



The banner features a photograph of a woman interacting with several young children in a classroom setting. The background is a light gray with a word cloud of terms related to speech and language, including 'articulation', 'exercises', 'improvement', 'discussion', 'training', 'formative', 'assessment', 'individualized', 'psychology', 'intervention', 'social', 'workshop', 'together', 'counselor', 'daughter', 'years', and 'language'. The title 'SLP & ABA Collaboration Series' is prominently displayed in red and black. Below the title, the text reads 'Using Collaboration to Generate Better Outcomes... Quicker'. A circular logo for Special Learning, Inc. is positioned in the lower right, featuring a colorful puzzle piece icon and the text 'Special Learning, Inc. A Global Leader in Digital Health Solutions'. A copyright notice '© 2018 Special Learning, Inc. All Rights Reserved' is visible at the bottom right of the banner.

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Learning Outcomes

1. Define the science behind Speech and Language Pathology and the role of Speech Language professionals working with children with autism and other special needs.
2. Define the science behind Applied Behavior Analysis and the role of Behavior Analysts working with individuals with language delays
3. Identify the responsibilities and ethical considerations of collaboration with team members.
4. Identify simple target areas to facilitate collaboration.

Speaker Bios

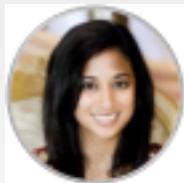


Melanie Olson Giles, CCC-SLP, BCBA, LABA

Melanie is a dually certified and licensed Speech-Language Pathologist (SLP) and Board Certified Behavior Analyst (BCBA). She is the Clinic Director of the Speech Therapy Group and The Verbal ABA Clinic at STG. She received her Bachelors of Science degree in Communication Disorders and Masters in Speech Language Pathology from the University of Massachusetts, Amherst, in 1999 and 2001, respectively. She also received her Masters of Education in Applied Behavior Analysis (ABA) and Autism from Endicott College, where she is currently working towards her PhD in ABA.

Her clinics are private practices focus on the areas of verbal behavior and swallowing/feeding disorders. Melanie's main research interests include collaboration between speech pathology and behavior analysis, as well as verbal behavior, feeding disorders and organizational behavior management.

Speaker Bios



Noor Syed, Ph.D., BCBA-D, LBA (NY, CT)

Dr. Syed is currently with Lehigh University's Special Education Department as Professor of Practice and Clinical Director for Lehigh University Autism Services. Previously, Dr. Syed was an Assistant Professor of Special Education at Manhattanville College.

Dr. Syed has over 10 years experience in the field of applied behavior analysis, general and special education, autism, and developmental disabilities as a classroom teacher, Special Education Itinerant Teacher, ABA home based therapist, and behavioral supervisor for center and home based services. Dr. Syed has worked in early intervention, preschool, and school aged settings, as well as with adults.

In 2018, Dr. Syed was selected as a Top Tier International Partnership Discovery Fellow in the Inaugural Fellowship Class of the Global Autism Project, a nonprofit organization that provides training for local international practitioners in the utilization of evidence-based practices when working with people with intellectual and developmental disabilities.

Her research interests lie in verbal behavior, ethical practices in behavior analysis, and the implementation of behavior analysis to curriculum and teaching.

Speaker Bios



Jennifer Rumfola, CCC-SLP, BCBA

Jennifer has worked as a speech language pathologist focused on early intervention, preschool and school aged populations with a concentration on children with autism spectrum disorders. In 2006, Jennifer co-founded a private behavioral consulting firm and direct service agency. Within two years of opening the clinic, she obtained became a Board Certified Behavior Analyst (BCBA).

As a NY Licensed BCBA and Speech and Language Pathologist, she combines her knowledge of both disciplines to create and manage programs that generates best outcomes within a short period of time.

She currently works in local school districts, agencies, and homes, as a consultant and direct service provider, performing Functional Behavioral Assessments (FBA), creating Behavioral Intervention Plans (BIP), delivering staff and parent training, and developing curriculum. She has guest lectured at the university level in the fields of Education and Communication Disorders and Sciences.

