Intelligence/Adaptive Behavior Screen

The following tests were combined and interpreted using procedures and principles of Cattell-Horn-Carroll (CHC) Cross-Battery Assessment (Flanagan, D.P., Ortiz, S.O., & Alfonso, V.C. (2013) Essentials of Cross-Battery Assessment 3rd edition, Wiley and Sons). The CHC Cross-Battery approach provides guidelines so that assessments can use multiple tests to measure a broader range of abilities than might be available on only one battery. This approach is based on current, research evidence regarding the structure of human cognitive abilities and their interactions with academic abilities. This approach provides for an analysis of cognitive strengths and weaknesses that results in more focused interventions and accommodations. The results presented in this report were compiled from tests that do not share a common norm group; however, test results have been interpreted following the cross-battery approach and integrated with data from other sources including educational records, parent/teacher interviews, behavioral observations, work samples, and other test findings to ensure ecological validity. Standardization was followed for all test administrations. No single test or procedure was used as the sole criterion for classification, eligibility or educational planning. Unless otherwise noted, the results of this evaluation are considered a reliable and valid estimate of ###'s demonstrated skills and abilities at this time. Unless otherwise noted, broad composites were generated via test instrument.

Cognitive Strengths

Out of the seven areas examined, his overall performance was intact and within normal limits in most (5) of them.

AUDITORY PROCESSING (or Ga) – This is the ability to detect and process meaningful nonverbal information in sound.

Cluster	Test + (CHC ability code)	Standard Score	Confidence Interval 68%	Percentile Rank	Instrument
(Ga) Auditory Processing	**Ga Cluster Score=**	**112**	**107-117**	**79th**	**WJ-IV OL**
	Segmentation (PC)	102	95-109	55th	WJ-IV OL
	Sound Blending (PC)	118	111-125	88th	WJ-IV OL

This area (specifically the narrow ability of *Phonetic Coding*) was assessed by two measures. On the first, he had to listen to words and identify the word parts ranging from compound words to syllables to individual sounds (phonemes) (Segmentation, **Average**/Within Normal Limits). QUALITATIVE. On the second, he had to listen to a series of phonemes and blend the sounds into a word (Sound Blending, **High Average**/Normative Strength). QUALITATIVE. Overall, his Ga was in the **High Average**/Within Normal Limits range which indicates that this broad area is intact.

VISUAL PROCESSING (Gv) – This is the ability to make use of simulated mental imagery (often in conjunction with currently perceived images) to solve problems.

Cluster	Test + (CHC ability code)	Standard Score	Confidence Interval 68%	Percentile Rank	Instrument
(Gv) VISUALIZATION	**Gv Cluster Score=**	**106****	**101-111****	**65th****	**X-BASS****
	Visualization (Vz)*	70*	63-77*	2nd*	WJ-IV COG*
	Picture Recognition (MV)	100	93-107	50th	WJ-IV COG
	Block Design (Vz)	110	103-117	75th	WISC-V

*=Divergent score, not calculated in broad ability cluster
**=Broad ability cluster calculated using X-BASS 1.0 without divergent score if applicable

This area was assessed by three measures. On the first, he had to perform two different tasks; identify the two or three pieces that form a complete target shape, and identify the two block patterns that match the target pattern (Visualization, **Low**/Normative Weakness). He seemed to

struggle with the directions on both sections, often stating "I have no idea what I am supposed to be doing here so I am just going to guess" and quickly responding with little processing time. On the second, he had to recognize a subset of previously presented pictures within a field of distracting pictures (Picture Recognition, **Average**/Within Normal Limits). QUALITATIVE. To follow-up, he was given a measure that required him to view a model and/or picture and use two-color blocks to re-create the design while working within a specified time limit (Block Design, **Average**/Within Normal Limits). His performance on the Visualization subtest was felt to be divergent due to his comments regarding his understanding of the task and his intact performance on the Block Design subtest. His performances on the Picture Recognition and Block Design subtests were combined to obtain a broad Gv composite, which was in the **Average**/Within Normal Limits range which indicates that this broad area is intact.

PROCESSING SPEED (or Gs) – This is the ability to perform simple, repetitive cognitive tasks quickly and fluently.

