's behavioral repertoires in their natural environments.

J-07 Select intervention strategies based on environmental and resource constraints.

C-01 State and plan for the possible unwanted effects of reinforcement.

G-06 Provide behavior-analytic services in collaboration with others who support and/or provide services to one's clients.

G-08 Identify and make environmental changes that reduce the need for behavior analysis services.

I-01 Define behavior in observable and measurable terms.

J-06 Select intervention strategies based on supporting environments.

J-08 Select intervention strategies based on the social validity of the intervention.

K-07 Evaluate the effectiveness of the behavioral program.

K-09 Secure the support of others to maintain the client's behavioral repertoires in their natural environments.

FK-11 environment, stimulus, stimulus class

J-08 Select intervention strategies based on the social validity of the intervention.

G-06 Provide behavior-analytic services in collaboration with others who support and/or provide services to one's clients.

G-08 Identify and make environmental changes that reduce the need for behavior analysis services.

I-06 Make recommendations regarding behaviors that must be established, maintained, increased, or decreased.

J-04 Select intervention strategies based on client preferences.

J-05 Select intervention strategies based on the client's current repertoires.

J-06 Select intervention strategies based on supporting environments.

J-12 Program for maintenance.

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-09 Secure the support of others to maintain the client's behavioral repertoires in their natural environments.

J-09 Identify and address practical and ethical considerations when using experimental designs to demonstrate treatment effectiveness.

B-03 Systematically arrange independent variables to demonstrate their effects on dependent variables.

G-08 Identify and make environmental changes that reduce the need for behavior analysis services.

H-03 Select a data display that effectively communicates relevant quantitative relations.

J-02 Identify potential interventions based on assessment results and the best available scientific evidence.

J-07 Select intervention strategies based on environmental and resource constraints.

J-08 Select intervention strategies based on the social validity of the intervention.

- J-10 When a behavior is to be decreased, select an acceptable alternative behavior to be established or increased.
- K-02 Identify the contingencies governing the behavior of those responsible for carrying out behavior-change procedures and design interventions accordingly.
- K-07 Evaluate the effectiveness of the behavioral program.
- J-10 When a behavior is to be decreased, select an acceptable alternative behavior to be established or increased.
- D-02 Use appropriate parameters and schedules of reinforcement.
- . D-18 Use extinction.
- D-19 Use combinations of reinforcement with punishment and extinction.
- I-06 Make recommendations regarding behaviors that must be established, maintained, increased, or decreased.
- J-06 Select intervention strategies based on supporting environments.
- J-07 Select intervention strategies based on environmental and resource constraints.
- J-11 Program for stimulus and response generalization.
- E-02 Use discrimination training procedures.
- I-06 Make recommendations regarding behaviors that must be established, maintained, increased, or decreased.
- J-02 Identify potential interventions based on assessment results and the best available scientific evidence.
- J-12 Program for maintenance.
- FK-11 environment, stimulus, stimulus class
- FK-12 stimulus equivalence
- FK-24 stimulus control
- FK-36 response generalization
- J-12 Program for maintenance.
- J-06 Select intervention strategies based on supporting environments.
- J-07 Select intervention strategies based on environmental and resource constraints.
- J-08 Select intervention strategies based on the social validity of the intervention.
- J-11 Program for stimulus and response generalization.
- J-13 Select behavioral cusps as goals for intervention when appropriate.
- G-08 Identify and make environmental changes that reduce the need for behavior analysis services.
- I-01 Define behavior in observable and measurable terms.
- I-06 Make recommendations regarding behaviors that must be established, maintained, increased, or decreased.
- J-01 State intervention goals in observable and measurable terms.
- J-08 Select intervention strategies based on the social validity of the intervention.
- J-14 Arrange instructional procedures to promote generative learning (i.e., derived relations).

