Association for Behaviour Analysis Australia

Australian Professional Competencies for Behaviour Analysts

Publication Information

Acknowledgements

ABA Australia acknowledges the Traditional Owners of country throughout Australia, their diversity, histories and knowledge, and their continuing connections to land, water and community. We pay our respects to all Australian Indigenous Peoples and their cultures, and to Elders of past, present and future generations.

ABA Australia commits to acknowledge and understand the historical and contemporary disadvantage experienced by Aboriginal and Torres Strait Islander peoples and the implication this has for behaviour analytic practice.

ABA Australia acknowledges those individuals that face adversity and discrimination within the lesbian, gay, bisexual, transgender, intersex and queer (LGBTIQ) community, those identifying as Queer Transgender Intersex People of Colour (QTIPOC), those from culturally and linguistically diverse backgrounds (CALD) inclusive of asylum seekers, refugees and migrants, those with diverse intergenerational migration histories and women.

ABA Australia is committed to working with you and understanding how we can better support you.

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Introduction

Background to the Australian Professional Competencies of Behaviour Analysts

The Australian Professional Competencies for Behaviour Analysts (the competencies) were developed by the Association for Behaviour Analysis Australia (ABA Australia) Board of Directors and consultation with key stakeholders. They describe the expected competencies for behaviour analysts when regulated by ABA Australia. These competences are intended to inform and be used by education institutes, individual practitioners, employers, clients of applied behaviour analysis services and the public. These are competencies related to using the science of behaviour analysis, please refer to the Code of Ethical Behaviour for any ethics and practice standards competencies.

They are based on:

1. Task lists (3rd, 4th, 5th editions) from the Behavior Analyst Certification Board
2. The history of the discipline of behaviour analysis.

Definitions

We have adopted the definition of the "practice of applied behaviour analysis" from the Association of Professional Behaviour Analysts (2018).

> PRACTICE OF APPLIED BEHAVIOR ANALYSIS. The design, implementation, and evaluation of instructional and environmental modifications to produce socially significant improvements in human behavior. The practice of applied behavior analysis includes the empirical identification of functional relations between behaviour and environmental factors, known as functional assessment and analysis. Applied behavior analysis interventions are based on scientific research and direct and indirect observation and measurement of behavior and environment. They utilize contextual factors, motivating operations, antecedent stimuli, positive reinforcement, and other procedures to help individuals develop new behaviors, increase or decrease existing behaviors, and emit behaviours under specific environmental conditions. The practice of applied behavior analysis excludes diagnosis of disorders, psychological testing, psychotherapy, cognitive therapy, psychoanalysis, and counseling. (Association of Professional Behavior Analysts, 2018, pp. 4-5)

Purpose of the Australian Professional Competencies of Behaviour Analysts

The competencies is a public statement of what constitutes the minimum standards of an entry level behaviour analyst. It defines the work of behaviour analysts, specifically the knowledge and professional expectations that are required to effectively deliver ABA services to improve outcomes for clients. The competencies do this by providing a framework that makes explicit areas of knowledge, practice and performance management integral to a behaviour analyst's career. The competencies can be used by those studying towards becoming a behaviour analyst to judge the quality and success of their learning outcomes and inform their continued self-reflection and self-assessment. The competencies also act as a bridge of common understanding and language for conversation between behaviour analysts, behaviour analytic organisations, professional associations and the public.

Competency 1: Foundational and Theoretical Knowledge of the Discipline

Description: Comprehend basic principles, theories, and concepts of behaviour analysis, using a scientific approach, on the following topics:

1. Define and behave in line with the philosophical assumptions of behaviour analysis
    1.1. Lawfulness of behaviour
    1.2. Selectionism (phylogenic, ontogenic, and cultural)
    1.3. Determinism
    1.4. Empiricism
    1.5. Parsimony
    1.6. Replication
    1.7. Pragmatism
    1.1. Philosophical Doubt
    1.8. Environmental (as opposed to mentalistic) explanations of behaviour
    1.9. Describe and define the dimensions of applied behaviour analysis (Baer, Wolf, & Risley, 1968).
    1.10. Distinguish between radical and methodological behaviourism
    1.11. Distinguish between the conceptual analysis of behaviour, experimental analysis of behaviour, applied behaviour analysis, and behavioural service delivery.
2. Define and provide examples of
    2.1. Behaviour, response
    2.2. Response class
    2.3. Environment
    2.4. Respondent conditioning: Reflexive relations and Respondent conditioning
    2.5. Operant conditioning
        2.5.1. Operant behaviour
        2.5.2. Operant selection
        2.5.3. Operant contingencies (basic four-term contingency)
    2.6. Respondent-operant interactions
    2.7. Reinforcement
        2.7.1. Unconditioned reinforcement
        2.7.2. Conditioned reinforcement
        2.7.3. Automatic reinforcement
        2.7.4. Schedules of reinforcement
        2.7.5. Positive reinforcement
        2.7.6. Negative reinforcement
    2.8. Punishment
        2.8.1. Unconditioned punishment
        2.8.2. Conditioned punishment

Competency 2: Measurement

Description: To be able to use various methods of measurement, identify and create appropriate measurement systems based on dimension of behaviour, and evaluate the quality of the measurement system.

