Assessment of an Associate BCBA Program

by

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Acknowledgments and Gratitude

Nothing in life is done alone. The obtaining of this degree is the result of many lifting me up and paving the road. The resulting credential truly belongs to more than just me.

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Executive Summary

The context examined in this work is the Autism Society of North Carolina (ASNC), which is facing the issue of needing to assess their current Associate Board Certified Behavior Analyst (BCBA) program. This is important because as a person progresses through different stages of certification, mentorship becomes an extremely important component in the further building of both technical, or clinical, and soft skills following certification.

The needs of the organization led me to the literature on supervision and mentorship and particularly the andragogy theory. Andragogy refers to a theory of adult learning, which details some of the ways in which adults learn differently than children. For example, adults tend to be more self-directed, internally motivated, and ready to learn. Using the concepts of andragogy, supervisors may be able to increase the effectiveness of adult education experiences.

In putting together context, problem, literature and framework, the following project questions were developed:

> **Project Question 1:** How have Associate BCBAs' skills changed during their time in the program?
>
> **Project Question 2:** How do components of current program contribute to those changes in skills?
>
> **Project Question 3:** What challenges do Associate BCBAs experience and how is this program helping to meet those challenges?

To answer these questions, qualitative methods were used as the project seeks to answer questions about experience, meaning and perspective, from the standpoint of the

participant. These data were collected through review of documents and four interviews with participants from the Associate BCBA program.

> **Finding 1:** The current data collection process appears to be too cumbersome for accurate skill measurement over the course of the program.
>
> **Finding 2:** Participants felt they grew in some skills with components of the current program and appreciated the low caseload, even as they wanted more feedback.
>
> **Finding 3:** The program addresses some of the challenges noted by participants through components examined, but there are no clear data on the direct relationship.

Like all projects, mine has limitations, including the small number of participants as well as the lack of consistent documents for participants for data analysis. However, I can suggest with some confidence, and connecting my results to the literature, the organization should utilize an andragogical process design. The following are recommended:

> **Recommendation 1:** Involve Associate BCBAs in a shared process to establish learning objectives and track their skill development through the course of the program.
>
> **Recommendation 2:** Incorporate self-evaluation of skills measured through established rubrics for participants.
>
> **Recommendation 3:** Establishment of a process to outline expectations of the Associate BCBA program.

Introduction

One of the primary eligibility requirements set forth by the Behavior Analyst Certification Board (BACB) for certification as a Board Certified Behavior Analyst® (BCBA®) or a Board Certified Assistant Behavior Analyst® (BCaBA®) is the completion of defined practical experience hours in applied behavior analysis (ABA). The number of hours required varies based on the type of experience (i.e., supervised fieldwork or concentrated fieldwork) with a range from 1500 to 2000 experience hours. However, there is no standard following certification for continued mentorship nor are there guidelines to address which individuals require such mentorship, how long they should receive such mentorship, etc.

The Autism Society of North Carolina developed an Associate BCBA program to address this need for newly certified individuals within the organization. An Associate BCBA refers to a newly certified BCBA (i.e., less than one-year of certification). Associate BCBAs working for ASNC agree to receive a lower beginning salary to access mentorship from a more senior, certified clinical professional. There is opportunity to increase the annual salary received by $5,000 at each quarterly benchmark established as part of the program. Upon completing all benchmarks, participants in the Associate BCBA program transition to an entry-level BCBA position with a salary in line with the standard beginning salary in the field for a Master's level clinician. Responsibilities of Associate BCBAs include providing direct services, holding their own caseload of learners, providing on-site and off-site supervision to Registered Behavior Technicians (RBT) and meeting established quarterly benchmarks.

An important learning theory, which may be beneficial to address these needs within the field is andragogy. Andragogy refers to a theory of adult learning that details some of the ways in which adults learn differently than children. For example, adults tend to be more self-directed, internally motivated, and ready to learn. Using the concepts of andragogy, supervisors may be able to increase the effectiveness of adult education experiences.

The purpose of this capstone project is to examine the Associate BCBA's technical (i.e., implementation of teaching a learner directly) versus soft skills (i.e., empathetic actions) and how these may develop in participants because of their participation in the Associate BCBA program. Additionally, assessing the quality of the program in teaching conceptual underpinnings; thus, how well does the program assess an individual's understanding of why certain teaching procedures are used. Lastly, there is interest in assessment of the breadth of experiences provided to Associate BCBAs.

Organizational Context

The focal organization for this project is the Autism Society of North Carolina (ASNC). For almost 50 years, as a part of their mission, ASNC has improved the lives of individuals with autism, supported their families, and educated communities across North Carolina. The Autism Society of North Carolina was formed in 1970 by a group of parents who wanted to build better lives for their children with autism. The parents did not accept their children were unreachable or should be excluded from school or community life. Thus, the parents created the organization to share information, provide support to one another, and improve the lives of all children with autism in the state. These founders laid the groundwork for the services and supports families and individuals now enjoy; their goals remain part of the organization's mission today.

Since beginning services in the 1970s, there has been significant growth by the organization across a multitude of supports and services. After years of growth, the Autism Society of North Carolina now operates with a budget of more than $20 million per year. ASNC is governed by a diverse Board of Directors made of a dedicated group of volunteers, many of whom are parents or family members of individuals with autism or self-advocates.

Since the Associate BCBA program was developed in 2018, there has been a total of seven participants. Five of the seven participants are still employed with the organization following completion of the program.

Area of Inquiry

Applied Behavior Analysis (ABA) is currently the only evidence-based treatment of autism spectrum disorders (ASD). ASD refers to a group of developmental disabilities typically associated with challenges of varying severity. Areas most associated with such challenges for individuals diagnosed with ASD include social interaction, communication, and repetitive/restricted behaviors, as noted in the Diagnostic and Statistical Manual of Mental Disorders, 5th Edition: DSM-5. It is noted in the most recent data from the Centers for Disease Control and Prevention (CDC) 1 in 54 children meet the diagnostic criteria for ASD. There is no separation in prevalence based on racial, ethnic, or socioeconomic status and ASD is four times more likely to be diagnosed in boys than girls (CDC, 2020). ASD is a lifelong disorder, affecting individuals of all ages.

While behavior analysts are not limited to only working with individuals diagnosed with autism, this is the primary area of need for ABA services, and where most behavior analysts apply skills learned through graduate school and fieldwork experience. The focus

of this project aims at working with the individuals assigned to oversee and create clinical services provided through ASNC for individuals on the autism spectrum. This team is composed of the Clinical Director, Associate Clinical Director, Lead Clinical Licensed Psychological Assistant (LPA), and a Board Certified Behavior Analyst assigned to overseeing training and supervision within the organization.

The Behavior Analyst Certification Board (BACB) provides guidelines on the criteria for eligibility to test for certification as a Board Certified Behavior Analyst (BCBA). Specifically, the completion of defined practical experience hours in applied behavior analysis under the supervision of a qualified supervisor. To be deemed "qualified", a person must simply complete an 8-hour training on supervision; there is no other determination of supervisor qualification currently. The number of fieldwork experience hours required for approval to test varies based on the type of experience being completed (i.e., supervised fieldwork or concentrated supervised fieldwork) with a range from 1500 to 2000 fieldwork experience hours. Within these supervised hours, only 40% may be accrued via direct service hours. However, the breadth of the remaining 60% is determined by the individual's supervisor. Thus, everyone reaches the required criteria outlined by the BACB differently and the skills learned through their fieldwork experience are largely dependent on the repertoire of skills demonstrated by their immediate supervisor. Thus, it goes without saying, all BCBAs are not created equal and are a product of their learning environments.

While the BACB provides guidelines for supervision during accrual of fieldwork experience hours, outside of meeting required continuing education criteria within a 2-year certification cycle, there is not currently a standard for continued mentorship following an individual obtaining certification as a BCBA. Additionally, there are no guidelines to

determine which individuals require such mentorship, the level of mentorship needed, the duration of mentorship, measurement of progress in mentorship, nor the qualifications needed of those providing mentorship. This serves as a huge gap in the development of skilled behavior analysts working as practitioners. Thus, the purpose of the Associate BCBA program at ASNC is to address this area of deficit in the field of applied behavior analysis. Associate BCBAs participating in the program have completed all the requirements outlined above, each with a different history of experiences. The Associate BCBA program seeks to expand those skills learned during the first year of certification to prepare the participant for a full-time clinical role.

Behavior analysts must have a combination of technical and soft skills for successful provision of services. Technical skills are taught most readily and are the focus of most training programs, as these skills relate to the actions needed daily for a practitioner in the provision of behavior analytic services. Specifically, these refer to direct service implementation with clients, writing of treatment protocols, completing assessments, and training of others. Soft skills have become an area of interest for many within the field of ABA, as these skills are not readily taught within most graduate programs and are not always the focus within required supervision. These soft skills refer to the more empathetic actions of a clinician, which include but are not limited to interaction styles, cultural competence, cultural responsivity, as well as communication and organization skills.

The Associate BCBA program has several requirements geared to establish the skills needed for success as a practitioner in behavior analysis. As it relates to technical skills, the program aims to build these skills through direct service implementation with assigned learners, writing protocol updates, completing assessments, and development of plans of

care based on assessment results. Professionalism and clinical "soft" skills aimed to be taught within the program include clinical interaction style, inter-organizational interaction style, empathy and cultural responsivity, and communication and organization.

A component of the Associate BCBA program is a gradual increase in caseload size. Associate BCBAs begin with two cases with which they work directly (i.e., provide direct behavior analytic services for). This is typically faded within the first quarter. At that time, a Registered Behavior Technician (RBT) is placed on those cases to provide the direct services under the direction/supervision of the Associate BCBA. The Associate BCBA will then take on two more cases, which makes a total of four cases. Following six months in the Associate BCBA program, two more cases are added for a total of six cases. Then, during the nineth month, two additional cases are added for a total caseload of eight cases. By the twelfth month, the Associate BCBA is responsible for supervision of four to six RBTs. Additionally, the Associate BCBA is responsible for all programmatic needs and parent collaboration pieces of their assigned cases alongside a mentor BCBA. During the last quarter (months 9-12), the Associate BCBA is to function as a full-time BCBA with the continued oversight of multiple mentors.

