



A Neurocognitive Understanding of ADHD and SLD: Practical Assessment and Intervention

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Settle Your Glitter!!

STAND & SHARE: Who's Here?

- Please Stand if...
- School psychologist
 - Clinical psychologist
 - Teacher
 - Special Education Teacher
 - Speech & Language Therapist
 - School Administrator
 - Other?



Our Backgrounds and Intentions

Secondary & Elementary Classroom Teacher	Special Education		Musician	School Psych
Talent Development	Multicultural Learners		Professor of Psych	Test Author
Juvenile Delinquents	Teacher of Teachers Teacher Researcher		Jack's Intention: To help psychologists and educators know their students' learning and emotional strengths and needs in order to help them succeed in school and life.	

Kathleen's Intention:
To open the heart, nourish the mind, and inspire the spirits of learners and teachers.

Disclosures

A collection of educational assessment tools and manuals, including:

- Essentials of CAS2 Assessment
- EF Comprehensive Executive Function Inventory
- DESSA-MANI Preschool and Elementary School
- CAS2 Cognitive Assessment System: Rating Scale
- CAS2 Cognitive Assessment System: Examiner's Manual
- CAS2 Cognitive Assessment System: Brief
- Helping Children Learn
- CEFI Adult
- DESSA School-Age Children
- RSI RATING SCALE FOR STUDENTS
- Administration and Scoring Manual
- CAS2 Cognitive Assessment System: Examiner's Manual
- AUTISM SPECTRUM RATING SCALES (ASRS)

JACKNAGLER.COM
www.jacknagler.com

WELCOME TO JACKNAGLER.COM

ABOUT & MEET

- Jack Nagler**
- PHD Case Studies**
- ED Military Solutions**
- CEFI Special Planning Guide**
- Artistic CD's**
- Workshops**

Kathleen Kryza's Infinite Intentions
www.kathleenkryza.com

Passionately Committed to Transforming Classrooms Culturally, Emotionally and Academically
"Mindssets + Skillssets) Relevance = Results!"

Transformative Teaching
Social, Multicultural, Academic

Workshops/Coaching
Big results in little time. Kathleen Kryza uses her expertise to help educators and students achieve their goals.

Wedding the Art and Science of Teaching: Theory Into Reality

Married May 17, 2014



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What's Our Point and Why are We Making It

- Identification of students with ADHD should include examination of their neurocognitive strengths and weaknesses AND measurement of impairment
- Similarly, tests used to identify students with a Specific Learning Disability (SLD) should measure their pattern of neurocognitive strengths and weaknesses
- Measuring brain function is a powerful way to detect the neurocognitive underpinning of ADHD and SLD
- **THE GOOD NEWS: We now have a better way to understand the neurocognitive strengths and weaknesses of students with ADHD and SLD.**



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Routines & Procedures

- Mindful Moments
- Double Entry Journals
- Sound of Coming Together
- Core Groups



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Move Constructively!



Ironing Boards as Desks and Bouncy Balls For Kids Who Need to Wiggle to Learn

www.katallensart.com

Core Groups with Jobs: Groups of Three

- Coach – Lead the group
- Organizer/Time Keeper – Keep track of materials and time
- Recorder – Write and/or draw
- Energizer – Keep up the energy and Mindset!



Decades of research shows that in most classroom's, _____ % of students do _____ % of the thinking and talking? -- Schmoker

•If the brain is not engaged, it's not learning.

Six Foundations that Support All Learners: Today we will "Live It to Learn It."

- *Safe Learning Environment
- * Routines and Procedures (for working Independently and interdependently)
- *Growth Mindsets
- * Student Talk
- * Self Assessment
- * Mindfulness (Brain Breaks)



Talk Time and Listen Time Knee to Knee, Eye to Eye




Topics for Today

- The Truth About IQ Tests
- ADHD, SLD & Planning
- ADHD, SLD & Attention
- ADHD, SLD & Successive
- ADHD, SLD & Simultaneous



Traditional IQ and Achievement Tests

- Working as a school psychologist I noticed that parts of the WISC we were administering was VERY similar to parts of the achievement tests
- HOW DOES THAT MAKE SENSE?
- WHY DO WE HAVE THIS PROBLEM?