Jennifer joined the clinical faculty at the University of New York at Buffalo in 2013 as an adjunct professor/clinical supervisor overseeing graduate level clinicians. She maintains a private practice providing speech language and behavioral services to individuals in Western New York.

Why Talk About Collaboration?

- **Speech and Language Perspective (SLP) Perspective**
 - There is emerging evidence that collaboration shows greater improvements in academic and social functioning (ASHA, 2014)
- **Behavior Analysis (BA) Perspective**
 - Many studies of applied behavior analysis use up to 40 hours/week of intervention (Lovaas)
 - Why are so many hours required? Inability to learn from environment is addressed through repetition.
- **Both disciplines**
 - Students with behavior problems often have underlying language weaknesses or disorder
 - Students with language delays are often perceived as non-compliant, may demonstrate unexpected behaviors due to language deficits.

History of the Field of Speech Language Pathology

- History of profesión (1940s)
 - Relatively young field
 - Roots in psychology
- Certification and Licensing
 - Certification through American Speech-Language-Hearing Association (ASHA)
 - Licensure at State AND national levels
- Approximately 190,000 ASHA certified professionals, some dual certified for speech and hearing
- Education required for both undergraduate and graduate
 - Physical Science (biology or chemistry) and statistical coursework (math), writing (focus on medical writing)
- Graduate Course include dysphagia, neuroanatomy, advanced language and literacy, AAC and cognitive coursework (dementia and TBI), practicum in adult (medical) and child
- Core courses in language development, speech science, anatomy and physiology, speech sound, audiology, adult language - aphasia and motor
- Clinical courses in observation and practicum
- Required to maintain a minimum of 3.3 GPA to remain in speech programs
- Minimum 400 supervised hours to graduate. (supervisors vary with experience)
- Exam pass rates - Praxis 90%

SLP Required Competencies

- Graduating Speech Language Pathology majors are required to meet ASHA standards from an accredited program that includes coursework and practical supervised assessment and treatment hours in all **9 areas of competency**. It is expected that all professionals have the ability to work across the entire lifespan.
- Graduating speech language pathology students are required to show competency in interpersonal and interprofessional education, evidence based practice, research, ethics and policy for reimbursement.
- During their academic career, a student SLP is mentored and supervised to meet all expectations of an ASHA accredited program
- minimum of 25% of all treatment and 100% of all evaluation sessions are supervised with one on one supervisor who holds at least 3 years experience and certificate of clinical competence.

SLP Educational Background

- Levels and background
 - Educational - must hold a minimum of Masters degree to be Speech Language Pathologist
 - Bachelors candidates can become speech language pathology assistants however are not Certified
 - SLP-A's receive provisional license "under" supervising SLP
- Certification (ASHA)
 - CCC-SLP Certificate of Clinical Competence earned after graduation from accredited program
 - Clinical Fellowship Year used for minimum of 36 weeks and 1260 hours of Hands -on intervention under supervision of SLP with CCC showing evidence that competencies have been met with application to ASHA . Once achieved - 3 year cycle to maintain CCC with Professional Education and/or coursework.
 - SLP-As (operate under the license of SLPs) - SLP-A's do not assess or evaluate or participate in meetings or teaching , their role is to provide supervised intervention following supervising SLP plan of care
 - Speech Language Pathologists may only supervise 2 non certified personnel at one time.
- Licensure
 - all 50 States and the District of Columbia have some type of license before practice allowed.

ASHA Defined 9 Core Competencies

1. [Planning and priority setting](#)
2. [Organizing and time management](#)
3. [Managing diversity](#)
4. [Team building](#)
5. [Interpersonal savvy and peer relationships](#)
6. [Organizational agility](#)
7. [Conflict management](#)
8. [Problem solving, perspective, and creativity](#)
9. [Dealing with paradox and learning on the fly](#)

ASHA Collaboration Definition / Responsibilities

- I. Incorporates Ethics and Values
 - Mutual respect and shared values
- II. Roles and Responsibilities
 - Knowledge of self and others
- III. Interprofessional Communication
- IV. Participation in Teams and Teamwork
 - Continued work with team dynamics

Speech Language Pathologist Ethical Code

Code I-B

Use every resource including referral and interprofessional collaboration to insure quality of services

Code IV-A

Work collaboratively with own or others professionals to insure quality of services

ASHA Practice Portal

Use evidence based range of approaches from Developmental to Behavioral

ASHA Position Statements: Collaboration is responsibility of all SLP's

Collaboration is often considered prerequisite for lifelong learning

Introduction to Speech Pathology

What is speech language pathology?