An explanation of the required documents and in-person activities to be completed as part of the Associate BCBA program is in Table 1. These skills align with the quarterly benchmarks and ongoing expectations within the organization for skills needed to perform the job of a full-time Clinical Professional/BCBA.

Table 1. Explanation of Required Documents and In-Person Activities

Documents	
Protocol Updates	Everyone receiving behavior analytic services must have a treatment plan in place. A component of the treatment plan is treatment protocols, which guide the provision of services and provides direction on how to teach the skills within the overarching treatment plan whether it is within the initial plan or concurrent plan (IPOC/CPOC). Associate BCBAs are expected to complete protocol updates for their programs quarterly at minimum. Protocols are to be updated to reflect the most current teaching methodologies necessary for goals being targeted for instruction.
IPOC Background Skill Domains	IPOC refers to Initial Plan of Care, or the first plan outlining services for an individual receiving behavior analytic services. Within the IPOC template utilized by ASNC, there is a section titled "current domains of functioning". Within this section, the clinician is expected to describe the following areas: cognitive/academic skills, language/communication skills, reduction of interfering/mildly inappropriate behaviors, severe behavior, safety skills, social skills, play/leisure skills, independent living/self-help skills, community integration, coping and tolerance skills.
CPOC Background Goal Overview	CPOC refers to a Concurrent Plan of Care, or each subsequent plan following the initial plan of care. These are typically completed every six months based on insurance mandates and document the continued need for behavior analytic services, while providing an update on the present level of need for the individual based on current progress.
In-person Activities	
Direct Instruction	Direct instructions imply refers to the time a clinician spends providing direct therapeutic services with a client.
Intake/Assessment of New Client	This refers particularly to the intake appointment and initial assessment completed for a new client. During which, information is gathered for placement in the Initial Plan of Care (IPOC) described above.
Parent Training	Parent training refers to time spent with the family members/caregivers for the recipient of services to assist in their development of skills needed to assist with acquisition of skills in different environments as well as guiding generalization and maintenance of skills learned during direct instruction.
Coordination of Services	Behavior analysts are expected to coordinate services, as appropriate and applicable, across team members and service providers (i.e., speech language therapists, occupational therapists, IEP teams, medical providers, etc.) Coordination of services can include review of behavior intervention plan, review of the current plan of care, specifics on treatment protocols, and updates on progress.
On-site Supervision	On-site supervision refers to time spent directly supervising other individuals in the implementation of behavior analytic services. Most often this is the supervision of Registered Behavior Technicians (RBTs) as well as students enrolled in behavior analytic coursework.
Off-site Supervision	Like on-site supervision, however, these meetings occur while the supervisee is not engaged in direct behavior analytic services.
Student Supervision	Student supervision refers to the supervision of trainees enrolled in behavior analytic coursework working toward fieldwork requirements for certification as a behavior analyst.

Each quarter, there are benchmarks aligned to the above expected skills for completion within the Associate BCBA program. Criteria for mastery are outlined per task with a focus on decreasing feedback required for completed activities by the assigned mentor, as noted in Table 2. Additionally, for in-person activities, there is movement from the Associate BCBA simply observing the assigned mentor engaged in the tasks to the independent completion of tasks by the Associate BCBA with a check-in occurring with the applicable mentor during weekly supervision.

Multiple rubrics are used by the organization to guide mentors in the scoring of documents as well as in-person activities. Each domain within the rubrics is scored as either demonstrates mastery (DM), emerging skill (ES), or needs improvement (NI). Scoring guidelines are provided with each rubric and the scoring guidelines outlines questions to assist the mentor in assigning one of the above scores (i.e., DM, ES, or NI) to the identified feedback domains for the associated rubric.

As noted in the *Treatment Protocol Feedback Rubric*[1], which is used for the assessment of Protocol Updates, the main feedback domains are General Treatment Protocol Overview, Mastered Goal Summary, Description of Current Goals, Novel Goal Development, Behavior Reduction Summary, and Overall Content. Within each of these feedback domains, the following are scored, which leads to the overall score related to mastery: Functional Treatment Goals Selected, Teaching Methodology Aligned with Evidence-Based Practices (EBP), Teaching Procedures are Clear and Concise and Appropriate for Audience, Graphs Included for Mastered/Existing Goal, Data Analyzed and

[1] Appendix A: Treatment Protocol Feedback Rubric and Scoring Guidelines

Interpreted Appropriately, and Writing Style/Clarity/Format. Specific feedback is then provided for areas noted as either an emerging skill or needs improvement.

Within the *I/CPOC Feedback Rubric*[2], which is used for the assessment of Initial Plan of Care (IPOC) as well as Concurrent Plan of Care (CPOC) documents, the main feedback domains are Background/History, Skill Grids/Assessment Summary, Data Analysis/Review, Novel Goal Development, Parent Training Summary/Goals, and Overall Content. Within each of these feedback domains, the following are scored and lead to the overall score related to mastery: Meaningful Content, Functional Treatment Goals, Clear Objectives and Outcomes, Aligned with Evidence-Based Practices (EBP), Appropriate Use of Technical Language, and Writing Style/Clarity/Format.

During the process of this program review, the organization developed the *Professional and Clinical "Soft Skills"* rubric[3], which assesses the feedback domains geared to the development of identified soft skills including Interaction Style, Inter-Organizational Communication Style, Empathy and Cultural Responsivity, and Communication and Organization. There are not any additional domains reviewed within these; however, there are guiding questions for the mentor to assess the performance within these domains.

In the table below, the expectations per time (in months) as an Associate BCBA are noted with aligned mastery criteria. The numbers noted within parentheses denote expectations for the total number of each assignment needed for completion.

[2] Appendix A: I/CPOC Feedback Rubric and Scoring Guidelines
[3] Appendix A: Professionalism and Clinical "Soft Skills" Rubric and Scoring Guidelines

Table 2. Documents and Mastery Criteria per Time in Program

Timeframe (months)	Documents	Mastery Criteria	In-Person Activities	Mastery Criteria
0-3	Protocol Updates (3)	Receives an overall score of "demonstrates mastery" on 80% or more content areas	Direct Instruction	Receives an overall score of "demonstrates mastery" on 80% or more content areas
	IPOC background skill domains (1)		Intake/Assessment of New Client (1)	N/A; observation only
			Parent Training (3)	
	CPOC background goal overview (1)		Coordination of Services (1)	
			On-site Supervision (6; 2 across 3 clients)	
			Off-site Supervision (2; across 2 RBTs)	
3-6	Protocol Updates (6)	Receives an overall score of "demonstrates mastery" on 80% or more content areas	Direct Instruction	Receives an overall score of "demonstrates mastery" on 80% or more content areas
	IPOC all content (1)		Intake/Assessment of New Client (1)	
	CPOC all content (3)		Parent Training (3)	
	[redacted]		On-site Supervision (10; 2 across 5 clients)	Debrief during weekly supervision
			Off-site Supervision (3; across 3 RBTs)	Receives an overall score of "demonstrates mastery" on 80% or more content areas
6-9	Protocol Updates (8)	Receives an overall score of "demonstrates mastery" on 90% or more content areas	Direct Instruction	Receives an overall score of "demonstrates mastery" on 90% or more content areas
	IPOC all content (1)		Intake/Assessment of New Client (1+)	
	CPOC all content (3)		Parent Training (6)	
	[redacted]		Parent Training (2) – alone Not to begin before month 7	Debrief during weekly supervision
			Onsite supervision (4; 1 each across 4 clients)	Receives an overall score of "demonstrates mastery" on 90% or more content areas
			On-site supervision (all necessary to meet clinical standards)	Debrief during weekly supervision
			Off-site supervision (2; across 2 RBTs)	Receives an overall score of "demonstrates mastery" on 90% or more content areas
			Off-site supervision (2; across 2 RBTs) Not to begin before month 7	
			Student supervision (2; across 2 students)	NA; observation only
9-12	Protocol Updates (10)	Receives an overall score of "demonstrates mastery" on 90% or more content areas	Intake assessment of new client (as necessary)	Debrief during weekly supervision
	IPOC all content (caseload)		Parent training (3)	Maintenance check-in. Should be maintaining performance at 90% or better.
	CPOC all content (caseload)		Parent training (as necessary)	Debrief during weekly supervision
	[redacted]		On-site supervision (3)	Maintenance check-in. Should be maintaining performance at 90% or better.
			On-site supervision (as necessary)	Debrief during weekly supervision
			Off-site supervision (3)	Maintenance check-in. Should be maintaining performance at 90% or better.
			Off-site supervision (as necessary)	Debrief during weekly supervision
			Student supervision (2; across 2 students)	N/A; observation only

Literature Review and Conceptual Framework

The Associate BCBA program at ASNC is geared to provide needed mentorship for newly certified behavior analysts within their first year of certification. The needs of the organization led me to the literature on training, supervision and mentorship and particularly the andragogy theory.

An emerging topic across several fields through the decades is that of mentoring. Mentoring relationships form between students and teachers in formal adult education settings, which range from adult basic education to advanced professional training. Some form of mentoring may be an important component through which adults learn in our society (Merriam, 1983).

Kram's (1985) seminal work provided the launching of empirical research on the topic of mentoring relationships at work. Now, for several decades, there have been noted benefits of mentoring relationships publicized (Allen, Eby, Poteet, Lentz, & Lima, 2004; Levinson, Darrow, Klein, Levinson, & McKee, 1978; Roche, 1979). Career outcomes such as salary level, promotion rate, and job satisfaction have been identified as benefits of mentoring for mentees (Chao, Walz, & Gardner, 1992; Fagenson 1989; Scandura, 1992; Whitely, Dougherty, and Dreher, 1991).