➤ 1975 Charles Champagne Elementary, Bethpage, NY

Evolution of IQ <http://www.jacknaglieri.com/cas2.html>

- A group of psychologists met at Harvard in April of 1917 to construct an ability test to help the US military evaluate recruits (WWI) for responsible positions
- Their goal was to develop a workable set of tests

Evolution of IQ <http://www.jacknaglieri.com/cas2.html>

- On July 20, 1917 they concluded that the Army Alpha and Beta tests could
- Thus, July 20, 1917 is the birth date of the verbal, quantitative, nonverbal IQ test format -- Traditional groups and individually administered IQ tests.
- “aid in segregating and eliminating the mentally incompetent, classify men according to their mental ability; and assist in selecting competent men for responsible positions” (p. 19, Yerkes, 1921).
- We have had more than 100 years of this approach to intelligence testing**

From Alpha/Beta to Wechsler IQ

Army Alpha

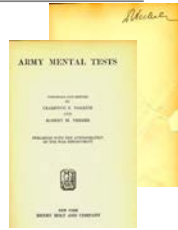
- Synonym- Antonym
- Disranged Sentences
- Number Series
- Arithmetic Problems
- Analogies
- Information

Verbal & Quantitative questions demand knowledge

Army Beta

- Maze
- Cube Imitation
- Cube Construction
- Digit Symbol
- Pictorial Completion
- Geometrical Construction

Nonverbal typically demand much less knowledge



Army Mental Tests - Vocabulary (still in WISC-V)

Test J, **Vocabulary**

Materials.—Accompanying five series of words.

Directions.—Place the list so that subject may see the words and pronounce them if he wishes. If a word is pronounced incorrectly, examine it subject imitates or sees you say it. All I care for is what he expresses. Judge ordinarily it will not be so hard or too easy for the subject accurately according to difficulty as accurate score.

Scoring.—Credit each correct answer.

The score is + if the subject is not necessary that the pronunciation of every, but for this

1 before
2 gutter
3 second
4 handle
5 within

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1 before
2 gutter
3 second
4 handle
5 within

Get the answers to these examples as quickly as you can. Use the side of this page to figure on if you need to.

SAMPLES { sky—blue : grass—table green warm big
fish—swims : man—paper time walks girl
day—night : white—red black clear pure

In each of the lines below, the first two words are related to each other in some way. What you are to do in each line is to see what the relation is between the first two words, and underline the word in heavy type that is related in the same way to the third word. Begin with No. 1 and mark as follows:

TEST 2

Get the answers to these examples as quickly as you can. Use the side of this page to figure on if you need to.

SAMPLES { 1 How many are 5 men and 10 men? Answer (15)
2 If you walk 4 miles an hour for 3 hours, how far do you walk? Answer (12)
1 How many are 49 guns and 6 guns? Answer (55)
2 If you save \$6 a month for 6 months, how much will you save? Answer (36)
3 If 32 men are divided into squads of 8, how many squads will there be? Answer (4)
4 Mike had 11 cigars. He bought 3 more and then smoked 6. How many cigars did he have left? Answer (8)
5 A company advanced 6 miles and retreated 3 miles. How far was it then? Answer (3)

The First IQ TEST: Alpha (Verbal)

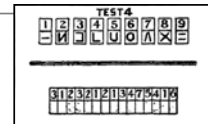
- tobacco** 1. Bull Durham is the name of
- fruit** 2. The Mackintosh Red is a kind of
- typewriter** 3. The Oliver is a
- Mogul** 4. A passenger locomotive type is the
- engineers** 5. Stone & Webster are well know
- Superbas** 6. The Brooklyn Nationals are called
- fabric** 7. Pongee is a
- corn** 8. Country Gentleman is a kind of
- Mckinley** 9. The President during the Spanish War was
- cigarette** 10. Fatima is a make of

From: Psychological Examining the United States Army (Yerkes, 1921, p. 213)

Army Beta Tests - Digit Symbol & Object Assembly



- Wechsler's Performance tests were taken from the Army Beta
- BUT WHY were nonverbal test included?



Test 7.—Digit Symbol

E. shows S. the record sheet, points to blank below 2 in the sample, then to symbol for 2 at top of page, writes in symbol, proceeds in the same way with the other parts of the sample, then gives S. pencil, points to space below 3 in the test, and nods affirmatively.