FK-10 behavior, response, response class
J-14 Arrange instructional procedures to promote generative learning (i.e., derived relations).
E-06 Use stimulus equivalence procedures.
FK-11 environment, stimulus, stimulus class
FK-24 stimulus control
FK-34 conditional discriminations
J-15 Base decision-making on data displayed in various formats.
A-10 Design, plot, and interpret data using equal-interval graphs.
A-11 Design, plot, and interpret data using a cumulative record to display data.
A-12 Design and implement continuous measurement procedures (e.g., event recording).
A-14 Design and implement choice measures.
B-03 Systematically arrange independent variables to demonstrate their effects on dependent variables.
H-01 Select a measurement system to obtain representative data given the dimensions of the behavior and the logistics of observing and recording.
H-03 Select a data display that effectively communicates relevant quantitative relations.
H-04 Evaluate changes in level, trend, and variability.
I-05 Organize, analyze, and interpret observed data.
I-07 Design and conduct preference assessments to identify putative reinforcers.
J-01 State intervention goals in observable and measurable terms.
K-04 Design and use effective performance monitoring and reinforcement systems.
FK-33 functional relations
K-01 Provide for ongoing documentation of behavioral services.
K-02 Identify the contingencies governing the behavior of those responsible for carrying out behavior-change procedures and design interventions accordingly.
J-01 State intervention goals in observable and measurable terms.
K-03 Design and use competency-based training for persons who are responsible for carrying out behavioral assessment and behavior-change procedures.
K-04 Design and use effective performance monitoring and reinforcement systems.
K-05 Design and use systems for monitoring procedural integrity.
K-06 Provide supervision for behavior-change agents.
K-08 Establish support for behavior-analytic services from direct and indirect consumers.
K-03 Design and use competency-based training for persons who are responsible for carrying out behavioral assessment and behavior-change procedures.
D-04 Use modeling and imitation training.
D-05 Use shaping.

- E-03 Use instructions and rules.
- F-03 Use Direct Instruction.
- K-02 Identify the contingencies governing the behavior of those responsible for carrying out behavior-change procedures and design interventions accordingly.
- K-04 Design and use effective performance monitoring and reinforcement systems.
- D-01 Use positive and negative reinforcement.
- F-01 Use self-management strategies.
- F-02 Use token economies and other conditioned reinforcement systems.
- F-03 Use Direct Instruction.
- H-03 Select a data display that effectively communicates relevant quantitative relations.
- H-04 Evaluate changes in level, trend, and variability.
- I-01 Define behavior in observable and measurable terms.
- 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-05 Design and use systems for monitoring procedural integrity.
- F-01 Use self-management strategies.
- H-03 Select a data display that effectively communicates relevant quantitative relations.
- H-04 Evaluate changes in level, trend, and variability.
- K-03 Design and use competency-based training for persons who are responsible for carrying out behavioral assessment and behavior-change procedures.
- K-04 Design and use effective performance monitoring and reinforcement systems.
- K-06 Provide supervision for behavior-change agents.
- H-03 Select a data display that effectively communicates relevant quantitative relations.
- H-04 Evaluate changes in level, trend, and variability.
- 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-04 Design and use effective performance monitoring and reinforcement systems.
- K-07 Evaluate the effectiveness of the behavioral program.
- B-01 Use the dimensions of applied behavior analysis (Baer, Wolf, & Risley, 1968) to evaluate whether interventions are behavior analytic in nature.
- FK-47 Identify the measurable dimensions of behavior (e.g., rate, duration, latency, interresponse time).
- G-01 Review records and available data at the outset of the case.
- H-01 Select a measurement system to obtain representative data given the dimen-

sions of the behavior and the logistics of observing and recording.

I-01 Define behavior in observable and measurable terms.

I-05 Organize, analyze, and interpret observed data.

I-06 Make recommendations regarding behaviors that must be established, maintained, increased, or decreased.

J-01 State intervention goals in observable and measurable terms.

K-07 Evaluate the effectiveness of the behavioral program.

K-08 Establish support for behavior-analytic services from direct and indirect consumers.