The term mentor dates to Greek mythology and describes "a relationship between younger adult and an older, more experienced adult [who] helps the younger individual learn to navigate the adult world and the world of work" (Kram, 1985, p.2). Levinson et al.'s (1978) research describes the relationship, which develops with a mentor as one of the most important experiences in young adulthood. Mentors are not only a source of learning

but play a key role in the development of self-esteem and work identity for mentees (Levinson, 1978).

As noted by Allen, et al (2006), formal mentoring programs have become an increasingly popular employee development tool. While recommendations concerning the design and implementation of these programs have been offered in both the popular and scholarly press; surprisingly, these recommendations have had little empirical scrutiny. While several studies have looked at the differences in benefits across formal and informal mentorships, less research has focused on characteristics of the programs and outcomes. Ragins, Cotton, and Miller (2000) and Viator (1999) are two exceptions to this. Ragins, et al. researched perceived formal mentoring program characteristics, perceived program effectiveness, satisfaction with the mentor, and job attitudes among 104 mentees across fields of social work, engineering, and journalism. Of those studied, program characteristics were associated with having a greater organizational commitment, fewer intentions to quit, and stronger satisfaction with their mentor. These characteristics include meeting frequency guidelines related to perceived program effectiveness, purpose of the program related to opportunities for promotion satisfaction, and having a mentor from a different department. Viator (1999) assessed the effects of perceived input into the matching process, setting goals and objectives, and meeting guidelines on satisfaction with the mentor. Results of the study indicate mentees were more satisfied with their mentorship experience when they had input in the matching process, had regular meetings and set goals and objectives.

This capstone examines the constructs of the Associate BCBA Program through mentoring theory and andragogy. Mentoring theory (Kram, 1985; Levinson, Darrow, Klein, Levinson, & McKee, 1978) and theoretical extensions of mentoring theory to formal

mentoring (Ragins et al., 2000) provide a solid foundation on which to develop hypotheses about how program characteristics relate to mentoring outcomes. The work of Kram (1985) on mentoring relationships suggests mutual liking, identification, and attraction are key interpersonal processes associated with the development and sustenance of mentoring relationships. Further, the extent to which the relationship meets needs of both individuals' developmental needs is a hallmark of mentoring. Mentorships assist mentees to develop a professional identity and personal competence. This can also provide mentors with a sense of generativity and purpose (Erickson, 1963; Kram, 1985; Levinson et al., 1978).

The term andragogy was first used by Alexander Kapp in 1833 to describe Plato's elements of education and refers to "man led" teaching. This comes in comparison to the term pedagogy, which refers to "child" led teaching based on the root *ped*. (Smith, M., 1996, 1999). Malcolm Knowles initially theorized adult education and connected the use of the two terms andragogy and adult education.

Adult learners have different characteristics when compared to other learners. In his 1950 work, Knowles identified five characteristics for adult learners which included self-concept, experience, readiness to learn, orientation to learning, and motivation to learn. A key notion of andragogy is Knowles' notion of self-concept, which refers to the movement from dependence on others, including mentors, to self-direction (Knowles, 1984; Smith, M., 2002).

In 1998, Knowles identified the following six core assumptions of adult learning:

1. Adults need to know why they need to learn something before learning it.
2. The self-concept of adults is heavily dependent upon a move toward self-direction.

3. Prior experiences of the learner provide a rich resource of learning.
4. Adults typically become ready to learn when they experience a need to cope with a life situation or perform a task.
5. Adults' orientation to learning is life-centered, and they see education as a process of developing increased competency levels to achieve their full potential.
6. The motivation for adult learners is internal rather than external.

As noted by Knowles, adults have acquired a plethora of experiences, which provides the base for their learning activities, or the frame of reference, which serves as the structure of assumptions from which we understand our experiences. This body of experience is made up of associations, concepts, values, feelings, conditioned responses; all of which define our life world. Transformative learning is described as the process of effecting change in the frame of reference (Mezirow, 1991, 1995, 1996; Cranton, 1994, 1996).

This applies to the current project, as the participants in the Associate BCBA program are adults. Therefore, the structure of the program needs to be based on the understanding of the conceptual underpinnings as it relates to adult learning theory. Adult learning theory, or andragogy, is especially relevant in the review of the Associate BCBA program, as the focus of the program is geared to the training and learning of adult practitioners in behavior analysis. Knowles (1998) notes six core principles of andragogy, which provide a solid foundation in the planning of adult learning experiences. The principles of andragogy appear in the Associate BCBA program in many ways. Participants in the Associate BCBA program are adults engaged in the active learning of skills. Through this experience, they have an active role in the process, both in the implementation of required skills and through

the receipt of feedback from their mentors. Thus, this serves as an adult learning transaction (Brookfield, 1986; Holton, Swanson, & Naquin, 2001).

In alignment with the six core principles of andragogy, participants in the Associate BCBA program are fully aware of the need to learn the skills outlined in the program prior to beginning. Through engagement in the Associate BCBA program, the goal is for participants to move toward self-direction rather than dependence on others for conceptualization. The histories of each practitioner provide a resource for learning and guides their interest in the learning process while providing a solid base for which the Associate BCBA program builds upon. Through this, participants view learning as life-centered, and view this process of participation in the Associate BCBA program as a process to increasing competency levels as practitioners in behavior analysis. This also ties to the interest of the participant because of the current life situation of needed to perform a task, as it is related to their future employment as a Clinical Professional/BCBA whether with ASNC or another organization. Through this learning process, mistakes are allowed for and expected during the initial stages of the program as shaping is used to increase expectations for the practitioner based on their success. As such, much of the motivation to learn these skills is intrinsic.

Project Questions

Behavior analysts have worked to establish and modify supervision guidelines for aspiring behavior analysts. However, there continues to be a lack of guidelines developed for mentorship practices of newly certified behavior analysts, which is needed as our field continues to grow. To fill this void within their own practice, ASNC has developed their own mentorship program for those within the first year of certification as a behavior analyst.

This project is geared to evaluate ASNC's Associate BCBA program under the conceptual framework of mentorship and andragogy.

Based on the interests of the organization, the following questions guided the project in determining the current effectiveness of ASNC's Associate BCBA program:

1. How have Associate BCBAs' skills changed during their time in the program?
2. How do components of current program contribute to those changes in skills?
3. What challenges do Associate BCBAs experience and how is this program helping to meet those challenges?

Table 3. Project Question linked to Concept and Method of Data Collection

Project Question	Concept	Method of Data Collection
PQ1: How have Associate BCBAs' skills changed during their time in the program?	- Mentorship - Training	- Document Review - Participant Interviews
PQ2: How do components of current program contribute to those changes in skills?	- Andragogy	- Document Review - Participant Interviews
PQ3: What challenges do Associate BCBAs are experiencing and how is this program helping to meet those challenges?	- Andragogy - Mentorship	- Participant Interviews

Project Design and Data Analysis

This project used a qualitative approach to attempt to understand and evaluate the questions associated with the Associate BCBA program. A qualitative approach was taken to gain rich insight into the way mentoring theory applies within the experiences of Associate BCBAs at ASNC. This method also informs how andragogy appears in the process.

Qualitative data were collected through structured interviews[4] of four participants of the Associate BCBA program. These participants completed their experience in the program at different times between 2018-2019 and had different histories within the organization. Data were also obtained through document reviews of feedback provided by clinical supervisors to participants.

Participants were identified by the organization and participated voluntarily. All seven participants were contacted for participation; however, only four responses were received, a 57% response rate. Documents from the organization were received for five out of seven participants (71%). However, these documents for review were not received for all individuals interviewed. Of those individuals interviewed, documents were received for 50%, or two of the four participants interviewed. There were documents received for three participants who did not participate in the interview portion of the project. The specific data on documents received can be found in Table 4. Two of the participants no longer work with the organization but were contacted to gauge interest in participation; they did not respond. The interviews with participants occurred via video conferencing due to COVID-19 and these interviews occurred at convenient times for the participant. The interviews were geared to obtain the perspective of the participant on skills learned, activities/opportunities provided, feedback received, barriers, and consequences for completing the program.

Data analysis occurred through review of interview data as well as historical data in the form of permanent products from the organization, which included rubrics used to assess performance, benchmark tracking, and feedback sent to participants. Based on the review of

[4] Appendix A: Interview Questions for Participants in Associate BCBA Program

these data, common themes evaluated include the following: benchmarks, skills learned as a function of the program (technical versus soft), modality of feedback received, frequency of feedback, programmed consequences for completion of benchmarks.

Interviews

All seven participants of the Associate BCBA program were contacted to schedule an interview during March and April 2020. However, only four participants responded and scheduled an interview. All interviews occurred voluntarily via Zoom due to COVID-19 restrictions. These interviews occurred at convenient times for the participant, and all interviews were recorded to allow for transcribing. Each interview was approximately an hour in duration. The interviews were geared to obtain information from the participant on their perception of skills learned through the Associate BCBA program (technical versus soft skills), the activities/opportunities provided, feedback received, barriers identified, and consequences for completing the program.

Following the completion of interviews, the narrative was downloaded from Zoom. These were then reviewed to find common themes noted by participants across the main areas as noted below.

Benchmarks

A component of the Associate BCBA program is the tracking of benchmarks within an Excel file by mentors. These files were provided for four of the seven participants. The files were cross-referenced with other available files for each participant. Only one participant had data entered through the entire course of the program; all others showed data entry ending within the second or third quarter.

