Applied Behavior Analysis, Cert. (GR)

Program Description

The ABA certificate is for individuals who have already obtained a master's-level degree. Students interested in pursuing BCBA certification will receive the coursework required for BCBA exam eligibility. Courses in the certificate place emphasis on serving people with challenging behaviors or autism and are appropriate for individuals who may be interested in the applied behavior analysis certificate.

Outcome 1 – Philosophical Underpinnings

ABA Certificate students will explain philosophical underpinnings of behavior analysis of special education.

Measure 1.1– EPSY 630 Final Exam

Data Collection: The final exam consisting of true/false, multiple choice, matching, fill in the blank, and short-answer questions will measure understanding of the goals of behavior analysis as it applies to Special Education. The data is gathered each year by the faculty member who teaches EPSY 630, and he/she/they will share that data with the SPED Master's Assessment Committee.

Methodology or data analysis strategy: Student responses on the EPSY 630 final exam will be evaluated with the Philosophical Underpinnings rubric indicator a. [See relevant rubric under *Supporting Documentation*.]

Target 1.1

Description of the standard: Proficient performance (column three on the rubric for each performance indicator) is the minimally acceptable student performance at completion of the program. Target: 75% of students will demonstrate proficient performance as evaluated by the Philosophical Underpinnings rubric on indicator A.

Finding 1.1: Met

For Philosophical Underpinnings rubric 1a, 86.24% of students demonstrated proficient performance or above. With an original target of 75%, this exceeds our target by 11.24%.

This reporting cycle's data indicates a slight decrease in performance, as the 2020-2021 reporting of this PLO showed that 92.39% of students demonstrated proficient performance or above. However, we also had six additional students complete this cycle. In general, these data are proportionally comparable to last year's cycle. Implications of this data include faculty reiterating the ways in which goals of behavior analysis can be applied in special education settings. This may include more applied examples and explicit connections in class.

Measure 1.2 – SPED 604 Midterm and Final Exam

Data Collection: Midterm and final exams consisting of true/false, multiple choice, matching, fill in the blank, and short-answer questions will measure understanding and application on philosophical assumptions of behavior analysis, perspectives of radical behaviorism, the science of behavior, and dimensions of applied behavior analysis. The data is gathered each year by the faculty member who teaches SPED 604, and he/she/they will share that data with the SPED Master's Assessment Committee.

Methodology or data analysis strategy: Student responses on the SPED 604 midterm and final exam will be evaluated with the Philosophical Underpinnings rubric indicators b, c, d, and e. [See relevant rubric under *Supporting Documentation*.]

Target 1.2

Description of the standard: Proficient performance (column three on the rubric for each performance indicator) is the minimally acceptable student performance at completion of the program. Target: 75% of students will demonstrate proficient performance as evaluated by the Philosophical Underpinnings rubric on exam items that address indicators b, c, d, and e.

Finding 1.2: Met

For Philosophical Underpinnings rubric (Rubric 1) sections b, c, d, and e, average performance across all 4 indicators indicates 88.345% of students demonstrated proficient performance or above. With an original target of 75%, this exceeds our target by 11.655%. Specific data include:

Rubric 1b = 94.59% Proficient performance and above.
Rubric 1c =81.08% Proficient performance and above.
Rubric 1d = 77.70% Proficient performance and above.
Rubric 1e = 100% Proficient performance and above.

This reporting cycle's data indicates a slight decrease in performance, as the 2020-2021 reporting of this PLO showed that 93% of students demonstrated proficient performance or above on rubric 1 sections b, c, d, and e. Specifically, last year's data indicate:

Rubric 1b = 92.39% Proficient performance and above.
Rubric 1c = 82.61% Proficient performance and above.
Rubric 1d = 87.50% Proficient performance and above.
Rubric 1e = 100% Proficient performance and above.