It is a profession that engages in clinical services, prevention, advocacy, education, administration and research in the areas of **communication** and **swallowing** across the life span [ASHA, 2014]

How is it used?

- To work on listening, speaking, reading, writing and learning strategies.
- To analyze what may be contributing to a student's difficulty mastering the curriculum
- To provide materials, strategies, data collection and analysis
- To provide counseling
- To develop modifications and accommodations

History of Behavior Analysis and BCBA Education Requirements

Very Young field

Governance provided by the Behavior Analyst Certification Board (BACB), which was founded in 1998

[Coursework Requirements](#)

Requirements to take BCBA exam

Master's Degree in ABA, Psych, Education

1,500 hours of Independent Fieldwork and Intensive practicum 750 hours

Additional training hours required to become a supervisor

Competencies (Task List)

- [4th Edition](#)
- [5th Edition \(2022\)](#)

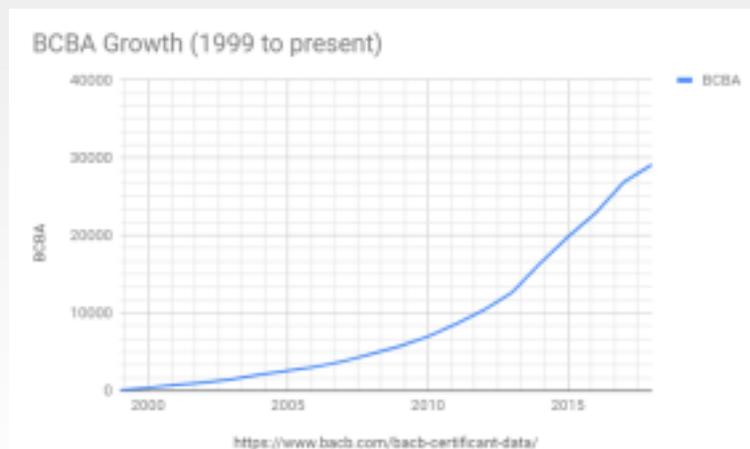
[Pass rates](#)

- 1st time 60% to 65%

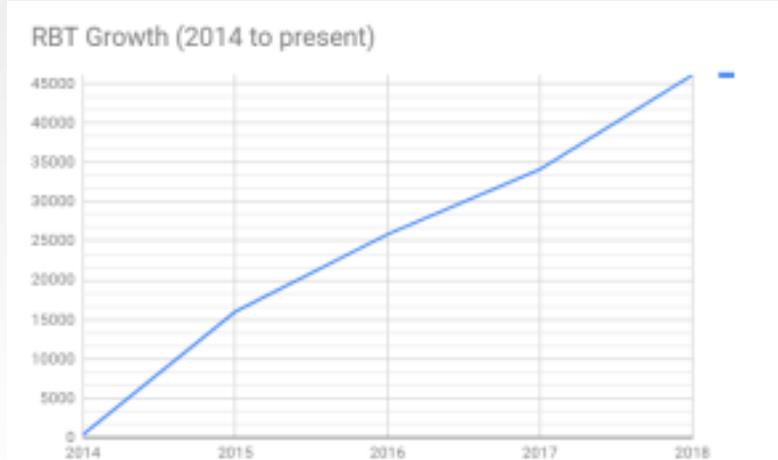
Explosive Growth

- BCBA (includes BCaBA and BCBA-D): 0 to nearly 30,000 in 20 years
- Registered Behavior Technician: 0 to 40,522 in ONLY 4 years