Skill Development

As it relates to the development of technical and soft skills, as outlined within the Associate BCBA program at ASNC, the following were consistent groupings of benchmarks associated with each, with some tasks falling in both areas. Across participants, consistency was noted with the following groupings when asked to align skills from benchmarks to either a technical or soft skill. Technical skills were noted as plan writing (IPOC/CPOC), protocol updates, supervision/training, intake/assessment. Soft skills were noted within on-site supervision, off-site supervision, parent training, intake/assessment.

While these groupings are not an all-inclusive list of skills needed to perform in the role of a BCBA, as it relates to the Associate BCBA program these are how participants identify the areas of skill development to these two groupings.

Additionally, the following skills were listed by participants as needed soft skills for completion of outlined benchmarks: interaction style to be used with both staff and families, empathy, and communication. An interesting item missing from this list is cultural sensitivity, as this is found on the most recent rubric used by the organization as a feedback domain.

75% of participants interviewed identified growth within technical skills as a function of the program, while only one participant identified growth of soft skills as a function of the program.

Activities/Opportunities Provided

Most activities/opportunities provided within the Associate BCBA program, as outlined within the benchmarks involve writing skills. There is an increasing number of

expected items to be completed per quarter but with little change in the breadth of experiences available.

Feedback Received

Through review of interview data, a variation in feedback preference emerged across participants. This was true for both the frequency and modality used (i.e., written, verbal, in-person). During the interviews, participants had the option to rate the frequency of feedback as "too much, too little, or just right". Of those interviewed, one participant felt the frequency of feedback was "too much" (25%), one participant felt the frequency of feedback was "too little" (25 %), while two participants felt the frequency of feedback was "just right" (50%).

Barriers Identified

A common barrier for the completion of identified benchmarks was caseload size. While this was noted as a positive for the program overall, caseload size was also noted consistently as a barrier to meeting benchmarks as outlined due to not having enough cases to meet the expected number of documents required per quarter.

Consequences for Completing the Program

Participants were able to state the contingencies of completing benchmarks; however, none of the participants reported receiving the identified salary increase contingent on completion of outlined benchmarks. They contributed the eventual increase in pay to their movement to a full-time BCBA in which that pay increase would have occurred regardless.

Document Review

To assist with compilation of historical data provided across participants a rubric was created to outline the following details across quarters:

1. Did the participant meet the specified criteria for documents?
    a. If not, how many did they meet?
2. Did the participant meet the specified criteria for in-person activities?
    a. If not, how many did they meet?

Table 4 provides details on the data available per participant. These data include documents completed as well as in-person activities completed, as recorded in the Associate BCBA Evaluation Workbook for each individual participant. The data below are divided by quarter and align to benchmarks within the Associate BCBA program. Data for participants E, F, and G are not available for reporting due to not having access to their benchmark workbook.

Table 4. Participant Data per Quarter

		Participant Data						
		A	B	C	D	E	F	G
Quarter 1 0-3 months	Documents Required							
	Protocol Updates (3)	Met	Met	Not Met	Not Met	N/A	N/A	N/A
	IPOC Background Skills (1)	Met	Not Met	Met	Met	N/A	N/A	N/A
	CPOC Background Skills (1)	Met	Met	Met	Met	N/A	N/A	N/A
	In-person Activities Required							
	Direct Instruction	Met	No Data	No Data	No Data	N/A	N/A	N/A
	Intake/Assessment of New Client (1+)	Met	Met	Met	Met	N/A	N/A	N/A
	Parent Training (3)	Met	Met	Met	Not Met	N/A	N/A	N/A
	Coordination of Services (1)	Met	Met	Not Met	Not Met	N/A	N/A	N/A
	Onsite Supervision (6; 2 across 3 clients)	Met	Not Met	Met	Not Met	N/A	N/A	N/A
	Offsite Supervision (2; across 2 RBTs)	Met	Met	Met	Met	N/A	N/A	N/A
Quarter 2 3-6 months	Documents Required							
	Protocol Updates (6)	Not Met	Not Met	Not Met	No Data	N/A	N/A	N/A
	IPOC: All Contents (1)	Met	Not Met	Met	No Data	N/A	N/A	N/A
	CPOC: All Content (3)	Met	Met	Not Met	No Data	N/A	N/A	N/A
	In-person Activities Required							

	Direct Instruction	No Data	No Data	No Data	No Data	N/A	N/A	N/A
	Intake/Assessment of New Client (1+)	Met	Not Met	Met	No Data	N/A	N/A	N/A
	Parent Training (3)	Met	Not Met	Not Met	No Data	N/A	N/A	N/A
	Onsite Supervision (3)	Met	Met	Met	No Data	N/A	N/A	N/A
	Onsite Supervision (10; 2 across 5 clients)	Not Met	Not Met	Not Met	No Data	N/A	N/A	N/A
	Offsite Supervision (3; across 3 RBTs)	Met	Not Met	Not Met	No Data	N/A	N/A	N/A
Quarter 3 6-9 months	Documents Required							
	Protocol Updates (8)	Not Met	No Data	No Data	No Data	N/A	N/A	N/A
	IPOC: All Contents (1)	Met	No Data	No Data	No Data	N/A	N/A	N/A
	CPOC: All Content (3)	Met	No Data	No Data	No Data	N/A	N/A	N/A
	In-person Activities Required							
	Direct Instruction	No Data	No Data	No Data	No Data	N/A	N/A	N/A
	Intake/Assessment of New Client (1+)	Met	No Data	No Data	No Data	N/A	N/A	N/A
	Parent Training (6)	Met	No Data	No Data	No Data	N/A	N/A	N/A
	Parent Training (2) *begin no sooner than month 7	Met	No Data	No Data	No Data	N/A	N/A	N/A
	Onsite Supervision (4; 1 each across 4 clients)	Met	No Data	No Data	No Data	N/A	N/A	N/A
	Onsite Supervision (all necessary to meet clinical standards)	Met	No Data	No Data	No Data	N/A	N/A	N/A
	Offsite Supervision (2; across 2 RBTs)	Met	No Data	No Data	No Data	N/A	N/A	N/A
	Offsite Supervision (2; across 2 RBTs) *begin no sooner than month 7	Met	No Data	No Data	No Data	N/A	N/A	N/A
	Student Supervision (2; across 2 students)	Met	No Data	No Data	No Data	N/A	N/A	N/A
Quarter 4 9-12 months	Documents Required							
	Protocol Updates (10)	Not Met	No Data	No Data	No Data	N/A	N/A	N/A
	IPOC: All Contents (all necessary)	Met	No Data	No Data	No Data	N/A	N/A	N/A
	CPOC: All Content (all necessary)	Met	No Data	No Data	No Data	N/A	N/A	N/A
	In-person Activities Required							
	Intake/Assessment of New Client (as necessary)	Met	No Data	No Data	No Data	N/A	N/A	N/A
	Parent Training (3)	Met	No Data	No Data	No Data	N/A	N/A	N/A
	Parent Training (as necessary)		No Data	No Data	No Data	N/A	N/A	N/A
	Onsite Supervision (3)	Met	No Data	No Data	No Data	N/A	N/A	N/A
	Onsite Supervision (all necessary to meet clinical standards)		No Data	No Data	No Data	N/A	N/A	N/A
	Offsite Supervision (3)	Met	No Data	No Data	No Data	N/A	N/A	N/A
	Offsite Supervision (2; across 2 RBTs) *begin no sooner than month 7		No Data	No Data	No Data	N/A	N/A	N/A
	Student Supervision (2; across 2 students)	Met	No Data	No Data	No Data	N/A	N/A	N/A

There are clearly limitations within this project. These limitations include the varying levels of feedback provided to participants during the duration of their experiences

in the Associate BCBA program. Additionally, as noted in Table 4 the documents provided for each participant were also variable and for some participants there were no documents available for review at all, or there was no way to determine where in the process the provided documents were applicable. Lastly, there is a small number of participants.

Through the above data analyses, the following findings were able to be concluded.

Findings

Project Question 1: How have Associate BCBAs' skills changed during their time in the program?

Finding 1: The current data collection process appears to be too cumbersome for accurate skill measurement over the course of the program.

One participant described their first time viewing the benchmarks, which occurred after their experience started, stating, "it felt very overwhelming to me". None of the participants recalled the specific benchmarks and one participant noted they were not often referenced throughout their experience in the Associate BCBA program. When asked the question, "Did you meet all the scheduled benchmarks that had been identified within the Associate BCBA program?" They responded, "Pretty sure I did. They weren't referred back to that often, so I didn't keep track of it. I think, [supervisor] did, maybe but I felt like honestly, I was just getting work and I was doing it." Thus, it seems there is a lack of clarity in the skills to be taught through the benchmarks and lack of ability to meet established benchmarks.

Data on four participants were available for review. Only one participant had data for each quarter recorded, with all other participants' data ending between Quarter 2 and 3. The participant with data across all quarters, maintained performance across both documents and in-person activities. However, it is hard to establish what skills improved through time

in the program specifically as items were scored as meeting mastery during Quarter 1. Direct instruction is noted as a required in-person activity, but these details were not recorded for any participant; thus, the data below do not include that portion of requirements when considering percentages of completion.