There is consistency across performance in rubric areas b, c, and e. Performance on rubric 1d shows a small decrease in performance, science of ABA and SPED. To enhance performance for future cycles, we will focus on acquisition and application of vocabulary related to this rubric indicator at the beginning and throughout the course, SPED 604 (Introduction to ABA).

Outcome 2 – Behavior Analytics and Curricular Concepts and Principles

ABA Certificate students will define and provide examples of behavior analytic and curricular concepts and principles considering the unique needs of individuals with disabilities.

Measure 2.1 – SPED 699 Midterm and Final Examinations

Data Collection: Midterm and final exams consisting of true/false, multiple choice, matching, fill in the blank, and short-answer questions will measure understanding and application of four term contingencies, reinforcement and punishment, verbal operant, generalization and maintenance, and rule governed and contingency shaped behavior. The data is gathered each semester by the faculty member who teaches SPED 699, and he/she/they will share that data with the SPED Master's Committee.

Methodology or data analysis strategy: Student responses on the SPED 699 midterm and finals exam will be evaluated with the Behavior Analytics and Curricular Concepts and Principles rubric indicators a, b, c, d, and e. [See relevant rubric under *Supporting Documentation*.]

Target 2.1

Description of the standard: Proficient performance (column three on the rubric for each performance indicator) is the minimally acceptable student performance at completion of the program. Target: 75% of students will demonstrate proficient performance as evaluated by the Behavior Analytics and Curricular Concepts and Principles rubric on exam items that address indicator indicators a, b, c, d, and e.

Finding 2.1: **Met**

For Behavior Analytics and Curricular Concepts and Principles rubric sections a, b, c, d, and e, 83.78% of students demonstrated proficient performance or above across all 5 indicators. With an original target of 75%, this exceeds our target by 8.78%. Specific data include:

83.78% Proficient + in Rubric 2 a, b, c, d and e

All targets PASSED.

OVERALL Breakdown:

Exemplary = 51.35%

Proficient = 32.43%

Emerging = 16.22%

Developing = 0.00%

Data for this rubric were not previously reported in the 2020-2021 cycle. This target was exceeded by nearly 9%, with over half of the students scoring in the "Exemplary" range on the rubric. In future reporting cycles, we will increase the target to 80%. To further enhance this target overall, additional applied examples of reinforcement and punishment - the weakest area of performance among these indicators - will be incorporated throughout the course (SPED 699 - Advanced ABA).

Outcome 3 – Measurement, Data Display, and Interpretation

ABA Certificate students will design and evaluate measurement procedures and interventions in order to interpret data and adjust plans.

Measure 3.1 – Intervention Project

Data Collection: A professional e-folio presentation of an intervention project where students define a target behavior, design a measurement system, and implement data collection procedures using that measurement system. Data will be displayed and then interpreted using visual analysis. The data is gathered each year by the faculty member who teaches SPED 642, and he/she/they will share that data with the SPED Master's Assessment Committee.

Methodology or data analysis strategy: Student submissions of the Intervention Project will be evaluated with the Measurement, Data Display, and Interpretation rubric indicators a, b, c, d, and e. [See relevant rubric under *Supporting Documentation*.]

Target 3.1

Description of the standard: Proficient performance (column three on the rubric for each performance indicator) is the minimally acceptable student performance at completion of the program. Target: On each rubric category, 75% of students will demonstrate proficient performance as evaluated by the Measurement, Data Display, and Interpretation rubric.

