

Applied Behavioral Analysis

Overview

Program Purpose, Goals, and Objectives: The preschool, elementary, and secondary Applied Behavior Analysis (ABA) program has a primary objective of preparing students with autism and related disabilities to function as independently as possible in a variety of settings through the use of the principles of Applied Behavior Analysis (ABA). Applied Behavior Analysis, including Skinner's analysis of Verbal behavior, is utilized as the fundamental approach to address behavioral challenges and teach new skills. ABA is a research-based intervention that has been demonstrated to be effective for children with autism and related disorders (Rogers and Vismara, 2008; United States Surgeon General, 1999; New York State Department of Health, 1999; Autism Center for Excellence, 2013). This instructional approach emphasizes the importance of looking at the A-B-C's (antecedents, behaviors, and consequences) of behaviors, teaching new behaviors, and developing systematic instructional plans to teach new skills. Skills are broken down into small units through task analysis. New skills are taught through the systematic use of ABA techniques such as reinforcement, shaping, prompting, fading, chaining, extinction, and discrimination (Goldstein, 2002; Odom et.al, 2003, and McConnell, 2002; American Psychiatric Association, 2000). Data collection and analysis is an important component of an ABA instructional program. Data are used to measure progress on the acquisition of new skills and behaviors and to analyze the success of individualized strategies used for instruction.

Program staff members provide direct coaching support to classroom instructional personnel and provide professional development events that focus on teaching technique, classroom management, behavior strategies, and communication skills. Research supports a coaching and professional development model that includes components consisting of didactic, performance feedback, rehearsal, and direct coaching. This model produces rapid and sustainable improvements in teacher's implementation of ABA. (Cullen, 1988; Delamater, et al, 1984; Demchak et al., 1992; Fielding, et. al., 1971; Fleming, et al., 1996; Gladstone & Spencer, 1979; Greene, et al., 1978; Harchik, et al., 1989); Johnoson & Fawcett, 1994; Krumhus & Malott, 1980; Matson, 1990; Neef et al., 1986; Parsons & Reid, 1995; Parsons, et al., 1996; Reid & Green, 1990; Richman, et al., 1988; Sepler & Meyers, 1978; Sarakoff and Sturme, 2004; Touchette & Howard, 1984). In addition, teachers who learned to generalize these skills were able to improve learning outcomes across a variety of student academic and behavioral profiles. (Koegel, Russo, and Rincover, 1977).

Instructional Program: Services for all students with low incidence disabilities, including students with autism, are delivered, consistent with students' individualized education programs (IEP), through a continuum of placement options that include base schools, cluster programs and center sites. The enhanced autism classes at the elementary level are a part of the continuum of available services for eligible students. Instruction is based on the individual needs of students and services range from support in the general education settings, to

specialized instruction in small, self-contained special education classes in neighborhood schools.

Program Structure: Preschool Autism Classes (PAC) are available for preschool-aged students with autism who are found eligible for services and have an IEP that outlines the need for specialized instruction using applied behavior analysis. The following features differentiate services provided in the PAC program:

- Instruction using ABA and Verbal Behavior (VB) principles
- Specially-trained instructional and support staff
- Full day classes
- Low student to staff ratio

Early Academic Curriculum including instruction in social skills, imitation, behavior, language, motor, self help, play, pre-academics

- Uniform data collection system
- Regularly scheduled support from an ABA Coach
- Fall and spring assessments

Eligible students with autism at the **elementary level** may participate in **enhanced autism classes**. The instructional program for students in the enhanced autism classes is guided by the general education curriculum with an additional focus on behavior management, communication, social skills, and life skill development. Teachers provide academic instruction that is individualized based upon students' current level of performance and rate of learning. The following additional features differentiate services in the enhanced autism classes:

- Instruction using ABA and Verbal Behavior (VB) principles
- Specially-trained instructional and support staff
- Low student to staff ratio
- Early Academic Curriculum, Life Skills Curriculum and SOL Curriculum
- Uniform data collection system
- Regularly scheduled support from an ABA Coach
- Fall and spring assessments

Principle and strategies of ABA are also applied to the instruction of students with Autism and other low incidence disabilities at the **secondary** (middle and high school) level.