Basic Measurement
1. Collect data using the following forms of measurement:
    1.1. Count
    1.2. Rate (i.e., count per unit time)
    1.3. Duration
    1.4. Latency
    1.5. Interresponse time
    1.6. Interval recording
    1.7. Trials to criterion
    1.8. Permanent products

Advanced Measurement
1. Define behaviour in observable and measurable terms.
2. Define the fundamental properties of behaviour (e.g., temporal locus, temporal extent, repeatability).
3. Identify the measurable dimensions of behaviour (e.g., rate, duration, latency, interresponse time).
4. Create a measurement system to obtain representative data given the dimensions of the behaviour and the logistics of observing and recording.
5. State the advantages and disadvantages of using continuous measurement procedures and discontinuous measurement procedures (e.g., partial- and whole-interval recording, momentary time sampling).
6. Design and implement
    6.1. continuous measurement procedures (e.g., event recording).
    6.2. discontinuous measurement procedures (e.g., partial & whole interval, momentary time sampling).
    6.3. choice measures.
7. Evaluate the accuracy and reliability of measurement procedures.
    7.1. Assess and interpret interobserver agreement.

Competency 3: Data Display and Analysis

Description: To be able to use various methods of data display and use single subject design to evaluate and intercept data.

1. Select a data display that effectively communicates relevant quantitative relations.
2. Identify the parts of an equal interval line graph (e.g., x-axis, y-axis, data points, data path, phase and condition changes, chart labels)
3. Design, plot, and interpret data using equal-interval graphs and/or cumulative record to display data.
4. Analyse changes in level, trend, and variability.
5. Interpret and base decision-making on data displayed in various formats.
6. Compare and contrast single-subject design versus group design

Competency 4: Experimental Evaluation of Interventions

Description: To be able to use various arrangements of baseline and intervention conditions to demonstrate effectiveness of the invention on the target behaviour.

1. Review and interpret articles from the behaviour-analytic literature.
2. Systematically arrange independent variables to demonstrate their effects on dependent variables.
1. Describe baseline logic and phase change logic
3. Define and Use
    3.1. Withdrawal/reversal designs
    3.2. Alternating treatments (i.e., multielement) designs
    3.3. Changing criterion designs
    3.4. Multiple baseline designs
    3.5. Multiple probe designs
4. Use combinations of design elements.
5. Identify and address practical and ethical considerations in using various experimental
6. designs.
7. Be able to conduct a component analysis to determine the effective components of an intervention package.
8. Be able to conduct a parametric analysis to determine the effective values of an independent variable.

9. Describe confounds (e.g., multiple treatment interference, sequence effects, carry over effects)

Competency 5: Behavioural Assessments

Description: A behaviour analyst investigates the client's primary concerns such as challenging behaviours, preferences, and/or skill deficits in various learning/life domains. Assessments are designed and carried out based on the current research-based recommendations.

1. Functional Behavioural Assessment
   1.1. State the primary characteristics of and rationale for conducting a functional behaviour assessment.
   1.2. Indirect Assessments
       1.2.1. Review records and available data.
       1.2.2. Consider biological and/or medical variables that may be affecting the client.
       1.2.3. Conduct an interview of the client with key stakeholders in order to identify the behaviour(s) of concern.
       1.2.4. Describe the benefits and limitations of using behavioural rating scales, questionnaires, and checklists
       1.2.5. Define the limitations of using only an indirect assessment
       1.2.6. Organise, analyse, and interpret indirect data
   1.3. Direct Assessment
       1.3.1. Define behaviour in observable and measurable terms.
       1.3.2. Define environmental variables in observable and measurable terms.
       1.3.3. Use various methods of descriptive data collection (e.g., baseline measurement, Antecedent - Behaviour - Consequence data collection, scatterplot, narrative recording, etc.)
       1.3.4. Organise, analyse, and interpret descriptive data.
       1.3.5. Create a hypothesis statement about the function of the behaviour of concern.
   1.4. Functional Analysis
       1.4.1. State the primary characteristics of and rationale for conducting a functional analysis as a form of assessment.
       1.4.2. Describe common functional analysis conditions.
       1.4.3. Describe various forms of functional analysis (e.g., standard, brief, trial-based, latency, etc.).
       1.4.4. Design and implement a functional analysis where antecedent and consequence are manipulated to understand their effects on the behaviour of concern.

        1.4.5.   Organise, analyse, and interpret functional analysis data.
- 1.5.   Data Analysis and Summary
    - 1.5.1.   Organise, analyse, and interpret observed data from the functional behaviour assessment.
    - 1.5.2.   Make recommendations regarding behaviours that must be established, maintained, increased, or decreased.

