

Submitted By: Donna E. Rutherford, Director/Reading Specialist
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Name: Ryan
Gender: Male
Chronological Age: 7.9-years
Clinical Diagnosis: Reading below grade level

Client History

Ryan's parents brought him to our learning center due to their concerns about his academic performance. Only in first grade, Ryan had already been to two different schools as his parents continued to seek a 'better teacher' and 'smaller class size'. Mom had begun to see that Ryan's struggles in the classroom were following him to every school setting. He had not received any prior educational services other than staying after school for tutoring from his first grade teacher. His parents noted difficulties in the following areas:

- reading
- encoding and decoding skills
- slow work pace
- attention and distractibility
- phonemic awareness
- reversals of letters and words
- following directions
- forgetfulness

Birth and Development

Ryan's mother was involved in an auto accident, which resulted in bleeding and bed rest for the first trimester. However, Ryan was born healthy and full-term at 34-weeks. Mother reported Ryan slept and ate well, loved taking baths, and was very affectionate. Typical speech and language development was noted with the usual babbling and imitation of sounds. His first words were at ten-months, with three to four word phrases by 24-months. Both mother and father are bilingual; Ryan does not speak Spanish but he understands it quite well.

Medical History

As a toddler, Ryan experienced many ear infections; seven infections in his first year. There were no other relevant or significant medical issues.

Goals.

Parental goals were simply for Ryan to "stop confusing his letters and numbers." Our goals for Ryan were as follows:

- increase processing speed
- expand ability to think and understand
- increase attention
- decrease distractibility
- improve visual processing skills
- improve auditory processing skills
- increase phonemic awareness
- improve letter identification
- expand vocabulary
- improve consistency of decoding skills
- increase reading fluency
- enhance memory skills

Concurrent Treatment/Intervention

- A 20-week intensive remediation program was designed to meet Ryan's goals. It consisted of the following elements:
 - The Listening Program® Level One Kit with Nature Sounds and Bone Conduction Audio System
 - Learning Ears® by Moyer's Learning Systems
 - Sondag System Reading Remediation Program
 - BrainBuilder®

Listening Plan

Cycle One listening used the standard *LearningEars* listening program protocol with two, 15-minute listening sessions, five-sequential days per week, with a TLP Level One Kit with Nature Sounds and Bone Conduction.

- Phase I (4-weeks) – both 15-minute listening sessions were in the home environment.
- Phase II/III (12-weeks) – the morning listening sessions was done in the home. His evening listening session was done in the learning center as an active-listening session. A simple mixer and microphone set-up was used (standard Learning Ears configuration), however, this session did not use bone conduction.
- Phase IV (6-weeks) – both listening sessions returned to the home environment.

Rationale for Listening Plan

- Relevant intake findings
- Correlations to the frequency zones
- How the listening plan was intended to achieve listening goals

Observations

- Behavior changes, social skills, academic skills, communication, etc. and when they occurred in the program.

Pre/Post Testing

GIBSON TEST BATTERY OF COGNITIVE SKILLS

Test Name	Pre-Test in Years	Post-Test in Years	Change in Years
Processing Speed	7.0	8.9	+1.9
Working Memory	8.9	11.9	+3.0
Logic-Reasoning	10.0	12.3	+2.3
Selective Attention	7.0	7.9	+0.9

TEST OF VISUAL PERCEPTUAL SKILLS, VERSION 3

Subtests	PRE-		POST-		Change in Years
	Scaled Score	Age Equiv.	Scaled Score	Age Equiv.	
<i>Basic Processes</i>					
Visual Discrimination	7	4.0	15	12.1	+8.1
Visual Memory	8	5.3	16	12.0	+6.9
Spatial Relations	16	10.7	15	10.7	+0.0
Form Constancy	17	13.10	15	> 18.11*	> +5.1
<i>Sequencing</i>					
Sequential Memory	8	5.5	9	6.0	+0.7
<i>Complex Processes</i>					
Figure Ground	12	7.6	15	11.2	+3.8
Visual Closure	9	5.2	9	6.1	+0.11