BCBA Growth Rate (1999 to 2018)



RBT Groth Rate (2014 to 2018)



BACB Rquired Competencies

3 Major Areas:

- I) Basic Behavior Analytic Skills
- II) Client Centered Responsibilities
- III) Foundational Knowledge

- A- Measurement
- B -Experimental Design
- C - Behavior-Change Considerations
- D - Fundamental Elements of Behavior Change
- E - Specific Behavior-Change Procedures
- F - Behavior-Change Systems
- G - Identification of the problem
- H - Measurement
- I - Assessment
- J - Intervention
- K - Implementation, Management, & Supervision

Behavior Analysis Ethical Code

The [Professional and Ethical Compliance Code](#) is a 24-page document produced by the Behavior Analyst Certification Board that governs the actions of all BACB certified and credentialed professionals (BACB, 2017)

- 1.0 Responsible Conduct of Behavior Analysts
- 2.0 Behavior Analysts' Responsibility to Clients
- 3.0 Assessing Behavior
- 4.0 Behavior Analysts and the Behavior-Change Program
- 5.0 Behavior Analysts as Supervisors
- 6.0 Behavior Analysts' Ethical Responsibility to the Profession of Behavior Analysis
- 7.0 Behavior Analysts' Ethical Responsibility to Colleagues
- 8.0 Public Statements
- 9.0 Behavior Analysts and Research
- 10.0 Behavior Analysts' Ethical Responsibility to the BACB

BACB Ethics Code Regarding Collaboration

1.02 Boundaries of Competence

- (a) All behavior analysts provide services, teach, and conduct research only within the boundaries of their competence, defined as being commensurate with their education, training, and supervised experience.
- (b) Behavior analysts provide services, teach, or conduct research in new areas (e.g., populations, techniques, behaviors) only after first undertaking appropriate study, training, supervision, and/or consultation from persons who are competent in those areas.

2.03 Consultation

- (a) Behavior analysts arrange for appropriate consultations and referrals based principally on the best interests of their clients, with appropriate consent, and subject to other relevant considerations, including applicable law and contractual obligations.
- (b) When indicated and professionally appropriate, behavior analysts cooperate with other professionals, in a manner that is consistent with the philosophical assumptions and principles of behavior analysis, in order to effectively and appropriately serve their client

Speech Premise

THINK FORM: What to teach!

Strong training in form, including linguistic analysis and structure of both language and speech production.

Several courses on phonetics/sound samples/grammatical form and formal properties of language

Behavior Analyst Premise

THINK Function: Why is the behavior occurring?

The focus of interventions are to address the function, or why, of behavior. Using data to drive our knowledge of why a behavior occurs enables behavior analysts to teach appropriate replacement behaviors.

For example, Muhammed cries to gain access to an item. We can teach Muhammed to access the item through more appropriate means (verbal behavior).

Intro to Applied Behavior Analysis

- Applied Behavior Analysis (ABA) is the “ process of systematically applying interventions based upon the principles of learning theory to improve socially significant behaviors to a meaningful degree, *and to demonstrate that the interventions employed are responsible for the improvement in behavior*” - Baer, Wolf, & Risley (1968).
- 7 Dimensions
 - Applied
 - Behavioral
 - Analytic
 - Conceptually Systematic
 - Technological
 - Effective
 - Generality

ABA Focus

Behavior Goal: Decrease “acting out”

- What contingencies in the environment may be maintaining the behavior?
 - Antecedent (teacher gives student a worksheet)
 - Consequence (student escapes completing work)
- Develop a plan to address the “acting out” behavior
 - Skill acquisition (target a replacement behavior)
 - Develop proactive strategies (antecedent manipulations) to increase skill acquisition and decrease opportunities for “acting out” Behavior

Skill Acquisition Goal: Increase Mand, or Request, Repertoire

- Identify the motivation for increased language
- Take a systematic approach to increasing language and focus on functionality