Training and Professional Development:

The Pre K-12 Applied Behavior Analysis program targets the professional development and direct support needed for the implementation of ABA instructional techniques. Training opportunities are offered throughout the year to teachers, instructional assistants, school administrators and parents. Trainings offered include:

Core training for all instructional staff:

- ABA Fundamentals
- Verbal Behavior Fundamentals
- ABA Beginning Hands-on Training (week-long, usually in the summer)

Advanced training opportunities for instructional staff:

- Advanced Hands-On Training
- Advanced Behavior Analysis
- Communication and Social Skill Development
- Developing Meaningful IEP Goals and Objectives

Training for school and support administrators:

- Understanding Applied Behavior Analysis (ABA) in the Classroom
- ABA Hands-on Workshop for Administrators

Parent topics include:

- Managing Behaviors at Home
- Successful Toilet Training
- Developing age appropriate social skills
- Supporting the transition to Middle School
- Developing independence and self-advocacy
- Social/sexual Issues in Preschool-Adolescence

Efforts are made to communicate regularly with principals and assistant principals regarding ABA services. Information is shared to assist school administrators with monitoring and supervising the delivery of ABA services in their schools. With program growth and staff turnover the number of teachers and instructional assistants who need training and support continues to increase.

Program Staff: The PreK-12 Applied Behavior Analysis Program Coordinator coordinates the design and delivery of ABA services for preschool, elementary, and secondary students with autism and related disorders. The responsibilities of the Coordinator include: design and implementation of an ABA professional development program; supervision of ABA coaches; coordination of the support of expert consultants; curriculum development and collaboration with other DSS staff to provide behavior intervention and support to schools.. Under the supervision of the ABA Coordinator, the ABA Specialist provides professional development to the ABA coaches and school staff on an ongoing basis. Additionally, she provides technical assistance in curriculum development and the implementation of ABA in the schools. The ABA coaches assist classroom teachers and instructional assistants with the implementation of ABA principles and methods through regularly scheduled visits to assigned classrooms. This includes instructional program development and modification, assessment and data collection, and on-site and follow-up training to classroom staff. By addressing effective practices through job-embedded coaching, student achievement is improved. The ABA coaches support school teams with the completion of functional behavior assessments and behavior intervention plans. An added responsibility of the ABA coaches is to collaborate with other DSS staff to provide behavior intervention and support to classrooms outside their caseload on an as needed basis in assigned schools.

The PreK-12 Behavior Crisis Resource Specialist responds to schools that are experiencing difficulties with individual student behavioral challenges. The behavior crisis resource specialist conducts an assessment of the identified behavioral challenge and participates in the development of a plan to support the school during a period of intervention. Central ABA Instructional Assistants (CIA) may be assigned to a classroom by the behavior crisis resource specialist on a temporary basis during the implementation of a behavior intervention plan.

The goal of the CIA is to provide support to the classroom until the student is able to access the instructional setting with the normal classroom staff ratio support.

Budget:The FY 2017 budget for Applied Behavior Analysis totals \$3.4 million and includes 39.0 positions. As compared to FY 2016, this is an increase of \$0.2 million, or 6.9 percent. Contracted salaries total \$2.2 million, an increase of \$0.1 million, or 6.9 percent. Funding for salaries and benefits reflects compensation adjustments including a step increase for all eligible employees, a 1.0 percent market scale adjustment for all employees, rate increases for retirement and health, and an adjustment for employee turnover. In addition, funding includes an initial investment to improve the teacher salary scale to attract and retain the highest quality teachers :

<https://www.fcps.edu/sites/default/files/media/pdf/FY-2017-Program-Budget.pdf>

Student Summary

Students receiving special education services using applied behavior analysis (ABA) include preschool, elementary, and secondary students with autism or related disorders. Students enrolled in the preschool autism classes (PAC) are ages 2-5, and have been identified as having Autism spectrum disorder or presenting characteristics of the disorder. Students in elementary school, grades K-6, receiving Enhanced Autism services, are also identified as having characteristics of autism or related disorders. Students in middle school or high school receiving instruction using ABA methodologies may have autism or other disability categories.

Approved Materials

Approved Instructional Materials:

The instructional program for students with autism, intellectual disabilities, intellectual disabilities severe, and physical disabilities is aligned with the Fairfax County Public Schools (FCPS) Program of Studies (POS) and the Virginia Aligned Standards of Learning (ASOL). The Office of Special Education Instruction recommends specialized instructional materials and resources to meet the individual learning needs of students with low incidence disabilities.