G-07 Practice within one's limits of professional competence in applied behavior analysis, and obtain consultation, supervision, and training, or make referrals as necessary.

K-09 Secure the support of others to maintain the client's behavioral repertoires in their natural environments.

K-10 Arrange for the orderly termination of services when they are no longer required.

K-09 Secure the support of others to maintain the client's behavioral repertoires in their natural environments.

H-01 Select a measurement system to obtain representative data given the dimensions of the behavior and the logistics of observing and recording.

J-01 State intervention goals in observable and measurable terms.

K-03 Design and use competency-based training for persons who are responsible for carrying out behavioral assessment and behavior-change procedures.

K-04 Design and use effective performance monitoring and reinforcement systems.

K-06 Provide supervision for behavior-change agents.

K-08 Establish support for behavior-analytic services from direct and indirect consumers.

K-10 Arrange for the orderly termination of services when they are no longer required.

G-07 Practice within one's limits of professional competence in applied behavior analysis, and obtain consultation, supervision, and training, or make referrals as necessary.

K-09 Secure the support of others to maintain the client's behavioral repertoires in their natural environments.

FK-01 Lawfulness of behavior

B-03 Systematically arrange independent variables to demonstrate their effects on dependent variables.

FK-02 Selectionism (phylogenic, ontogenic, cultural)

FK-03 Determinism

- FK-04 Empiricism
- FK-05 Parsimony
- FK-06 Pragmatism
- FK-02 Selectionism (phylogenic, ontogenic, cultural)
- FK-15 operant conditioning
- FK-31 behavioral contingencies
- FK-33 functional relations
- FK-41 contingency-shaped behavior
- FK-42 rule-governed behavior
- FK-03 Determinism
- FK-01 Lawfulness of behavior
- FK-04 Empiricism
- FK-05 Parsimony
- FK-06 Pragmatism
- FK-04 Empiricism
- B-01 Use the dimensions of applied behavior analysis (Baer, Wolf, & Risley, 1968) to evaluate whether interventions are behavior analytic in nature.
- H-01 Select a measurement system to obtain representative data given the dimensions of the behavior and the logistics of observing and recording.
- H-03 Select a data display that effectively communicates relevant quantitative relations.
- 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.
- J-01 State intervention goals in observable and measurable terms.
- J-15 Base decision-making on data displayed in various formats.
- K-07 Evaluate the effectiveness of the behavioral program.
- FK-10 behavior, response, response class
- FK-05 Parsimony
- FK-06 Pragmatism
- B-01 Use the dimensions of applied behavior analysis (Baer, Wolf, & Risley, 1968) to evaluate whether interventions are behavior analytic in nature.
- G-04 Explain behavioral concepts using nontechnical language.
- G-06 Provide behavior-analytic services in collaboration with others who support and/or provide services to one's clients.
- K-08 Establish support for behavior-analytic services from direct and indirect consumers.
- K-09 Secure the support of others to maintain the client's behavioral repertoires in their natural environments.
- FK-07 Environmental (as opposed to mentalistic) explanations of behavior