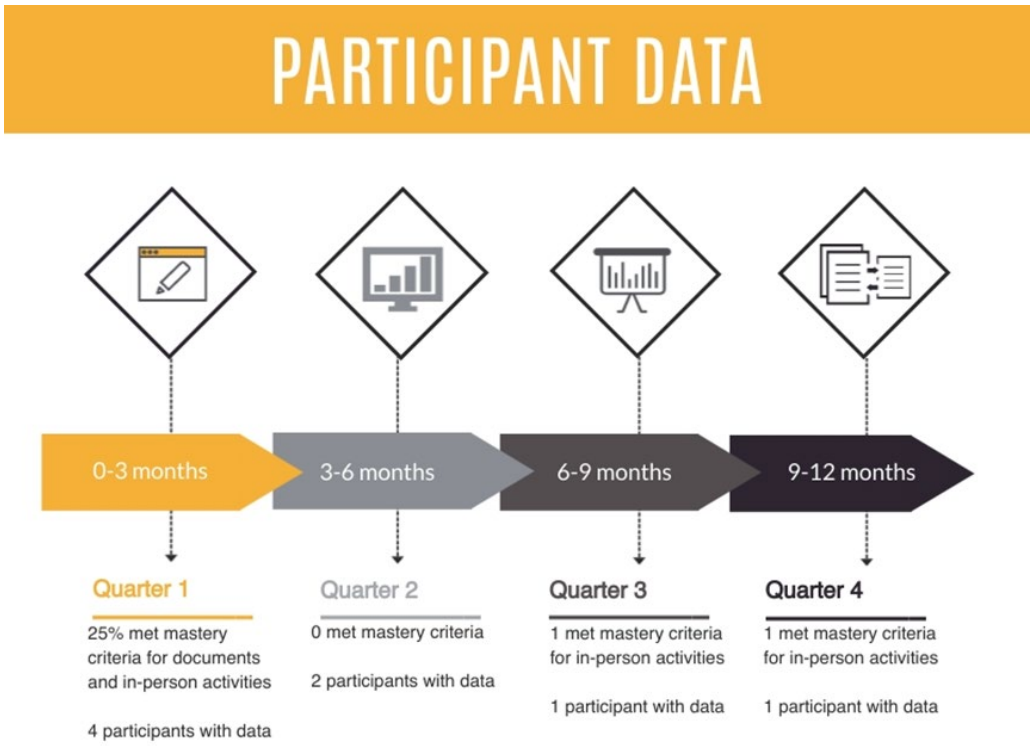


Figure 1. The figure above provides details on aggregate data across participants available for each quarter as noted in Table 4. Mastery criteria was determined by scores assessed by supervisors, as recorded in available Associate BCBA benchmark workbooks.

The following graphs note data available across quarters for individual participants within the Associate BCBA program. In the first graph, the percentage of completion as it relates to documents required is shown per quarter. Participant A is the only individual with data recorded for all quarters; as noted in the first graph, Participant A completed 100% of required documents, as recorded by their supervisor, during the first quarter and 67% during all following. Of the three required documents, protocol updates were the documents not completed to the established criteria during Quarters 2, 3, and 4. Participants B and C only

have data for Quarter 1 and 2. Protocol updates were again, a barrier for meeting outlined expectations in the program. Participant D only had data for Quarter 1, with the same barrier of protocol updates noted when assessing individual data.

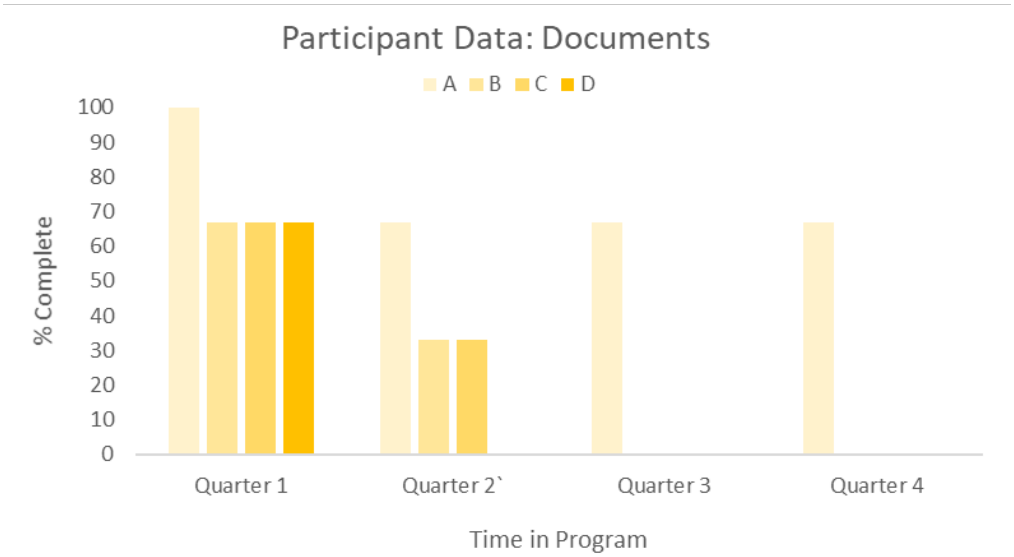


Figure 2. The above graph provides details on participant completion of required documents noted as part of Associate BCBA program across quarters.

In the following graph, the percentage of completion as it relates to in-person activities required is shown per quarter. Participant A is again the only individual with data recorded by their supervisor for all quarters; as noted in the graph below, Participant A completed 100% of required in-person activities during the first, third, and fourth quarters. During the second quarter, 80% of expected activities were completed. The only in-person activity not completed to established standards was on-site supervision. Similarly to data for documents, Participants B and C only have data for the first and second quarter. A decrease in completion of activites from first to second quarter is noted for both. There are no comparison data available for Participant D.

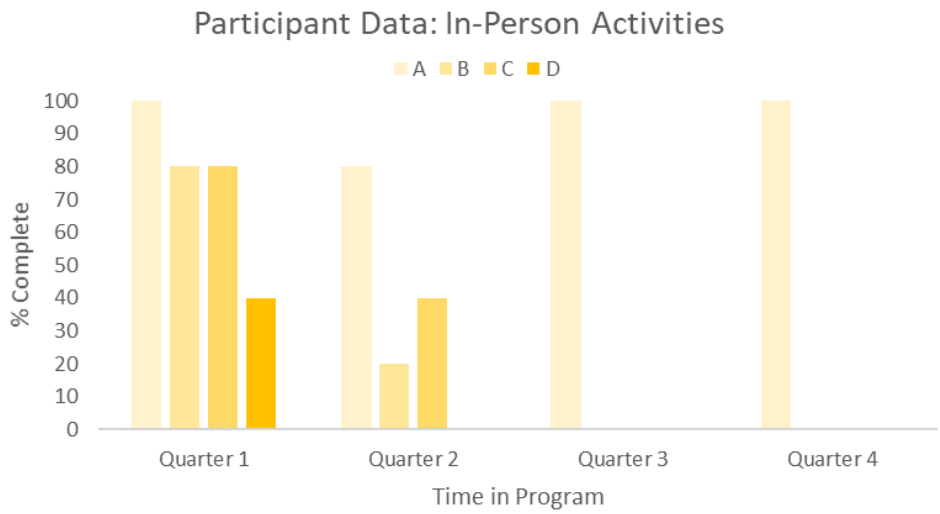
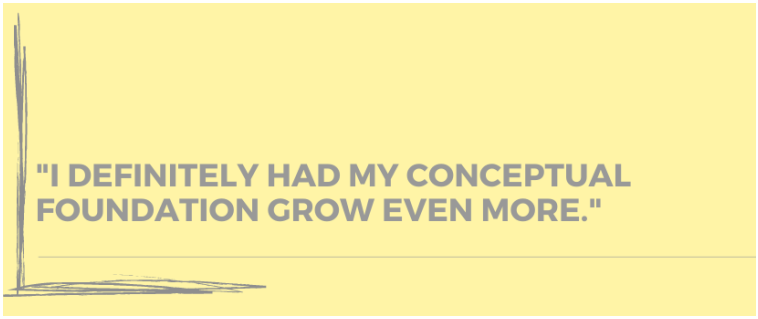


Figure 3. The above graph provides data on the percentage of completion as it relates to in-person activities required by participant per quarter.

Project Question 2: How do components of current program contribute to those changes in skills?

Finding 2: Participants felt they grew in some skills with components of the current program and appreciated the low caseload, even as they wanted more feedback.

While data were limited to determine a functional relationship between the program and skills learned, participants report changes in skill set over the course of the time spent in the Associate BCBA Program. One participant stated the positive of, "I definitely had my conceptual foundation grow even more."



While another participant made an interesting point in the statement, "I wish I had more structure to self-reflect and gauge my own progress." Showing a desire for more self-reflection and the ability to note individual growth through their time in the Associate BCBA program.

Skill Development: Technical Skills

Participants agreed plan writing (IPOC/CPOC), protocol updates, supervision/training, and intakes/assessments were all technical skills they received significant practice in through their participation in the Associate BCBA program. One participant noted the technical skill learned through the program as most beneficial was plan writing; specifically stating, "…it helped as far as just framework and being able to then give myself the foundational framework of what the RBTs were going to be taking in." The participant added, "The feedback from that was really important…Now, having had that feedback, I don't feel I need it as much, but if I do, I can ask. I feel it opened that door for communication and talking about the technical skills [needed for the job]." Additionally, it was noted, "I think graduate school helps a lot with conceptual foundation growth but putting it into practice was a huge deal. So, I felt the Associate model really helped with that. Having the two pieces where we're still doing direct work and having the feedback on all of our plans…having someone kind of pick apart all the pieces. I'm now able to recognize and reframe my thinking to 'oh, this may be a better way to put it'. I didn't even know how to operationalize it that way. It makes it totally different." Another participant stated, "I would say the program was very beneficial to me and the technical skills in the direct sense of working directly with clients and families."

Skill Development: Soft Skills

Consistency was also noted with participants on their groupings of tasks seen to be associated with soft skills, which included components of on-site and off-site supervisions, parent training, as well as intake/assessment. Specifically, within the tasks noted to require soft skills participants identified the following skills as being required for completion of

outlined benchmarks addressing soft skills: interaction style to be used with both staff and families, empathy, and communication. It should be noted these skills do not align with those of the organization, as outlined in their rubric; however, the rubric was designed during the time this project occurred and was not utilized with participants. Specifically, notably absent from this list is one identified earlier to include cultural sensitivity, a feedback domain found on the Professional and Clinical "Soft Skills" Rubric. However, this rubric was created after the program was developed and has not been incorporated into the learning concepts.