Myths and How they Hamper Collaboration

- Many SLP's believe child should have negative behaviors to benefit from ABA
- Many SLP's believe behavior analysts' cannot teach language skills.
- As mainly pull-out intervention is used by the Speech Language Pathologist the BA does not see involvement of others or teaching approach, which results in a lack of opportunity to learn
- SLP's think BA only does one word response and not train full sentences (expand utterance)
- SLP's think that BAs use inappropriate reinforcers/rewards for language behaviors.
- SLP's believe that the amount of time spent in session with BA is too long for the child to participate
- BAs believe SLP follows a checklist for teaching language
- BAs believe SLP reward/reinforce inappropriate behavior
- BAs believe that there is limited functionality with tact (naming and identify pictures)

**MYTH
BUSTED**

Terms: Similar, Yet Different

Speech/Language Terms

Language: (Structure)

- Receptive/ Expressive –directions/use of vocabulary ,sentence length, grammar (Understanding and use of words)
- Articulation (sounds)
- Pragmatics (social skills)

Behavior Analytic Terms

Verbal Behavior: (Function)Analytic Tool to look at how language is used

- Manding: Requesting
- Echoic (sounds)
- Tacting (features, functions, class)
- Intraverbal (conversational skills-back and forth)

Types of Assessment Used

Speech and Language Pathology:

- Standardized testing
- Brown's Stages of Morphology
- Gard, Gilman, Gorman developmental chart
- Receptive/Expressive

Behavior Analysis:

- Criterion Referenced
- VB MAPP/ABLLS
- Verbal operants
- Will use non-standardized measures to assess skill sets

Goal: Identify deficits and strengths to guide intervention and scaffolding of skills

Intervention Goals: Similar Yet Different

Speech and Language Pathology:

- May write general goals to allow broader application
- Based on skill deficits shown during assessment
- Developmentally based
- Focus on language

Behavior Analysis:

- Writes specific goals that are discrete in nature
- Based on problem Behavior and skill deficits
- Socially significant at functional level
- Focus on communication

Communication Goal: Different Methods of Intervention

Speech and Language Pathology:

- Remediation of articulation errors
- Extensive knowledge of augmentative systems
- Understand developmental sequence of communication & speech

Behavior Analysis

- Establish communication as a behavior
- Requesting is hallmark of early learner programming
- Targets chosen based on child's motivation
- Teach replacement behaviors based on function of problem behavior

Integral Value Contributed from Each Discipline

Speech and Language Pathology:

- Language is the foundation for success across domains
- Use expertise to hone communication and speech skills including AAC
- S/L sessions are prime time to work on communication systems
- Guide with developmental norms

Behavior Analysis:

- Analyze establishing operations and contrive learning opportunities
- Task analysis and error corrections
- Look at function of behavior and confirm hypotheses
- Interpret based on ABC contingencies

Case Study- Luke

Luke is 3 years old and just started preschool. His teacher is concerned that he only uses one word responses, and will act out when he does not have what he needs at the moment. He follows directions in the classroom with visual cues when others are present.

His mother reports that she understands what he needs and that there are not any behaviors at home. Her concern is that he doesn't follow directions well but attributes it to not listening. Mother also feels that he will talk more when he is ready.

What Happens with Luke?

- Referrals: ABA or SLP or Both?
 - Probably Speech referral first - as it affects education
- Need for interventions ?
 - Should have both interventions - cross referral
- SLP view of this case
 - increase comprehension
 - Increase length of utterance
- ABA view of this case
 - increase receptive repertoire/Listener behavior
 - increase expressive repertoire/Speaker behavior

Target Goals - Priority

- Increase naming/labeling/vocabulary
- Functional communication training -get needs met
- Evidence based for receptive versus expressive- must learn how to follow directions
- Evidence based for family teaching -carryover training
- Functional communication training-Increase mand repertoire to independence
- Evidence based - consistency/dosage

How are these goals addressed through Speech and Behavior Analysis?

How to Approach Collaboration?