- B-01 Use the dimensions of applied behavior analysis (Baer, Wolf, & Risley, 1968) to evaluate whether interventions are behavior analytic in nature.
- G-04 Explain behavioral concepts using nontechnical language.
- G-05 Describe and explain behavior, including private events, in behavior-analytic (nonmentalistic) terms.
- I-01 Define behavior in observable and measurable terms.
- I-02 Define environmental variables in observable and measurable terms.
- K-02 Identify the contingencies governing the behavior of those responsible for carrying out behavior-change procedures and design interventions accordingly.
- FK-01 Lawfulness of behavior
- FK-03 Determinism
- FK-07 Environmental (as opposed to mentalistic) explanations of behavior
- FK-08 Distinguish between radical and methodological behaviorism.
- B-01 Use the dimensions of applied behavior analysis (Baer, Wolf, & Risley, 1968) to evaluate whether interventions are behavior analytic in nature.
- G-04 Explain behavioral concepts using nontechnical language.
- G-05 Describe and explain behavior, including private events, in behavior-analytic (nonmentalistic) terms.
- FK-01 Lawfulness of behavior
- FK-07 Environmental (as opposed to mentalistic) explanations of behavior
- FK-09 Distinguish between the conceptual analysis of behavior, experimental analysis of behavior, applied behavior analysis, and behavioral service delivery.
- B-01 Use the dimensions of applied behavior analysis (Baer, Wolf, & Risley, 1968) to evaluate whether interventions are behavior analytic in nature.
- G-04 Explain behavioral concepts using nontechnical language.
- G-05 Describe and explain behavior, including private events, in behavior-analytic (nonmentalistic) terms.
- G-06 Provide behavior-analytic services in collaboration with others who support and/or provide services to one's clients.
- FK-01 Lawfulness of behavior
- FK-02 Selectionism (phylogenic, ontogenic, cultural)
- FK-03 Determinism
- FK-04 Empiricism
- FK-05 Parsimony
- FK-06 Pragmatism
- FK-07 Environmental (as opposed to mentalistic) explanations of behavior
- FK-08 Distinguish between radical and methodological behaviorism.
- FK-10 behavior, response, response class
- FK-36 response generalization
- G-05 Describe and explain behavior, including private events, in behavior-analytic

(nonmentalistic) terms.

I-01 Define behavior in observable and measurable terms.

FK-11 environment, stimulus, stimulus class

FK-11 environment, stimulus, stimulus class

FK-12 stimulus equivalence

FK-13 reflexive relations (US-UR)

FK-14 respondent conditioning (CS-CR)

FK-15 operant conditioning

FK-16 respondent-operant interactions

FK-14 respondent conditioning (CS-CR)

FK-10 behavior, response, response class

FK-13 reflexive relations (US-UR)

FK-15 operant conditioning

FK-16 respondent-operant interactions

FK-17 unconditioned reinforcement

FK-24 stimulus control

FK-26 unconditioned motivating operations

FK-35 stimulus discrimination

FK-15 operant conditioning

FK-15 operant conditioning

FK-31 behavioral contingencies

FK-33 functional relations

FK-16 respondent-operant interactions

G-02 Consider biological/medical variables that may be affecting the client.

G-05 Describe and explain behavior, including private events, in behavior-analytic (nonmentalistic) terms.

FK-07 Environmental (as opposed to mentalistic) explanations of behavior

FK-13 reflexive relations (US-UR)

FK-14 respondent conditioning (CS-CR)

FK-15 operant conditioning

FK-17 unconditioned reinforcement

C-01 State and plan for the possible unwanted effects of reinforcement.

D-01 Use positive and negative reinforcement.

D-02 Use appropriate parameters and schedules of reinforcement.

D-19 Use combinations of reinforcement with punishment and extinction.

FK-02 Selectionism (phylogenic, ontogenic, cultural)

FK-13 reflexive relations (US-UR)