When assessing skills learned there were mixed reviews on the individual perception of technical and soft skills gained through participation in the Associate BCBA program by participants. Three of the four participants reported growing in technical skills. Specific ways they felt this occurred are noted as, "…definitely [in] writing plans and protocols; those were experiences I hadn't had before." Another way noted was "learning from observation [of supervisors] in supervision with staff. Learning how to talk about the interventions, identifying what's happening, and why we want to do it this way and not that way." The fourth participant did not report growth in technical skills. Rather they reported, "I feel I've advanced more being outside of the Associate model because I feel the way it was set up was a little constricting…I feel I get more meaningful feedback now than I had then."

Only one of the four participants thought they developed soft skills. They related this skill development as "establishing confidence, especially with parents, that I know what I'm doing just as much as the next person." The other three did not think they grew in soft skills. One participant stated, "I always found myself wishing someone would come and see me

interact with the client or interact with a parent. That [writing] is a skill I think anybody can be taught, but what if I'm a crappy clinician or crappy supervisor?" Another participant felt that more soft skills could be developed through "Providing more opportunities for coordination of care, because that becomes such a big thing, I think maybe even more knowledge about the autism community in the area." Additionally, it was said, "I feel like, the Associate program was more geared towards technical skills…I don't feel I learned a whole lot about soft skills until after this Associate program." Additionally, it was shared, "I wouldn't describe my advancement in soft skill as a whole lot, to be honest."

Based on individual participant data, it appears the program is effective in skill changes related to technical skills, but it is less clear the impact the program has on development and/or growth for participants as it relates to soft skills. However, all participants felt they obtained skills needed to move toward more independent work as a BCBA through the required writing tasks and supervision provided.

Caseload Size

A common theme noted across interviews for positives of the program included the preference for allowance of small caseloads during the program to set the participants up for success. This is not common practice in the field of ABA, which did not go unnoticed by participants. As one participant said, "…I feel like that [starting with a full caseload] would have super overwhelming. So, starting with a smaller caseload…I feel like that piece was super beneficial." All individuals noted this as a positive, though one individual did suggest flexibility in pacing of the program to account for individual differences, stating, "Maybe there's some way to pace it a little bit better, or to take into consideration the person that is going through the model and what's best for them." While the small caseloads were noted as

an overall positive, they were also noted as a barrier to meeting established benchmarks due to limited opportunities. As one participant said, "…it felt like I was passing the benchmarks because I've done enough but I haven't actually passed them because I do not have enough cases to pass them." Another participant shared, "I do have to say there were times I thought about throwing in the towel, because it [the benchmark] was just unobtainable. It would be reasonable for a full-time BCBA, but as an associate I only started with four clients."

Thus, while the small caseload is noted as preferred by participants, it also seems to serve as a barrier for their completion of benchmarks due to not having the volume needed to meet the specific amount required as they move through the program.

Feedback

Another common theme that emerged was feedback. There was variation in responding from participants regarding their perspective on the frequency of and modality used for feedback on assignments related to benchmarks (i.e., written, verbal, in-person).

Within interviews, participants were asked to rate their feelings on the frequency of feedback. Rating options for frequency of feedback were "too much, too little, or just right". One participant felt the frequency of feedback was too little (25%), while three participants felt the frequency of feedback was just right (75%).

For those seeing feedback occurring too little, some comments were, "I feel like it wasn't frequent enough, it would come in waves with big gaps between." The participant identified feedback to align with meeting of benchmarks rather than an ongoing shaping process. When asked for specifics on frequency, the participant stated, "I would say maybe monthly and mostly when it was time to look at the completion of a benchmark." When

asked what the preferred frequency would be, it was stated to be "Maybe a weekly or even every other week, for a 15-minute check-in…so I had the opportunity to ask more frequent questions and get clarification on anything that I was unsure of. I feel like that would have made things easier." Those that noted the feedback schedule as "just right" reported feedback to occur "once or twice a week". Additionally, those identifying feedback received as "just right" stated, "I felt like I wasn't hounded all that much with too much feedback in a way that it felt overwhelming."

Within interviews, participants were also asked to rate their feelings on the modality for feedback received. Data on participant reports regarding the mode of feedback indicate the current method in which feedback is delivered was overall beneficial and preferred. 75% of participants (3/4) reported the mode of feedback received (combination of verbal, written, and direct) was beneficial. It was noted, "…I think they were equally helpful, as there is variation in modes of feedback needed based on skills". However, for one participant when asked about the different modes of feedback, it is stated they received primarily written feedback only (including email), with the notion they would have preferred a more combination approach, stating written feedback was the least helpful mode "because I feel there was too much room for interpretation and the lack of opportunity to ask for clarification." It was stated by others that "…if it has to do with your soft skills then in-person feedback is better."

Additionally, an issue noted with feedback was the receipt in bulk. To which a participant stated, "I submitted a number of plans that were supposed to go towards my benchmarks, but it took a really long time for them to be turned around and come back to me. So, for example, I think my first round of documents I submitted all four at once. It's

almost like they were edited in bulk and then sent back to me in bulk. So, the mistakes I made on the initial ones, I made on all of them…because the same mistakes were made on all of those. They didn't count towards my benchmark."

Programmed Consequences

In review of the contingency established for meeting benchmarks, which was noted to be an increase in pay for each quarter in which benchmarks were met. This was not reported by any participant interviewed. Additionally, participants did not indicate any consequence for failing to meet established benchmarks. When asked the benefits of completing the program one participant stated, "Not sure if I felt benefits of meeting them. I mean, there's benefits of meeting them as far as gaining experience." Other participants noted more independence but no clear benefit or known progression through benchmarks. One participant stated, "You get a larger caseload." While another stated, "you get your full salary." So, while there appears to be some intrinsic motivation to complete the program and associated benchmarks, it does not appear the current responses of participants is controlled by extrinsic motivation as a function of the programmed consequences within the Associate BCBA program.

Project Question 3: What challenges do Associate BCBAs experience and how is this program helping to meet those challenges?

Finding 3: The program addresses some of the challenges noted by participants through components examined, but there are no clear data on the direct relationship.

A few common themes emerged when speaking of challenges experienced by Associate BCBAs. These include intake assessments, programming, supervision, parent training, and writing. These are explored in more detail below.

Intake Assessments

Intakes, which are the first appointments with a family to determine services needed for an individual were noted a couple time as areas of continued challenge. One participant stated the most challenging part of intakes to be "trying to figure out exactly, you know what, to be looking for because it's really hard when you don't know the person…figuring out what behaviors to be looking for and what exactly to focus on in that setting. I think it is really tricky, so [the program] could work on some of that and then really navigating working with different types of people and all of those types of things, which is more of a soft skill."

Programming

Programming was noted as a challenge across interviews. Programming refers to specific teaching procedures, data collection, monitoring and tracking of individual goals for cases as outlined in their plans of care. One component of challenges noted with programming by participants was in relation to the use of an electronic data system. The participant stated, "We haven't really gotten a lot of guidance on how to program, how to set the programs up and it is the same thing. It is like trial by fire."

Additionally, another challenge noted as it relates to programming was being more comfortable and fluent in shifts in programming to a more naturalistic, client led treatment. With the attempt and intent to make treatment more meaningful for the client and their family as compared to more historically contrived learning opportunities. Thus, participants noted feeling programming for generalization continues to be a challenging area both while in the Associate BCBA program and following completion.

Thus, it does not appear the components within the Associate BCBA program address this area of need for participants.

Supervision

Another common area noted as a challenge across participants is supervision. However, it was noted as a challenge differently across participants. For one participant the challenge associated with supervision was related to the level of supervision while attempting to assert their self in the role of BCBA. Specifically, with parents/caregivers. Stating, "A con of that model is there was a lot of heavy supervision and sometimes I think because of that the relationship you're able to build with the caregiver can be really difficult." Thus, for this participant they felt the level of supervision provided within the program hindered their ability as a clinician to establish themselves as the lead for the case they were assigned.

Parent Training

Similarly, to challenges noted in supervision practices, challenges noted for parent training are related to needed soft skills in practice. One participant stated, "I wish I had more resources on parent training." Specifically, how to handle difficult situations, setting boundaries with families, and different ways to approach establishing parent training goals and assist the families to reach those goals.

Writing

For the theme of writing, it was brought up by one participant, who noted there were "expectations to do all this writing, without being taught exactly how they wanted me to do

it. So, it's kind of like shooting arrows in the dark." Additionally, it was said, "I could be 10 years into this job and I'm still going to get feedback on my writing."

Recommendations/Intervention

Adult learning theory, or andragogy, is especially relevant in the review of the Associate BCBA program, as the focus of the program is geared to the training and learning of adult practitioners in behavior analysis. Knowles (1998) notes six core principles of andragogy, which provide a solid foundation in the planning of adult learning experiences. Through this experience, participants have an active role in the process, both in the implementation of required skills and through the receipt of feedback from their mentors. Thus, this serves as an adult learning transaction (Brookfield, 1986; Holton, Swanson, & Naquin, 2001).

In alignment with the six core principles of andragogy, participants in the Associate BCBA program are fully aware of the need to learn the skills outlined in the program prior to beginning. Through engagement in the Associate BCBA program, the goal is for participants to move toward self-direction rather than dependence on others for conceptualization. The histories of each practitioner provide a resource for learning and guides their interest in the learning process while providing a solid base for which the Associate BCBA program builds upon. Through this, participants view learning as life-centered, and view this process of participation in the Associate BCBA program as a process to increasing competency levels as practitioners in behavior analysis. This also ties to the interest of the participant because of the current life situation of needed to perform a task, as it is related to their future employment as a Clinical Professional/BCBA whether with ASNC or another organization. Through this learning process, mistakes are allowed for

and expected during the initial stages of the program as shaping is used to increase expectations for the practitioner based on their success. As such, much of the motivation to learn these skills is intrinsic.