2. Stimulus Preference assessments
    - 2.1.   Design and conduct stimulus preference assessments to identify potential reinforcers.
        - 2.1.1.   Use various method of stimulus preference assessments such as:
            - 2.1.1.1.   Single stimulus preference assessments
            - 2.1.1.2.   Paired choice preference assessments
            - 2.1.1.3.   Multiple stimulus with and without replacement preference assessments
            - 2.1.1.4.   Duration and concurrent operant preference assessments

3. Assessment of Skill Strengths and Deficits
    - 3.1.   Conduct a skills assessment appropriate to identify the skill strengths and deficits.
    - 3.2.   Use direct observation of the behaviour during the skills assessment.
    - 3.3.   Use verbal operants as a basis for language assessment.

Competency 6: Intervention

Description: To be able to use various principles and procedures of behaviour analysis to create an individualised intervention based on assessment data.

1. Basic Behaviour Change Procedures: Be able to use the following:
    - 1.1.   Positive and negative reinforcement
    - 1.2.   Appropriate parameters and schedules of reinforcement
    - 1.3.   Response and stimulus prompts and prompt fading
    - 1.4.   Modelling and imitation training
    - 1.5.   Shaping
    - 1.6.   Chaining
    - 1.7.   Task analyses
    - 1.8.   Discrete-trial and free-operant arrangements
    - 1.9.   Echoic training
    - 1.10.   Mand training
    - 1.11.   Tact training

1.12. Intraverbal training
1.13. Listener training
1.14. Criterion-based mastery goals
1.15. Positive and negative punishment
1.16. Appropriate parameters and schedules of punishment
1.17. Extinction
1.18. Combinations of reinforcement with punishment and extinction
1.19. Response-independent (time-based) schedules of reinforcement (i.e., noncontingent reinforcement)
1.20. Differential reinforcement (e.g., DRO, DRA, DRI, DRL, DRH)
1.21. Augmentative and alternative communication systems
1.22. Various teaching arrangements (e.g., Direct Instruction, precision teaching, personalised systems of instruction, incidental teaching, etc.)

2. Intermediate Behaviour Change Procedures
   2.1. Use the dimensions of applied behaviour analysis (Baer, Wolf, & Risley, 1968) to evaluate whether interventions are behaviour analytic in nature.
   2.2. Design and implement:
      2.2.1. Interventions based on manipulation of antecedents, such as motivating operations and discriminative stimuli
      2.2.2. Discrimination training procedures
      2.2.3. Instructions and rules
      2.2.4. Contingency contracting (i.e., behavioural contracts)
      2.2.5. Independent, interdependent, and dependent group contingencies
      2.2.6. Stimulus equivalence procedures
      2.2.7. The Premack principle
      2.2.8. Pairing procedures to establish new conditioned reinforcers and punishers
      2.2.9. Errorless learning procedures
      2.2.10. Matching-to-sample procedures
      2.2.11. Self-management strategies
      2.2.12. Token economies and other conditioned reinforcement systems
      2.2.13. Functional communication training
   2.3. Design and implement for behavioural contrast effects.
   2.4. Use matching law and recognize factors influencing choice.
   2.5. Arrange high-probability request sequences.
   2.6. When a behaviour is to be decreased, select an acceptable alternative behaviour to be established or increased.
   2.7. Identify punishers.

3. Advanced Behaviour Change Procedures
   3.1. State intervention goals in observable and measurable terms.
   3.2. Identify potential interventions based on assessment results and the best available scientific evidence.

3.3.　　Select intervention strategies based on
    3.3.1.　　Client preferences
    3.3.2.　　Client's current repertoires
    3.3.3.　　Supporting environments
    3.3.4.　　Environmental and resource constraints
    3.3.5.　　The social validity of the intervention
3.4.　　Identify and address practical and ethical considerations when using experimental designs to demonstrate treatment effectiveness.
3.5.　　Program for maintenance, and stimulus and response generalisation.
3.6.　　Arrange instructional procedures to promote generative learning (i.e., derived relations).
3.7.　　Base decision-making on data displayed in various formats.
3.8.　　Conduct risk-benefit analyses.
3.9.　　State and plan for the possible unwanted effects of
    3.9.1.　　Reinforcement
    3.9.2.　　Punishment
    3.9.3.　　Extinction

Competency 7: Performance Management

Description: To be able to create training programs alongside ongoing feedback systems to ensure appropriate delivery of behaviour analytic services.

1. Identify the contingencies governing the behaviour of those responsible for carrying out behaviour-change procedures and design interventions accordingly.
2. Design and use competency-based training for persons who are responsible for carrying out behavioural assessment and behaviour-change procedures.
3. Design and use behaviour skills training.
4. Design and use effective performance monitoring and reinforcement systems.
5. Design and use systems for monitoring procedural integrity.
6. Evaluate the effectiveness of the performance monitoring systems
7. Establish support for behaviour-analytic services from direct and indirect consumers.
8. Use a combination of technical and non-technical language to explain ABA to all relevant stakeholders
9. Secure the support of others to maintain the client's behavioural repertoires in their natural environments.

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