Finding 3.1: Not Met

For Measurement, Data Display, and Interpretation rubric sections a, b, c, d, and e, 74% of students demonstrated proficient performance or above across all 5 indicators. With an original target of 75%, this missed our target by 1%. Specific data include:

74% Proficient + in Rubric 3 a, b, c, d and e
74% = Proficient or Above in all FIVE eFolio Categories
11% = Proficient of Above in FOUR eFolio Categories
14% = Proficient or Above in THREE eFolio Categories
3% = Proficient or Above in TWO eFolio Categories
0% = Proficient or Above in ONE eFolio Category
0% = Proficient or Above in ZERO eFolio Categories

This reporting cycle's data indicates a significant increase in performance, as the 2020-2021 reporting of this PLO showed that 26% of students demonstrated proficient performance or above on rubric 3 sections a, b, c, d, and e. Our growth for this rubric area between the two reporting cycles was 48%. Specifically, last year's data indicate:

26.09% = Proficient or Above in all FIVE eFolio Categories
13.04% = Proficient of Above in FOUR eFolio Categories
26.09% = Proficient or Above in THREE eFolio Categories
13.04% = Proficient or Above in TWO eFolio Categories
13.04% = Proficient or Above in ONE eFolio Category
8.70% = Proficient or Above in ZERO eFolio Categories

To further promote growth for this rubric, we will address the two lowest-performing indicators - operational definitions and measurement systems - by incorporating more in-class practice and feedback before students submit the projects used for the e-folio review. This will be applied across SPED 604, SPED 699, and EPSY 630 courses.

Use of Results

PLO#1 - The instructor of SPED 604 (Introduction to ABA) course will enhance the vocabulary acquisition throughout the course, with regular refreshers and informal assessments (in-class discussions and practice).

- This will take place beginning in Summer I, 2023 and will be led by the instructor for the SPED 604 course.
    - Students likely will be able to demonstrate increased understanding of key terminology in the field of applied behavior analysis by placing increased emphasis on the acquisition of vocabulary.

PLO#2 - Two courses - SPED 604 and EPSY 630 - will reemphasize how the goals of behavior analysis (ABA) can be applied in a special education setting, especially through examples provided in class.

- SPED 604 updates will take place beginning in Summer I, 2023 and will be led by the instructor for the SPED 604 course.
    - By using applied case examples, students will likely be able to gain a stronger understanding of the application of ABA goals in context.
- EPSY 630 updates will take place beginning in Spring 2024 and will be led by the instructor of that course.
    - By using applied case examples, students will likely be able to gain a stronger understanding of the application of ABA goals in context.

PLO#2 - faculty will provide additional applied examples of reinforcement and punishment principles of applied behavior analysis.

- SPED 699 course updates will take place beginning in Fall 2023 and will be led by the instructor of that course.
    - By providing additional applied examples of reinforcement and punishment principles, student understanding of these concepts for future application should improve.

PLO#3 -Across SPED 604, SPED 699, and EPSY 630 courses, faculty will provide more salient and applicable student opportunities to articulate operational definitions of behavior as well as measurement systems.

- SPED 604 updates will take place beginning in Summer I, 2023 and will be led by the instructor for the SPED 604 course.
    - By emphasizing and increasing opportunities to articulate operational definitions of behavior as well as measurement systems, student understanding and performance in these areas should likely improve.
- SPED 699 updates will take place beginning in Fall 2023 and will be led by the instructor for that course.

    - By emphasizing and increasing opportunities to articulate operational definitions of behavior as well as measurement systems, student understanding and performance in these areas should likely improve.
- EPSY 630 updates will take place beginning in Spring 2024 and will be led by the instructor for that course.
    - By emphasizing and increasing opportunities to articulate operational definitions of behavior as well as measurement systems, student understanding and performance in these areas should likely improve.

Status Update on a Previous Action

Program faculty have aligned course assignment rubrics to the eFolio rubrics to improve student performance and have increased the rigor and application of course projects in alignment with what is expected of them in both the eFolio and their Board-Certified Behavior Analyst examination. These efforts are aiding in PLO achievement based on cohort data. For example, we see in Rubric 3: Measurement, Data Display, and Interpretation that the percentage of students who demonstrated proficient performance or above in all five areas increased by approximately 48% from the 2020-2021 to the 2021-2022 assessment cycle.

Supporting Documentation

1. Philosophical Underpinnings

Special Education Master's Program students will…

Explain philosophical underpinnings of behavioral analysis of special education (TAMU PLO 1).