Thus, based on the six core principles of andragogy, the following recommendations are made as it relates to findings from this evaluation.

Recommendation 1: Involve Associate BCBAs in a shared process to establish learning objectives and track their skill development through the course of the program.

Participants consistently noted benchmarks were not reviewed and they were not always clear on whether they had met the established benchmarks or not. This is also a very cumbersome process for the supervisors, which is possibly a barrier to consistent data collection. Additionally, participants indicated established contingencies were not followed, even if benchmarks were met.

As noted in Finding 1, the current process is too cumbersome. Additionally, adult learning theory highlights the importance of engagements in the learning process. Thus, it is recommended the tracking of skills be a shared effort between the participant and the mentor. This will allow for the burden to be shared and hopefully lead to an increased awareness of where each participant stands. Additionally, this will allow for follow-through with established contingencies for completion of identified benchmarks (i.e., pay raises). The organization may also consider the development of contingencies if the benchmarks are not met, as established. Thus, it is recommended prior to the onset of the program, participants are prepared for the program through establishment of clear processes, which outline expectations in performance, as well as establish contingencies for meeting expectations and how these will be upheld.

Associate BCBAs should participate in the identification and assessment of their own learning needs and progress in meeting established learning objectives. The histories of each practitioner provide a resource for learning and guides their interest in the learning process while providing a solid base for which the Associate BCBA program builds upon. Behavioral skills training (BST) is an effective teaching methodology, which can be used across skill sets (Parsons, 2012). In this situation, common feedback by participants included they were not clear on how they were progressing in the program. Additionally, some participants felt based on their history with the organization, some skills should be less of a focus than others while identifying they had deficits in some areas that needed more focus.

A common theme noted was the desire for self-direction. Participants appreciated the level of support associated with the program, but they also wanted autonomy and how this can look different across their time in the program. Thus, based on learning objectives created, it is recommended participants be involved in the development of their individual learning plans and how they plan to meet learning objectives through their participation in the Associate BCBA program.

Recommendation 2: Incorporate self-evaluation of skills measured through established rubrics for participants.

As noted in Finding 2, one participant stated, “I wish I had more structure to self-reflect and gauge my own progress.” Thus, it is recommended the organization involve participants in the identification of their own learning needs through a self-assessment prior to beginning the Associate BCBA program. Through the establishment of self-assessment procedures, participants can have a more active role in the establishment of their own learning objectives to be achieved in the Associate BCBA program, which aligns with

andragogical practices. This will provide clarity on benchmarks to be achieved and provide a means to which the participant can guide their completion of established benchmarks.

A common barrier to meeting established benchmarks was caseload size. Thus, based on individual needs, shift to determining sample of items to be reviewed during the established review period (i.e., Quarter 1, Quarter 2, etc.). This would allow for participants to establish criteria appropriate for their current availability of clients and individual needs.

Across each component, a barrier to making a causal relationship was noted due to the way in which data were collected, as well as the lack of data across participants and activities. Based on this, it is recommended to incorporate the self-evaluation of skills measured through rubrics for the participants. These data could be aligned to those of supervisors to obtain a percentage for each individual activity. This would then allow for an average during that review period for comparison over time to determine if an improvement is noted in specific skills of interest (i.e., technical versus soft skills).

Recommendation 3: Establishment of a process to outline expectations of the Associate BCBA program.

As noted in Finding 3, the program addresses some of the challenges noted by participants through components examined, but there are no clear data on the direct relationship. Thus, it is recommended ASNC establish a process to outline expectations of the Associate BCBA program, which would include a verbal review of expectations, establishing clear contingencies, and provide models associated with different writing samples.

Many of the technical skills needed to perform the role of a Clinical Professional/BCBA involve writing, which is noted within the requirements of the Associate

BCBA program through the number for documents expected for completion by participants. However, writing style was noted as a challenge by a participant, noted there were "expectations to do all this writing, without being taught exactly how they wanted me to do it." Thus, it may be beneficial for the organization to establish a portion of verbal review for those beginning the Associate BCBA program to establish the clear expectations. Additionally, it is recommended the participants be provided at least two models of programs that would meet mastery criteria. Depending on the participant's baseline performance, it may also be helpful to break the writing assignments into smaller sections to shape the writing style of the participant to expectations of the organization and supervisor.

Participants noted ongoing challenges with parent training, even following completion of the Associate BCBA program. Therefore, it is recommended during their experience in the program, opportunities to role play common situations occur to practice how they would handle having difficult conversations. This could be added as a portion of the program to build soft skills associated with dealing with others, which would not be limited to parents/caregivers but could also address issues with staff training/supervision of others.

Additionally, it may be helpful to establish a time frame for reviews and timelines for feedback to be provided following submissions to allow for consistencies regardless of region assigned. Feedback from a participant noted, "Maybe a weekly or bi-weekly check in to allow an opportunity for more frequent questions and clarification on anything that I was unsure of. I feel that would have made things easier." Preference of opportunity for face-to-face feedback as compared to email/written feedback, which leaves too much for interpretation."

Discussion or Conclusions

Overall, those interviewed noted a positive experience within the Associate BCBA program. Specifically, 100% of interviewed participants state they would recommend the program to other individuals seeking a similar experience following certification as a BCBA.

Using andragogical principles, the areas noted as relative areas of weakness can easily be addressed. Contingencies are a huge part of our work as behavior analysts in shaping the behavior of others. Therefore, it will be especially important for the program to continue establishing such contingencies through which behavior of the practitioners can be guided, shaped and consistent feedback provided.

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Appendices

Appendix A: Tools

Treatment Protocol Feedback Rubric

Score each domain and provide a comment for anything not scored as "demonstrates mastery."
DM-demonstrates mastery
ES-emerging skill
NI-needs improvement

Feedback Domains:	General Treatment Protocol Overview	Mastered Goal Summary	Description of Current Goals	Novel Goal Development	Behavior Reduction Summary	Overall Content
Functional treatment goals selected.	DM ES NI Comments:	DM ES NI Comments:	DM ES NI Comments:	DM ES NI Comments:	DM ES NI Comments:	DM ES NI Comments:
Teaching methodology in line with EBP.	DM ES NI Comments:	DM ES NI Comments:	DM ES NI Comments:	DM ES NI Comments:	DM ES NI Comments:	DM ES NI Comments:
Teaching procedures are clear and concise and appropriate for audience.	DM ES NI Comments:	DM ES NI Comments:	DM ES NI Comments:	DM ES NI Comments:	DM ES NI Comments:	DM ES NI Comments:
Graphs included for each mastered/ existing goal.	DM ES NI Comments:	DM ES NI Comments:	DM ES NI Comments:	DM ES NI Comments: n/a	DM ES NI Comments:	DM ES NI Comments:
Data analyzed and interpreted appropriately.	DM ES NI Comments:	DM ES NI Comments:	DM ES NI Comments:	DM ES NI Comments: n/a	DM ES NI Comments:	DM ES NI Comments:
Writing style/clarity/ format.	DM ES NI Comments:	DM ES NI Comments:	DM ES NI Comments:	DM ES NI Comments:	DM ES NI Comments:	DM ES NI Comments:

Scoring guidelines:

1. Functional treatment goals:
    a. Do the goals selected make sense, given current skill repertoire of the learner and previous goals mastered/targeted?
    b. Do goals map onto the outcomes identified as important by the learner and his/her family?
    c. Do behavior reduction goals include clear replacement behaviors that align with hypothesized functions of the target behaviors?
2. Aligned with EBP:
    a. Are the strategies outlined in the plan in line with current published research on the 27 EBPs?
    b. If referencing non-behavior analytic (yet still appropriate/in line with EBP) curriculum, does the clinician appropriately operationalize content and embed within established BA teaching procedures?
    c. Do teaching procedures make sense given current skill repertoire of the learner?
    d. Do the teaching procedures take the most parsimonious approach to behavior change?
3. Teaching Procedure Verbiage:
    a. Does the clinician use clear language that is in line with behavior analytic concepts/principles (while still meeting the objectives outlined below)?
    b. Is the language used technically correct while still easily understood by parents/technicians/reviewers?
    c. Are all behavior analytic terms (e.g., mand, tact, interverbal, "function" of behavior, etc.) fully explained using lay-person friendly language?
    d. Are all procedures explained thoroughly, with an emphasis on identifying:
        i. Discriminative stimuli that should be included to occasion the target behavior?
        ii. A clear definition of the target behavior and when and how it should occur in order to contact reinforcement?
        iii. A clear description of the reinforcement system including reinforcement schedules?
    e. Are data collection systems and modalities made clear to the reader?
4. Graphical Display of Data and Analysis:
    a. Do all goals include a graph?
    b. Is it clear, by way of visual inspection of the graph and/or figure captions/legends, exactly what the graph is displaying, including target behavior and dimension?
    c. Does the dimension of the target behavior selected make sense, given the overall target outcome of the treatment goal?
    d. Are procedural modifications depicted on the graph via phase change lines and/or data labels when necessary?
    e. Are data summaries included to accompany all graphs? Are the conclusions drawn from the graph and future directions indicated by the clinician appropriate, given current learner responding?
5. Writing style/clarity/format:

a. Does the clinician use appropriate grammar, syntax, sentence structure and organization throughout?
b. Do all paragraphs have a clear main idea?
c. Is the document easy to read and follow?
d. Does the clinician use language that is accurate yet sensitive to the viewing audience (e.g., parents, self-advocates) and refrains from using overly harsh descriptions or brash language?