FK-16 respondent-operant interactions

FK-19 unconditioned punishment

FK-21 schedules of reinforcement and punishment
FK-26 unconditioned motivating operations
FK-30 distinguish between motivating operation and reinforcement effects
FK-18 conditioned reinforcement
C-01 State and plan for the possible unwanted effects of reinforcement.
D-01 Use positive and negative reinforcement.
D-02 Use appropriate parameters and schedules of reinforcement.
D-20 Use response-independent (time-based) schedules of reinforcement (i.e., non-contingent reinforcement).
D-21 Use differential reinforcement (e.g., DRO, DRA, DRI, DRL, DRH).
F-02 Use token economies and other conditioned reinforcement systems.
J-04 Select intervention strategies based on client preferences.
K-04 Design and use effective performance monitoring and reinforcement systems.
FK-02 Selectionism (phylogenic, ontogenic, cultural)
FK-14 respondent conditioning (CS-CR)
FK-15 operant conditioning
FK-16 respondent-operant interactions
FK-17 unconditioned reinforcement
FK-21 schedules of reinforcement and punishment
FK-26 unconditioned motivating operations
FK-27 conditioned motivating operations
FK-19 unconditioned punishment
D-17 Use appropriate parameters and schedules of punishment.
D-16 Use positive and negative punishment.
D-19 Use combinations of reinforcement with punishment and extinction.
E-11 Use pairing procedures to establish new conditioned reinforcers and punishers.
G-07 Practice within one's limits of professional competence in applied behavior analysis, and obtain consultation, supervision, and training, or make referrals as necessary.
J-10 When a behavior is to be decreased, select an acceptable alternative behavior to be established or increased.
FK-20 conditioned punishment
C-02 State and plan for the possible unwanted effects of punishment.
D-15 Identify punishers.
D-16 Use positive and negative punishment.
D-17 Use appropriate parameters and schedules of punishment.
D-18 Use extinction.
D-19 Use combinations of reinforcement with punishment and extinction.
FK-14 respondent conditioning (CS-CR)

FK-17 unconditioned reinforcement
 FK-18 conditioned reinforcement
 FK-19 unconditioned punishment
 FK-21 schedules of reinforcement and punishment
 FK-21 schedules of reinforcement and punishment
 D-02 Use appropriate parameters and schedules of reinforcement.
 D-17 Use appropriate parameters and schedules of punishment.
 FK-22 extinction
 C-03 State and plan for the possible unwanted effects of extinction.
 D-18 Use extinction.
 D-19 Use combinations of reinforcement with punishment and extinction.
 FK-23 automatic reinforcement and punishment
 FK-17 unconditioned reinforcement
 FK-19 unconditioned punishment
 FK-22 extinction
 FK-24 stimulus control
 D-19 Use combinations of reinforcement with punishment and extinction.
 FK-22 extinction
 FK-29 distinguish between the discriminative stimulus and the motivating operation
 FK-25 multiple functions of a single stimulus
 E-01 Use interventions based on manipulation of antecedents, such as motivating operations and discriminative stimuli.
 D-01 Use positive and negative reinforcement.
 . D-16 Use positive and negative punishment.
 FK-14 respondent conditioning (CS-CR)
 FK-15 operant conditioning
 FK-16 respondent-operant interactions
 FK-26 unconditioned motivating operations
 D-01 Use positive and negative reinforcement.
 E-01 Use interventions based on manipulation of antecedents, such as motivating operations and discriminative stimuli.
 I-02 Define environmental variables in observable and measurable terms.
 FK-02 Selectionism (phylogenic, ontogenic, cultural)
 FK-13 reflexive relations (US-UR)
 FK-14 respondent conditioning (CS-CR)
 FK-17 unconditioned reinforcement
 FK-19 unconditioned punishment
 FK-27 conditioned motivating operations
 FK-28 transitive, reflexive, surrogate motivating operations

FK-29 distinguish between the discriminative stimulus and the motivating operation
 FK-30 distinguish between motivating operation and reinforcement effects
 FK-27 conditioned motivating operations
 D-01 Use positive and negative reinforcement.
 E-01 Use interventions based on manipulation of antecedents, such as motivating operations and discriminative stimuli.
 I-02 Define environmental variables in observable and measurable terms.
 FK-02 Selectionism (phylogenic, ontogenic, cultural)
 FK-13 reflexive relations (US-UR)
 FK-14 respondent conditioning (CS-CR)
 FK-17 unconditioned reinforcement
 FK-19 unconditioned punishment
 FK-26 unconditioned motivating operations
 FK-28 transitive, reflexive, surrogate motivating operations
 FK-28 transitive, reflexive, surrogate motivating operations
 FK-29 distinguish between the discriminative stimulus and the motivating operation
 FK-30 distinguish between motivating operation and reinforcement effects