FCPS Developed Curriculum Resources:

- *Modified Student Rights and Responsibilities (SR&R) Grades 4-12. Modified versions of the general education SR&R lessons and materials are available to teachers in order to meet the needs of students with low incidence disabilities.*
- *Modified Family Life Education (FLE) Curriculum. The FLE Human Growth and*

Development (HGD) Modified Lessons (Grades 5-12) are based on the general education FLE curriculum and adapted for students with low incidence disabilities who require instruction using visuals supports and concrete activities.

- *Community-Based Instruction Manual*
- *Life Skills Curriculum Manual*
- *Early Academic Guide*

Commercially Developed Resources:

A comprehensive list of recommended instructional resources is available for teachers to meet the individual needs of students with low incidence disabilities. A variety of FCPS approved instructional programs and supplementary materials are included that address content and life skills instruction. All students receive instruction in the core content areas of reading and math using one of the approved commercial curriculum resources listed below:

Reading Programs:

- *SRA Reading Mastery*
- *EDMARK® Reading Program*
- *Early Literacy Skills Builder (ELSB)*
- *PCI Reading Program*
- *Start to Finish Literacy Starters (supplemental)*
- *News-to-You (supplemental)*
- *Boardmaker resources (supplemental)*
- *CARS & STARS (supplemental)*

English Language Arts

- *Teaching to Standards: Language Arts*

Mathematics Programs:

- *Teaching to Standards: Math*
- *SRA Connecting Math Concepts*
- *Early Numeracy Curriculum*
- *Touch Math (supplemental)*
- *Touch Money (supplemental)*
- *Boardmaker resources (supplemental)*

Science Programs:

1. *Teaching to Standards: Science*
2. *Early Science Curriculum*
3. *Science and Health Series (supplemental)*

Social Studies Programs:

- *Explore American History*

- *Read for Content: Social Studies (supplemental)*
- *United States Geography Reader (supplemental)*

Program Planning, Behavior Intervention and Curriculum Planning:

- *Verbal Behavior - Milestones Assessment and Program Placement (VB-MAPP)*
- *The Assessment of Basic Language and Learning Skills (ABLLS)*
- *Work In Progress, Dr. Ron Leaf and Dr. Jon McEachin*
- *Crafting Connections, Dr. Ron Leaf et al.*

Assessments

State Assessments: The Individuals with Disabilities Education Act (IDEA) and Regulations Governing Special Education Programs for Children with Disabilities in Virginia require that all students with disabilities participate in the Virginia Assessment System (VAS) either through the Standards of Learning (SOL) assessments or the Virginia Alternate Assessment Program (VAAP). Students with disabilities have several options for participating in the regular state accountability assessments. They may participate in the Standards of Learning (SOL) assessments in the same manner that non-disabled students participate, or they may participate in the SOL assessments with standard or non-standard accommodations. Students who are unable to take the general statewide assessments may participate in the state assessment system through an alternate assessment. In Virginia, students who are working in the Aligned Standards of Learning (ASOL) curriculum may participate in the Virginia Alternate Assessment Program (VAAP) in grades 3 through 8 and 10 and 11. .

Criterion Referenced Assessments: The Brigance® Inventories are a set of comprehensive, criterion-referenced assessments approved for use in FCPS that measure developmental and academic progress from birth to adult. The assessments are conducted by teachers. Three assessment batteries are used to assess the progress of students with low incidence disabilities:

- Inventory of Early Development (IED) III: Designed for students performing below the developmental level of a typical 5 to 8-year old.
- Inventory of Early Development (IED) II: Designed for students performing below the developmental level of a typical 5 to 7-year old.
- Comprehensive Inventory of Basic Skills, Revised (CIBS-R): Designed for students performing at grade levels PreK-8.
- Comprehensive Inventory of Basic Skills-- Reading/ELA and Mathematics (CIBS-II): Designed for students performing at grade level PreK-9.
- Life Skills Inventory (LSI): Designed for students who receive instruction in an essential life skills curriculum ranging in difficulty from grades 2-8.
- Transition Skills Inventory: Designed for students at the secondary level.

The Verbal Behavior Milestones Assessment and Program Placement (VB-MAPP) is used in Preschool Autism Classes (PAC) as a format summative assessment. The purpose of the VB-MAPP assessment tool is to assess student skills and developmental milestones, as well as

determine benchmarks for curriculum planning.