Cluster	Test + (CHC ability code)	Standard Score	Confidence Interval 68%	Percentile Rank	Instrument
(Gs) PROCESSING SPEED	**Gs Cluster Score=**	**100**	**95-105**	**50th**	**WJ-IV COG**
	Letter-Pattern Matching (P)	100	93-107	50th	WJ-IV COG
	Pair Cancellation (P)	100	93-107	50th	WJ-IV COG

This area (specifically the narrow ability of *Perceptual Speed*) was assessed by two measures. On the first, he had to locate and circle the two identical letter pattern in a row of six patterns (Letter-Pattern Matching, **Average**/Within Normal Limits). QUALITATIVE. On the second, he had to locate and mark a repeated pattern as quickly as possible (Pair Cancellation, **Average**/Within Normal Limits). QUALITATIVE. Overall, his Gs was in the **Average**/Within Normal Limits range which indicates that this broad area is intact

CRYSTALLIZED INTELLIGENCE (or Gc) – This is the depth and breadth of knowledge and skills that are valued by one's culture.

Cluster	Test + (CHC ability code)	Standard Score	Confidence Interval 68%	Percentile Rank	Instrument
(Gc) Crystallized Intelligence	**Gc Cluster Score=**	**97****	**92-102****	**43rd*****	**X-BASS****
	Oral Vocabulary (VL)*	70*	63-77*	2nd*	WJ-IV COG*
	General Information (K0)	100	93-107	50th	WJ-IV COG
	Vocabulary (VL)	95	88-102	66th	WISC-V

*=Divergent score, not calculated in broad ability cluster
**=Broad ability cluster calculated using X-BASS 1.0 without divergent score if applicable

This area was assessed by three measures. On the first, he had to listen to a word and then provide and appropriate word with the same or a similar meaning, as well as listen to a word and then provide an appropriate word with the opposite meaning (Oral Vocabulary, **Low**/Normative Weakness). Again, he struggled with the directions on this task. For the synonym portion, he would frequently give an antonym and on the antonym portion, he would say "Un" and the stimulus word despite redirection. On the second, he had to answer orally presented questions regarding the common or typical characteristics of certain objects (General Information, **Average**/Within Normal Limits). QUALITATIVE. To follow-up, he was given a measure that required him to name depicted objects and define the word that was read aloud (Vocabulary, **Average**/Within Normal Limits). His performance on the Oral Vocabulary subtest was felt to be divergent due to his response style and his intact performance on the Vocabulary subtest (which was a much less complex Lexical Knowledge measure). His performances on the General Information and Vocabulary subtests were combined to obtain a broad Gc composite, which was in the **Average**/Within Normal Limits range which indicates that this broad area is intact.

FLUID REASONING (or Gf) – This is how well one can reason with unfamiliar or novel information.

Cluster	Test + (CHC ability code)	Standard Score	Confidence Interval 68%	Percentile Rank	Instrument
(Gf) Fluid Reasoning	**Gf Cluster Score=**	**101****	**96-106****	**56th****	**X-BASS****
	Number Series (RQ)	100	93-107	50th	WJ-IV COG
	Analysis-Synthesis (RG)	101	94-108	53rd	WJ-IV COG
	Concept Formation (I)	70*	63-77*	2nd*	WJ-IV COG*
	Matrix Reasoning (I)	65*	57-72*	1st*	WISC-V*
	Inductive Reasoning	**66***	**61-71***	**1st***	**X-BASS***

*=Divergent score, not calculated in broad ability cluster
**=Broad ability cluster calculated using X-BASS 1.0 without divergent score if applicable

This area was assessed by four total measures. On the first, he had to determine the missing number when presented with a series of numbers with one number missing in the series (<u>Number Series</u>, **Average**/Within Normal Limits). QUALITATIVE. On the second, he had to derive the rule when presented with a complete stimulus set (<u>Concept Formation</u>, **Low**/Normative Weakness). On this task, he appeared to struggle and determining the pattern, often throwing his hands up and saying something to the effect of "I have no freaking clue. I don't know, GREEN!" To follow-up, he was given a measure that required him to view an incomplete matrix or series and select the response option hat completes the matrix or series (<u>Matrix Reasoning</u>, **Very Low**/Normative Weakness). The same behaviors as on <u>Concept Formation</u> were seen here, with him stating that he was guessing on nearly every item and answering quite quickly. Due to the consistency between his performances, <u>Concept Formation</u> and <u>Matrix Reasoning</u> were combined to generate a narrow FLUID REASONING-*Induction* composite, which was in the **Very Low**/Normative Weakness range. But at the same time, he performed perfectly **Average**/Within Normal Limits on a narrow FLUID REASONING-*Quantitative Reasoning* measure.

Now the question was does he have intact Gf with a deficit in *Induction*, or does he have a deficit in Gf with intact *Quantitative Reasoning*? To figure this out, a measure of a third Gf narrow ability, *Deduction* was given, where he had to perform increasingly complex procedures after given directions on how to do so (<u>Analysis-Synthesis</u>), where this time his performance was in the **Average**/Within Normal Limits range for his age. This resulted in a broad FLUID REASONING composite in the **Average**/Within Normal Limits range and a narrow *Induction* score which was in the **Very Low**/Within Normal Limits range. This indicates that for the most part, his Gf is intact the exception of a deficit in the narrow Gf ability of *Induction*.