D-01 Use positive and negative reinforcement.
 E-01 Use interventions based on manipulation of antecedents, such as motivating operations and discriminative stimuli.
 FK-13 reflexive relations (US-UR)
 FK-14 respondent conditioning (CS-CR)
 FK-15 operant conditioning
 FK-16 respondent-operant interactions
 FK-18 conditioned reinforcement
 FK-20 conditioned punishment
 FK-27 conditioned motivating operations
 FK-29 distinguish between the discriminative stimulus and the motivating operation
 FK-30 distinguish between motivating operation and reinforcement effects
 FK-29 distinguish between the discriminative stimulus and the motivating operation
 E-01 Use interventions based on manipulation of antecedents, such as motivating operations and discriminative stimuli.
 G-08 Identify and make environmental changes that reduce the need for behavior analysis services.
 I-02 Define environmental variables in observable and measurable terms.

- J-04 Select intervention strategies based on client preferences.
- J-06 Select intervention strategies based on supporting environments.
- J-07 Select intervention strategies based on environmental and resource constraints.
- K-09 Secure the support of others to maintain the client's behavioral repertoires in their natural environments.
- FK-07 Environmental (as opposed to mentalistic) explanations of behavior
- FK-24 stimulus control
- FK-26 unconditioned motivating operations
- FK-31 behavioral contingencies
- FK-33 functional relations
- FK-30 distinguish between motivating operation and reinforcement effects
- E-01 Use interventions based on manipulation of antecedents, such as motivating operations and discriminative stimuli.
- FK-25 multiple functions of a single stimulus
- FK-26 unconditioned motivating operations
- FK-27 conditioned motivating operations
- FK-28 transitive, reflexive, surrogate motivating operations
- FK-29 distinguish between the discriminative stimulus and the motivating operation
- FK-31 behavioral contingencies
- B-01 Use the dimensions of applied behavior analysis (Baer, Wolf, & Risley, 1968) to evaluate whether interventions are behavior analytic in nature.
- E-01 Use interventions based on manipulation of antecedents, such as motivating operations and discriminative stimuli.
- G-04 Explain behavioral concepts using nontechnical language.
- I-01 Define behavior in observable and measurable terms.
- I-02 Define environmental variables in observable and measurable terms.
- FK-10 behavior, response, response class
- FK-11 environment, stimulus, stimulus class
- FK-15 operant conditioning
- FK-21 schedules of reinforcement and punishment
- FK-27 conditioned motivating operations
- FK-30 distinguish between motivating operation and reinforcement effects
- FK-33 functional relations
- FK-34 conditional discriminations
- FK-35 stimulus discrimination
- FK-41 contingency-shaped behavior
- FK-32 contiguity
- FK-14 respondent conditioning (CS-CR)
- FK-24 stimulus control

FK-32 contiguity
FK-36 response generalization
FK-33 functional relations
B-03 Systematically arrange independent variables to demonstrate their effects on dependent variables.
FK-33 functional relations
H-03 Select a data display that effectively communicates relevant quantitative relations.
H-05 Evaluate temporal relations between observed variables (within & between sessions, time series).
I-05 Organize, analyze, and interpret observed data.
FK-34 conditional discriminations
E-06 Use stimulus equivalence procedures.
FK-11 environment, stimulus, stimulus class
FK-24 stimulus control
FK-35 stimulus discrimination
FK-37 stimulus generalization
J-14 Arrange instructional procedures to promote generative learning (i.e., derived relations).
FK-35 stimulus discrimination
E-06 Use stimulus equivalence procedures.
FK-11 environment, stimulus, stimulus class
FK-24 stimulus control
FK-34 conditional discriminations
FK-37 stimulus generalization
FK-36 response generalization
B-01 Use the dimensions of applied behavior analysis (Baer, Wolf, & Risley, 1968) to evaluate whether interventions are behavior analytic in nature.
E-06 Use stimulus equivalence procedures.
E-11 Use pairing procedures to establish new conditioned reinforcers and punishers.
I-01 Define behavior in observable and measurable terms.
I-02 Define environmental variables in observable and measurable terms.
J-11 Program for stimulus and response generalization.
J-12 Program for maintenance.
J-14 Arrange instructional procedures to promote generative learning (i.e., derived relations).
K-09 Secure the support of others to maintain the client's behavioral repertoires in their natural environments.
FK-10 behavior, response, response class