- Respectful behavior towards each team member- What does that look like?
- Clearly define roles
 - How to include both function and form-
 - Who brings what to the table?
- Must consider the reinforcement history of the SLP and Behavior Analyst, as their training and prior histories will impact how they work together and how their skills can overlap.
- Have an open mindset when going into collaboration expecting to learn from each other.

Collaboration Revisited

Benefits of collaboration

- Better outcomes: ASHA states emerging evidence that collaboration shows greater improvement in academic and social functioning.
- Reduces errors
- Parents recognize needs of both interventions and how they work together
- Recognized globally
- Sharing the load: Ability to move through hierarchy more effectively
- Greater accountability
- Teachers and other professionals more able to incorporate techniques
- Maximize resources

Going Back to Luke...

Let's go back and talk about Luke....

- Do we want both or neither?
- Do we want an SLP involved? Why?
- Do we want an Behavior Analysis involved? Why?

- Use what we know about education and background competencies of professions to determine our answer to this!

SLP Approach: Focus on FORM

- Adjunct to existing classroom activities /materials:
- Use existing curriculum and materials
 - Pre-academic / Academic
 - Language
 - Talking
 - Listening
 - Reading
 - Writing
 - Social Skills - Pragmatics
 - Life Skills - IADL's
 - Executive Functioning
 - Memory and attention

ABA Approach: Focus on Function

Environmental manipulation to evoke responding

- Natural environment teaching
- Pivotal response training
- Discrete trial training/ Instructional trials

Spiral curriculum

- Pre-academic / Academic
- Language -look at language as a behavior
- Social Skills
- Life Skills
- Problematic Behaviors that interfere with learning of the student or his/her peers- Identify functions and replacement behaviors

How do our Disciplines Fit Together?

- How the two disciplines should work together
 - Collaboration
- Understand each other's scope of practice
 - Role and responsibility
- Understand how behavior and language impact one another
- Awareness of what is being measured and how often
 - Long and short term goals - ultimate achievement
- Arena training - inter and intra professional education ongoing
 - Sharing goals, concepts, outcomes - increase accountability
- Looking at interrelationship with the WHO --- ICF-CY and functional skill set

How do our Disciplines Fit Together?

Always keep the same end goal in mind: Child's success!

- Long term goals with approach via short term goal
- Exact measurement of response - vocal verbal or nonvocal verbal

Appropriate stimuli levels

- Especially important with children with sensory processing
- Need to implement change with children with hearing/visual impairments
- When to utilize alternative augmentative communication (AAC)

Functional outcomes

- Data-based decision making

Scope of Practice with Luke (Speech)

What does a Speech Language Pathologist do after referral?

- Evaluation - level of skill, area of breakdown (why needed)
- Needs for the classroom for optimal learning
- Consult and collaborate with other professionals to optimize opportunity
- Establish plan and write measurable goals if eligible for special education

What does an SLP do for the student?

- Cognition- optimal functioning within classroom setting
- Determine type of strategy to try- get most from learning environment
- Provide feedback on success (errorless learning)

Scope of Practice with Luke (Behavior Analysis)

What would a Behavior Analyst do?

- Assessment of level of skill, barriers to learning
 - Maladaptive behavior
 - Prerequisite skills
- Preference assessment
 - What does the student like?
- Using reinforcement and motivating operation strategies

Putting it All Together: Case Study- Ben

Ben is a 2 year old diagnosed with Autism and has a comorbid diagnosis of apraxia of speech. The speech pathologist is working with Ben on functional communication training using the PECS protocol and using a specific articulation program to target his apraxia of speech, as he has limited /b/ and /d/ in his repertoire. He is stimulable for these sounds, however cannot demonstrate at the CVC, consonant vowel consonant level. Ben is unable to participate in imitation targets consistently due to his tantrum behavior. The behavior analyst just conducted a Functional Behavior Assessment for Ben's problem behaviors, which included tantrum behavior and concluded that SR-(escape) may be function of behavior.

How might we collaborate on this case, given both disciplines are already involved?

Thank you for attending Special Learning's

**SLP and ABA Collaboration Series: How to Collaborate to
Generate Better Outcomes... Quicker**