Informal Assessments: Informal assessments are instructional tools that can be individualized for students. They are intended to provide more detailed data to guide instruction. Informal assessments are content-specific tools that can be teacher-developed or may be a part of a commercial academic instructional program. Examples of informal assessment used:

- Emergent Reading Checklist
- Basic Math Assessment
- Concepts Assessment
- Social Skills Checklist
- Life Skills Checklist
- Building Independence and Self-Advocacy Checklist
- Teacher-Developed Checklists

Current Focus

Current Areas of Focus:

Current Focus: The PreK-12 ABA team supports improved outcomes for students by working collaboratively with other DSS staff members to provide direct and indirect coaching support, and plan and deliver professional development in the areas of behavior intervention and professional development.

Goal 1: Student Impact

By June 2017, students in the Preschool Autism Classrooms (PAC) will increase an average 20 points over baseline using the Verbal Behavior Milestones Assessment and Placement Program (VB-MAPP). Baseline data will be collected in October 2016. Final data will be collected in May 2017.

Goal 2: Staff Impact

By June 2017, using a random sample, Enhanced Autism Classroom (EAC) staff, will increase technique skills in the area of reinforcement, instruction, corrective feedback, and prompting an average of 7 points or on average of 5% on a checklist or rubric of 140 points.

By increasing staff skills in the above area, student behaviors and learning will also increase.

Future Focus

Future Focus:

- Continue to improve quality and variety of ABA trainings and support to schools by offering more advanced technical training topics to teachers with 3 or more years' experience
- Forge partnerships with a variety of agencies and community organizations outside Fairfax County Public Schools to expand network, sharing of information and accessibility for parents.
- Integrate technology and web-based modules into professional development training outreach plan.

Data Narrative

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Data: Baseline data increased an average of 29.5 points on the VB-MAPP assessment from October to June 2016.

Goal 2: Student Impact

By June 2016 using a random sample of 15 students with behavior intervention plans (BIPs), students will demonstrate a decrease their challenging behaviors by 20% over October baseline.

Data: Using a random sample of 15 students, challenging behavior in all 15 students decreased by 22% over October baseline.

Locations

ELEMENTARY	MIDDLE	HIGH	OTHER
Aldrin Elementary Armstrong Elementary Beech Tree Elementary Belle View Elementary Belvedere Elementary Bull Run Elementary Camelot Center Canterbury Woods Elementary Cardinal Forest Elementary Centre Ridge Elementary Centreville Elementary Cherry Run Elementary Chesterbrook Elementary Churchill Road Elementary Clearview Elementary Colin Powell Elementary Crossfield Elementary Cub Run Elementary Deer Park Elementary Eagle View Elementary Fairhill Elementary Fairview Elementary Floris Elementary Forest Edge Elementary Forestdale Elementary Fort Belvoir Elementary Fort Hunt Elementary Fox Mill Elementary Franklin Sherman Elementary Glen Forest Elementary Greenbriar East Elementary Groveton Elementary Gunston Elementary Halley Elementary Haycock Elementary Hunt Valley Elementary	Island Creek Elementary Keene Mill Elementary Kent Gardens Elementary Kings Glen Elementary Kings Park Elementary Lake Anne Elementary Lane Elementary Laurel Hill ES Laurel Ridge Elementary Lees Corner Elementary Little Run Elementary Lorton Station Elementary Lutie Lewis Coates ES Lynbrook Elementary Marshall Road Elementary McNair Elementary Navy Elementary North Springfield Elementary Oak Hill Elementary Oakton Elementary Parklawn Elementary Pine Spring Elementary Poplar Tree Elementary Providence Elementary Riverside Elementary Rose Hill Elementary Sangster Elementary Shreveview Elementary Silverbrook Elementary Sleepy Hollow Elementary Spring Hill Elementary Stratford Landing Elementary Sunrise Valley Elementary Terra Centre Elementary Terraset Elementary Timber Lane Elementary Union Mill Elementary Virginia Run Elementary Waples Mill Elementary Washington Mill Elementary Weyanoke Elementary Willow Springs Elementary Woodlawn Elementary	Carson Middle Cooper Middle Franklin Middle Frost Middle Herndon Middle Hughes Middle Irving Middle Key Middle Kilmer Middle Lake Braddock Secondary Lanier Middle Liberty Middle Longfellow Middle Poe Middle Robinson Secondary Sandburg Middle Thoreau Middle Twain Middle Whitman Middle	Annandale High Cedar Lane Center Centreville High Davis Career Center Herndon High Lake Braddock Secondary Langley High Lee High Marshall High McLean High Mount Vernon High Pimmit Hills Alt High Pulley Career Center Quander Road Center Robinson Secondary South County High South Lakes High Stuart High West Potomac High Westfield High Woodson High