FK-11 environment, stimulus, stimulus class
FK-12 stimulus equivalence
FK-37 stimulus generalization
FK-37 stimulus generalization
B-01 Use the dimensions of applied behavior analysis (Baer, Wolf, & Risley, 1968) to evaluate whether interventions are behavior analytic in nature.
E-06 Use stimulus equivalence procedures.
J-11 Program for stimulus and response generalization.
J-14 Arrange instructional procedures to promote generative learning (i.e., derived relations).
FK-10 behavior, response, response class
FK-11 environment, stimulus, stimulus class
FK-12 stimulus equivalence
FK-36 response generalization
FK-38 behavioral contrast
C-01 State and plan for the possible unwanted effects of reinforcement.
C-02 State and plan for the possible unwanted effects of punishment.
D-01 Use positive and negative reinforcement.
D-02 Use appropriate parameters and schedules of reinforcement.
D-15 Identify punishers.
D-16 Use positive and negative punishment.
D-17 Use appropriate parameters and schedules of punishment.
D-19 Use combinations of reinforcement with punishment and extinction.
E-07 Plan for behavioral contrast effects.
FK-18 conditioned reinforcement
FK-20 conditioned punishment
FK-21 schedules of reinforcement and punishment
FK-39 behavioral momentum
E-09 Arrange high-probability request sequences.
FK-10 behavior, response, response class
FK-40 matching law
A-14 Design and implement choice measures.
B-03 Systematically arrange independent variables to demonstrate their effects on dependent variables.
E-08 Use the matching law and recognize factors influencing choice.
G-04 Explain behavioral concepts using nontechnical language.
FK-41 contingency-shaped behavior
E-04 Use contingency contracting (i.e., behavioral contracts).
FK-42 rule-governed behavior
FK-42 rule-governed behavior

- E-04 Use contingency contracting (i.e., behavioral contracts).
- FK-41 contingency-shaped behavior
- FK-43 Echoics
- D-04 Use modeling and imitation training.
- D-10 Use echoic training.
- FK-44 Mands
- D-09 Use the verbal operants as a basis for language assessment.
- D-11 Use mand training.
- FK-45 Tacts
- D-12 Use tact training.
- FK-46 Intraverbals
- D-13 Use intraverbal training.
- FK-47 Identify the measurable dimensions of behavior (e.g., rate, duration, latency, interresponse time).
- A-01 Measure frequency (i.e., count).
- A-02 Measure rate (i.e., count per unit time).
- A-03 Measure duration.
- A-04 Measure latency.
- A-05 Measure interresponse time (IRT).
- A-09 Evaluate the accuracy and reliability of measurement procedures.
- D-21 Use differential reinforcement (e.g., DRO, DRA, DRI, DRL, DRH).
- FK-48 State the advantages and disadvantages of using continuous measurement procedures and discontinuous measurement procedures (e.g., partial- and whole-interval recording, momentary time sampling).
- A-09 Evaluate the accuracy and reliability of measurement procedures.
- A-12 Design and implement continuous measurement procedures (e.g., event recording).
- 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.
- I-01 Define behavior in observable and measurable terms.
- FK-47 Identify the measurable dimensions of behavior (e.g., rate, duration, latency, interresponse time).
- FK-48 State the advantages and disadvantages of using continuous measurement procedures and discontinuous measurement procedures (e.g., partial- and whole-interval recording, momentary time sampling).

Glossary

Applied Refers to selection of socially significant behaviors when designing interventions.

Behavior Refers to an observable act or response from a living organism.

CAT A sleepy animal.

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