Weaknesses

In contrast, he had significant difficulty performing the tasks measuring SHORT-TERM MEMORY and LONG-TERM RETRIEVAL (as well as the previously-discussed FLUID REASONING-*Induction*).

SHORT-TERM MEMORY (or Gsm) – This is the ability to encode, maintain, and manipulate information in one's immediate awareness.

Cluster	Test + (CHC ability code)	Standard Score	Confidence Interval 68%	Percentile Rank	Instrument
(Gsm) Short-Term Memory	**Gsm Cluster Score=**	**81**	**76-86**	**10th**	**WJ-IV COG**
	Verbal Attention (MW)	85	78-92	16th	WJ-IV COG
	Number Series (MW)	84	77-91	14th	WJ-IV COG

This area (specifically the narrow ability of *Working Memory Capacity*) was assessed by two measures. On the first, he had to listen to an intermingled series of animals and digits and then

answer a specific question regarding the sequence (<u>Verbal Attention</u>, **Low Average**/Normative Weakness). QUALITATIVE. On the second, he had to hold a span of numbers in immediate awareness while performing a mental operation on it (<u>Number Series</u>, **Low Average**/Normative Weakness). QUALITATIVE. Overall, his Gsm was in the **Low Average**/Normative Weakness range. This finding suggests that he has a deficit in this basic psychological process (i.e., the ability to direct the focus of attention to perform relatively simple manipulations, combinations, and transformations of information within primary memory while avoiding distracting stimuli and engaging in strategic/controlled searches for information in secondary memory), a finding that should play an essential role in developing educational interventions.

LONG-TERM RETRIEVAL (or Glr) – This is the ability to store, consolidate, and retrieve information.

Cluster	Test + (CHC ability code)	Standard Score	Confidence Interval 68%	Percentile Rank	Instrument
(*Glr*) Long-Term Retrieval	*Glr* Cluster Score=	59**	54-64**	<1st**	X-BASS**
	Story Recall (MM)*	100*	93-107*	50th*	WJ-IV COG*
	Visual-Auditory Learning (MA)	70	63-77	2nd	WJ-IV COG
	Imm Sym Translation (MA)	65	58-72	1st	WISC-V
	Naming Speed Literacy (NA)	65	58-72	1st	WISC-V

*=Divergent score, not calculated in broad ability cluster
**=Broad ability cluster calculated using X-BASS 1.0 without divergent score if applicable

This area was assessed by four total measures. On the first, he had to recall increasingly complex stories presented from an audio recording (<u>Story Recall</u>, **Average**/Within Normal Limits). QUALITATIVE. On the second, he had learn and recall rebuses (pictographic representations of words) (<u>Visual-Auditory Learning</u>, **Low**/Normative Weakness). On this task, He had a hard time with even the earlier items even with corrections. To follow-up, he was given a measure that required him to learn visual-verbal pairs and then translate symbol strings into phrases and sentences (<u>Immediate Symbol Translation</u>, **Very Low**/Normative Weakness). The same behaviors as on Concept Formation were seen here. While he was not corrected on this measure, there was multiple re-teaching. Due to the consistency between his performances, <u>Visual-Auditory Learning</u> and <u>Immediate Symbol Translation</u> were initially combined to generate a narrow LONG-TERM RETRIEVAL-*Associative Memory* composite, which was in the **Very Low**/Normative Weakness range. But at the same time, he performed perfectly **Average**/Within Normal Limits on a narrow LONG-TERM RETRIEVAL-*Meaningful Memory* measure.

Now the question was does he have intact Glr with a deficit in *Associative Memory*, or does he have a deficit in Glr with intact *Meaningful Memory*? To figure this out, a measure of a third Glr narrow ability, *Naming Facility* was given, where he had to name elements (e.g., objects of various size and color, letters, and numbers) as quickly as possible (<u>Naming Speed Literacy</u>), where this time his performance was in the **Very Low**/Normative Weakness range for his age. This resulted in a broad LONG-TERM RETRIEVAL composite in the **Very Low**/Normative Weakness range. This indicates that for the most part, his Glr is a normative weakness the exception of intact ability in the narrow Glr ability of *Meaningful Memory*. This finding suggests that with the exception of *Meaningful Memory*, he has a deficit in this basic psychological process (i.e., the ability to store, consolidate, and retrieve information), a finding that should play an essential role in developing educational interventions.