	Performance Indicator	Emergent	Developing	Proficient	Exemplary
		1	2	3	4
a.	**Goals of behavior analysis as it applies to special education** BCBA A-1	1. a. 1 State that there are goals of behavior analysis as a science.	1. a. 2 Identify the goals of behavior analysis as a science (i.e., description, prediction, control).	1. a. 3 Describe the goals of behavior analysis as a science (i.e., description, prediction, control).	1. a. 4 Describe the goals of behavior analysis as a science (i.e., description, prediction, control) in the context of special education.
b.	**Philosophical assumptions underlying the science of behavior analysis and special education pedagogy** BCBA A-2	1. b. 1 State that the science of behavior analysis has underlying assumptions.	1. b. 2 Identify philosophical assumptions underlying the science of behavior analysis.	1. b. 3 Explain the philosophical assumptions underlying the science of behavior analysis (e.g., selectionism, determinism, empiricism, parsimony, pragmatism).	1. b. 4 Synthesize philosophical assumptions underlying behavioral analysis with special education pedagogy.
c.	**Perspective of radical behaviorism** BCBA A-3	1. c. 1 Define behaviorism.	1. c. 2 Identify examples of behavior from the perspective of radical behaviorism.	1. c. 3 Explain behavior from the perspective of radical behaviorism.	1. c. 4 Explain behavior from the perspective of radical behaviorism as it may be seen in a special education setting.
d.	**Science of behavior analysis and special education** BCBA A-4	1. d. 1 Identify examples of professional practice.	1. d. 2 Identify professional practice guided by the science of behavior analysis.	1. d. 3 Distinguish among behaviorism, the experimental analysis of behavior, applied behavior analysis, and professional practice guided by the science of behavior analysis.	1. d. 4 Distinguish among behaviorism, the experimental analysis of behavior, applied behavior analysis, and professional practice guided by the science of behavior analysis within the context of special education.
e.	**Dimensions of applied behavior analysis (Baer, Wolf, & Risley, 1968)** BCBA A-5	1. e. 1 State that applied behavior analysis has dimensions.	1. e. 2 Identify the dimensions of applied behavior analysis.	1. e. 3 Describe the dimensions of applied behavior analysis.	1. e. 4 Describe the dimensions of applied behavior analysis within the context of special education.

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2. Behavior Analytics and Curricular Concepts and Principles

Special Education Master's Program graduates will…

Define and provide examples of behavior analytic and curricular concepts and principles, considering the unique needs of individuals with disabilities (AIS 3.K and 3.S, BIS 3.K, and TAMU PLO 2).

	Performance Indicator	Emergent	Developing	Proficient	Exemplary
		1	2	3	4
a.	**Four-term contingencies** BCBA B-1, B-2, B-3, B-7, B-10, B-12, B-15	2. a. 1 Describe the four-term contingency (motivating operations, antecedent, behavior, and consequence).	2. a. 2 Describe the four-term contingency (motivating operations, antecedent, behavior, and consequence) and accurately match each to provided examples or cases.	2. a. 3 Explain the four-term contingency (motivating operations, antecedent, behavior, and consequence) and generate both academic and social/emotional examples of four-term contingencies.	2. a. 4 Implement the four-term contingency (motivating operations, antecedent, behavior, and consequence) in professional practice.
b.	**Reinforcement and punishment** BCBA B-4, B-5, B-6, B-8, B-9	2. b. 1 Define reinforcement and punishment.	2. b. 2 Define reinforcement and punishment; match these concepts to provided examples.	2. b. 3 Define and generate academic and social/emotional examples of reinforcement and punishment applications.	2. b. 4 Implement reinforcement and punishment applications in curricular, instructional, and behavior management practices.
c.	**Verbal operant** BCBA B-14	2. c. 1 Define verbal operant.	2. c. 2 Define and identify examples of verbal operants.	2. c. 3 Define and generate examples of the verbal operants.	2. c. 4 Utilize verbal operants effectively in professional practice.
d.	**Generalization and maintenance** BCBA B-11	2. d. 1 Define generalization and maintenance.	2. d. 2 Identify academic and social/emotional examples of generalization and maintenance strategies.	2. d. 3 Define and generate academic and social/emotional examples of generalization and maintenance strategies.	2. d. 4 Demonstrate planning for academic and social/emotional generalization and maintenance.
e.	**Rule-governed and contingency shaped behavior** BCBA B-13	2. e. 1 Define rule-governed and contingency shaped behavior.	2. e. 2 Given examples, match rule-governed and contingency shaped behavior.	2. e. 3 Define and provide academic and social/emotional examples of rule-governed and contingency shaped behavior.	2. e. 4 Establish rule-governed and contingency shaped behavior for individuals with disabilities.