I/CPOC Feedback Rubric

Score each domain and provide a comment for anything not scored as "demonstrates mastery."
DM-demonstrates mastery
ES-emerging skill
NI-needs improvement

Feedback Domains:	**Background/ History**	**Skill Grids/ Assessment Summary**	**Data Analysis/ Review**	**Novel Goal Development**	**Parent Training Summary/ Goals**	**Overall Content**
Meaningful content	DM ES NI Comments:	DM ES NI Comments:	DM ES NI Comments:	DM ES NI Comments:	DM ES NI Comments:	DM ES NI Comments:
Functional treatment goals	DM ES NI Comments:	DM ES NI Comments:	DM ES NI Comments:	DM ES NI Comments:	DM ES NI Comments:	DM ES NI Comments:
Clear objectives and outcomes	DM ES NI Comments:	DM ES NI Comments:	DM ES NI Comments:	DM ES NI Comments:	DM ES NI Comments:	DM ES NI Comments:
Aligned with EBP	DM ES NI Comments:	DM ES NI Comments:	DM ES NI Comments:	DM ES NI Comments:	DM ES NI Comments:	DM ES NI Comments:
Appropriate use of technical language	DM ES NI Comments:	DM ES NI Comments:	DM ES NI Comments:	DM ES NI Comments:	DM ES NI Comments:	DM ES NI Comments:
Writing Style/Clarity/ Format	DM ES NI Comments:	DM ES NI Comments:	DM ES NI Comments:	DM ES NI Comments:	DM ES NI Comments:	DM ES NI Comments:

Scoring guidelines:

1. **Meaningful content:**
    a. Does the content align with the goals identified by the learner and/or his/her family during intake/assessment? Is it evident that the clinician has continued to check in with the learner/family at various points throughout treatment to ensure that treatment goals remain consistent with their ideal outcomes?
    b. Do the goals map onto socially significant outcomes for the learner?
    c. Does the clinician make a clear case for how these goals will improve the overall quality of life of the learner upon mastery?
    d. Are parent goals feasible and appropriate? Are they presented in a manner which will promote buy-in and engagement on the part of the parents (e.g., approachable wording, clear expectations, etc.)
2. **Functional treatment goals:**
    a. Is the assessment tool used appropriate given age and current skill level?
    b. Are the assessment results reported graphically and correctly?
    c. Are the assessment results analyzed correctly?
    d. Do the goals selected make sense, given current skill repertoire?
    e. Do goals map onto the outcomes identified as important by the learner and his/her family?
    f. Is it clear how the outlined goals will improve the lives of this individual and his/her family?
    g. Do behavior reduction goals include clear replacement behaviors that align with hypothesized functions of the target behaviors?
3. **Clear objectives/outcomes:**
    a. Do all goals include a clear, objective operational definition with mastery criteria clearly outlined?
    b. Is the writing style of the clinician clear and concise?
4. **Aligned with EBP:**
    a. Are the strategies outlined in the plan in line with current published research on the 27 EBPs?
    b. If referencing non-behavior analytic (yet still appropriate/in line with EBP) curriculum, does the clinician appropriately operationalize content and embed within established BA teaching procedures?
5. **Appropriate use of technical language:**
    a. Does the clinician use clear language that is in line with behavior analytic concepts/principles (while still meeting the objectives outlined below)?
    b. Is the language used technically correct while still easily understood by parents/technicians/reviewers?
    c. Are all behavior analytic terms (e.g., mand, tact, interverbal, "function" of behavior, etc.) fully explained using lay-person friendly language?
6. **Writing style/clarity/format:**
    a. Does the clinician use appropriate grammar, syntax, sentence structure and organization throughout?
    b. Do all paragraphs have a clear main idea?

c. Is the document easy to read and follow?
d. Does the clinician use language that is accurate yet sensitive to the viewing audience (e.g., parents, self-advocates) and refrains from using overly harsh descriptions or brash language?
e. Is the template used appropriately, including the use of the alphanumeric naming convention?
f. For a CPOC, do all goals include graphs with figure captions and data summaries?
g. Do data summaries reflect an accurate interpretation of the data? Are next steps included in the data summary based on gains and/or lack of progress?

Professionalism and Clinical "Soft Skills" Rubric

Score each domain and provide a comment for anything not scored as "demonstrates mastery."
DM-demonstrates mastery
ES-emerging skill
NI-needs improvement

Clinical Interaction Styl	Inter-organizational Interaction Style	Empathy and Cultural Responsivity	Communication and Organization
Comments:	Comments:	Comments:	Comments:

Scoring guidelines:

1. **Interaction Style:**
    a. Does the student interact with the parent(s)/caregiver(s) in a professional, courteous manner?
    b. Does the student provide an effective ratio of constructive feedback: positive praise when training caregivers to administer specific protocols?
    c. Does the student answer questions from the caregiver with clarity and professionalism?
    d. Does the student refrain from discussing the individual in front of him or her when appropriate?
    e. Does the student react appropriately to parent/caregiver feedback? This includes responding appropriately to nonverbal communication cues of the parent and adjusting communication style accordingly. For example, observing that the body language of the parent suggests that he or she is becoming overwhelmed and/or upset with the information being shared and responding in an empathetic way and/or refocusing the conversation/content of the training.
    f. Does the student exude confidence when delivering information to participants, staff, and families? Do they ***instill*** confidence in others?

g. Does the student present with welcoming body language and affect? Do the families and participants appear comfortable in their presence?
h. Can they flex their communication style based on their conversation partner?

2. **Inter-organizational Communication Style:**
    a. Is the student receptive to feedback, particularly constructive feedback?
    b. Can the student respectively disagree with a supervisor or co-worker? Be sure to fully evaluate both verbal and non-verbal components of these exchanges.
    c. Does the student seek first to understand and then to be understood?
3. **Empathy and Cultural Responsivity:**
    a. Is the student sensitive to potential external barriers to treatment fidelity? Does the student program and plan for navigating those barriers without setting the caregiver(s) up for failure?
    b. Is the student compassionate and empathetic to the family and their concerns/potential treatment barriers when appropriate?
    c. Is the student sensitive to cultural factors that may be relevant to the family and their priorities, needs, and goals for their loved one?
    d. Does the student show a willingness to learn from the perspective of others' (families, coworkers, staff, participants) and shift their thinking and/or treatment planning/approach accordingly?
    e. Does the student maintain respectful discourse in regards to the family and participant, both in their presence and in their absence?
    f. Is it evident that the student is invested in the family, the participant and the goals that are important to them in addition to what has been identified as clinically significant?
    g. Does the student include the participant when appropriate, allowing them to answer for themselves and to identify their own goals and objectives when appropriate?
    h. Is the student mindful of avoiding discussing the participant in front of the participant, to the extent possible?
    i. Does the student make a point to highlight positive attributes of the participant when addressing current treatment barriers/challenging behaviors?
4. **Communication and Organization:**
    a. Does the student respond promptly to emails or other forms of communication from both supervisors and co-workers?
    b. Is the student respectful and diligent in regards to deadlines? If a deadline will not be met for some reason, is that clearly and graciously communicated to the supervisor?
    c. Does the student actively seek feedback and guidance from supervisors? Do they show initiative in their own learning and development?
    d. Does the student come prepared to supervision meetings and onsite observations, in the form of prepared agendas, questions, videos, project ideas, etc.?
    e. Does the student arrive on time to sessions and meetings?
    f. Does the student reach out in a timely manner if issues, questions, or concerns arise?

Interview Questions for Participants in Associate BCBA Program

1. How long have you been working at ASNC?
    a. How long have you been participating in the Associate BCBA Program?
2. What roles have you held within the organization?
    a. What was the length of each role?
3. Describe your experiences within the Associate BCBA Program.
    a. What have you liked best about the Associate BCBA Program?
        i. What would you say has been your most positive experience within the program?
        ii. What aspect of the program was the easiest for you and why?
    b. What have you liked the least about the Associate BCBA Program?
        i. What would you say has been your most negative experience within the program?
        ii. What aspect of the program was most difficult for you and why?
    c. Did you meet all scheduled benchmarks?
        i. What were the benefits of meeting these?
        ii. What happened if you did not meet them?
4. Tell me how you define technical vs. soft skills as it applies to our line of work in ABA.
    a. What benchmarks would you identify as teaching to technical skills?
    b. What benchmarks would you identify as teaching to soft skills?
5. Tell me about the different technical skill activities completed within the Associate BCBA program.
    a. What technical skills, do you feel were the most beneficial to your work as a BCBA?
        i. When did you utilize these technical skills following training?
        ii. How often do you use these technical skills?
        iii. Have you trained others to use these technical skills?
            1. If so, whom? How often do you complete such trainings?
    b. What technical skills did you find yourself still searching for answers on?
        i. How often have you found you needed these technical skills following training?

c. How would you describe your advancement in technical skills through the Associate program?

6. Tell me about the different soft skill activities completed within the Associate BCBA program.
    a. What soft skills, do you feel were the most beneficial to your work as a BCBA?
        i. When did you utilize these soft skills following training?
        ii. How often do you use these soft skills?
        iii. Have you trained others to use these soft skills?
            1. If so, whom? How often do you complete such trainings?
    b. What soft skills did you find yourself still searching for answers on?
        i. How often have you found you needed these soft skills following training?
    c. How would you describe your advancement in soft skills through the Associate program?
7. Tell me about feedback received as an Associate BCBA.
    a. How often did you receive feedback?
        i. Was this too much, too little, just right?
            1. Too much: Tell me more. Why too much? What would have been preferred?
            2. Too little: Tell me more. Why too little? What would have been preferred?
            3. What modalities were used for feedback with supervisors?
    b. Which of these did you find most helpful?
    c. Which of these did you find least helpful?
    d. How many supervisors did you have at one time?
8. What happens after you complete the Associate BCBA program?
9. What are the challenges you've faced? Both through the program and following?
10. If it were up to you, based on what you know now:
    a. What additions would you make to benchmarks?
    b. What benchmarks would you remove?
11. If a friend was trying to decide between programs, would you recommend ASNC's Associate BCBA program?

a. Yes, why?

b. No, why?

Appendix B: Concept Map