COMPOSITE SCORES FROM TVPS-3

Tests	PRE-		POST-		Change in Years
	Standard Scores	Age Equiv.	Standard Scores	Age Equiv.	
Basic Processes	110	7.6	127	11.6	+4.0
Sequencing	90	5.5	95	6.0	+0.7
Complex Processes	103	6.4	110	8.3	+1.11
Overall	105	6.10	117	9.3	+2.5

TEST OF AUDITORY PROCESSING SKILLS, VERSION 3

Subtests	PRE-		POST-		Change in Years
	Scaled Scores	Age Equiv.	Scaled Scores	Age Equiv.	
<i>Phonologic Processes</i>					
Word discrimination	8	6.2	13	>9.6*	> +3.4
Phonological segmentation	8	6.5	11	9.0	+2.7
Phonological blending	11	7.6	14	13.4	+5.10
<i>Memory Processes</i>					
Number memory forward	11	9.2	11	10.3	+1.1
Number memory reversed	7	6.0	9	7.6	+1.6
Word memory	11	7.7	11	8.6	+0.11
Sentence memory	7	5.7	11	8.6	+2.11
<i>Complex Processes</i>					
Auditory comprehension	12	9.10	13	11.2	+1.4
Auditory reasoning	10	7.4	13	10.3	+2.11

COMPOSITE SCORES FROM TAPS-3

Tests	<i>PRE-</i>	<i>POST-</i>
	Standard Scores	Standard Scores
Phonologic	95	114
Memory	95	103
Cohesion	105	115
Overall	97	109

WOODCOCK READING MASTERY

Test Name	<i>PRE-</i>		<i>POST-</i>		Change in Years
	Pre-Test in Years	SS	Post-Test in Years	SS	
Visual-Auditory Learning	5.5	73	7.3	96	+1.10
Letter Identification	7.1	98	7.4	94	+0.3
Word Identification	7.8	110	8.6	109	+0.10
Word Attack	7.7	106	9.3	115	+1.8
Word Comprehension	7.10	109	8.11	114	+1.1
Passage Comprehension	8.10	118	9.7	116	+0.9

GRAY ORAL READING TESTS

Test	<i>PRE</i>		<i>- POST</i>		Change in yrs.
	Std Score	Age Equiv	Std Score	Age Equiv	
Rate	9	6.3	12	8.3	+2.0
Accuracy	8	6.6	11	8.3	+1.9
Fluency	8	6.6	11	8.0	+1.6
Comprehension	12	8.0	13	9.0	+1.0

Ryan's Oral Reading Quotient, as measured by the GORT, moved from 100- in the 50th percentile ranking to 112- in the 79th percentile ranking.

Testing Summary

Ryan was presented at the Brain Zone due to parental concerns with regard to inconsistent academic performance and poor reading skills. Pre-remediation assessments indicated slow processing speed, poor visual and auditory memory, and below average ability with both visual and auditory discrimination, visual closure, and selective attention. Post-assessments were administered following 20-weeks of intensive remediation using The Listening Program®, Learning Ears®, and BrainBuilder® as the primary tools. Ryan experienced a growth of 6.5-years in overall auditory memory and 7.4-years in overall visual memory. As well, his processing speed, and attentional skills were all at or above his current age.

Questions/Follow-up Recommendations

It was recommended that Ryan continue reading therapy to focus his encoding skills, which he continues to struggle with. As well, even though Ryan is now a good reader, he tires very quickly when he reads. Therefore, in addition to continuing with daily listening using his TLP with Bone Conduction, it was recommended that he begin the Path To Reading therapy to address the remaining deficit with visual closure, which we believe may be at the root of the reading stamina issue.

Discussion

Ryan, his parents, and his teacher are all extremely pleased with the results of his remediation. His latest report card was all A's and B's, with an A+ in Reading! As well, his parents said their quiet little boy with the soft voice that could barely be heard, will now not stop talking!

He is using complete sentences when he speaks, he is able to organize his thoughts and give detailed descriptions of his day. These were not mentioned as concerns when Ryan first came to see us because his parents had just accepted their little guy exactly the way he was. However, they are now overjoyed to hear him tell a story from begin to end and even using humor!