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3. Measurement, Data Display, and Interpretation

Special Education Master's Program graduates will…

Design and evaluate measurement procedures and interventions in order to interpret data and adjust plans (AIS 1.K and TAMU PLO 3).

	Performance Indicator	Emergent	Developing	Proficient	Exemplary
		1	2	3	4
a.	**Operational definition of behavior** BCBA C-1	3. a. 1 Operationally define a behavior.	3. a. 2 Operationally define academic, cognitive, social, and linguistic based behaviors.	3. a. 3 Operationally define academic, cognitive, social, and linguistic based behaviors to produce high reliability in direct observation.	3. a. 4 Evaluate outcomes in relationship to operational definition(s).
b.	**Measurement systems** BCBA C-2, C-3, C-4, C-5, C-6	3. b. 1 Describe data collection choices, types, and characteristics.	3. b. 2 Distinguish between data collection systems from a set of choices.	3. b. 3 Apply direct, indirect, and product measures of behavior; measure trials of behavior occurrence to criterion, including evaluation of validity and reliability (e.g., frequency, rate, percentage), temporal dimensions of behavior (e.g., duration, latency, interresponse time), and behavior form and strength (e.g., magnitude, topography).	3. b. 4 Develop data collection measurement systems that include criterion, validity, and reliability (e.g., frequency, rate, percentage), temporal dimensions of behavior (e.g., duration, latency, interresponse time), and behavior form and strength (e.g., magnitude, topography).
c.	**Data collection** BCBA C-7, C-8, C-9	3.c. 1 Identify sampling procedures (i.e., interval recording, time sampling).	3.c. 2 Select sampling procedures appropriate for a particular behavior.	3.c. 3 Design and implement sampling procedures (e.g., interval recording, time sampling); select a measurement system to obtain representative data given the dimensions of behavior and the logistics of observing and recording.	3.c. 4 Design and implement sampling procedures for complex and multiple behaviors (e.g., interval recording, time sampling); select a measurement system to obtain representative data given the dimensions of behavior and the logistics of observing and recording.
d.	**Data display** BCBA C-10	3. d. 1 Describe data in non-visual format (e.g., narrative).	3. d. 2 Graph or chart data in one format (e.g., equal-interval graphs, bar graphs, cumulative records).	3. d. 3 Graph data, using technology, to communicate relevant quantitative relations (e.g., equal-interval graphs, bar graphs, line graphs, cumulative records).	3. d. 4 Defend graphed data with scientific knowledge about graphs, charts, and data display; use technology to support individual program evaluation.
e.	**Data interpretation** BCBA C-11	3. e. 1 Identify components of graphed data.	3. e. 2 Interpret graphed results data as summative.	3. e. 3 Using visual analysis, accurately interpret graphed data on behavior occurrence (e.g., frequency), temporal dimensions of behavior (e.g., duration), and behavior strength (e.g., magnitude).	3. e. 4 Using masked visual analysis, accurately interpret graphed data, report reliability of interpretation, and use multiple interpretation metrics.