Antonino Mirenda - 1906

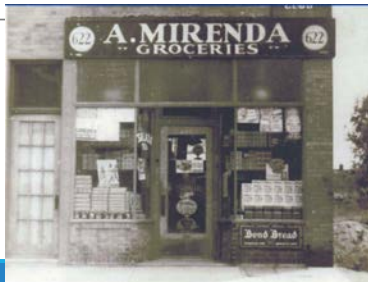
Why the Beta (nonverbal) tests?



Antonino Mirenda - 1907



A. Mirenda Groceries 622 Ave X, Brooklyn, NY




1920 Army Testing (Yoakum & Yerkes)

Note there is no mention of measuring verbal and nonverbal intelligences – **it was a social justice issue.**

METHODS AND RESULTS 19

Why Beta? Men who fail in alpha are sent to beta in order that injustice by reason of relative unfamiliarity with English may be avoided. Men who fail in beta are referred for individual examination by means of what may appear to be the most suitable and altogether appropriate procedure among the varied methods available. This reference for careful individual examination is yet another attempt to avoid injustice either by reason of linguistic handicap or accidents incident to group examining.



Wechsler (1939)

His definition of intelligence does not mention verbal or nonverbal *abilities*:

“The aggregate or global capacity of the individual to act purposefully, to think rationally, and to deal effectively with his environment (1939)”

David Wechsler, Ph.D.

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IQ Tests that Require Knowledge

- WISC-V
 - Verbal Comprehension: Vocabulary, Similarities, Information & Comprehension
 - Fluid Reasoning: Figure Weights, Picture Concepts, Arithmetic
- WJ-IV and Batería-IV
 - Comprehension Knowledge: Vocabulary & General Information
 - Fluid Reasoning: Number Series & Concept Formation
 - Auditory Processing: Phonological Processing
- K-ABC-II
 - Knowledge / GC: Riddles, Expressive Vocabulary, Verbal Knowledge


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To Detect if a Student with ADHD or SLD has a Cognitive Weakness a Test Should Measure *Thinking* not Knowing

What does the student have to **know** to complete a task?

◦ This is dependent on educational opportunity (e.g., Vocabulary, Arithmetic, phonological skills, etc.)


I know that



How does the student have to **think** to complete a task?

This is dependent on the brain's neurocognitive processes

I can use a plan




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Thinking and Knowing Continuum

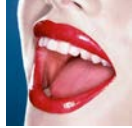
Cognitive Assessment System-2 Wechsler Nonverbal Scale of Ability	Kaufman Assessment Battery for Children-2	Wechsler Intelligence Scale for Children-5	Woodcock-Johnson Cognitive-4	Feifer Assessment of Reading & Math	Stanford Achievement Test Kaufman Test Educational Achievement-3
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❖ The obvious connection between educational opportunity and vocabulary and arithmetic subtests was noted by Matarazzo (1972) when he wrote: “a man’s vocabulary is necessarily influenced by his education and cultural opportunities (p. 218)” and when referring to the Arithmetic subtest, “its merits are lessened by the fact that it is influenced by education (p. 203)”. The impact of education on intelligence tests was clearly understood yet our interpretations of these scores have not adequately recognized the threat to validity.

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&




Talk about someone you know who's intelligence could have been inaccurately assessed with a test that requires verbal skills?

WALK AND TALK: Movement and Talk helps cement learning

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What do Verbal IQ tests measure?



THEY MEASURE KNOWLEDGE

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VIQ is Achievement - Vocabulary


<p>What does <u>scared</u> mean? (The child answers orally)</p> <p>Wechsler or Binet Vocabulary item presented orally by the examiner:</p>	<p>Someone who is <u>glad</u> is</p> <ul style="list-style-type: none"> (a) tall (b) proud (c) happy (d) alone <p>Stanford Achievement Test Reading Vocabulary</p>
--	--

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VIQ is Achievement - Arithmetic

<p>"A boy had twelve books and sold five. How many books did he have left?"</p> <p><small>Stanford-Binet 5th Ed. Quantitative items</small></p>	<p>Peter counted seventeen lily pads at the pond. There were frogs sitting on five of the lily pads, and the rest were empty. How many lily pads were empty?</p> <p>(a) 22 (b) 13 (c) 12</p> <p><small>Stanford Achievement Test Math item</small></p>
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REASON FOR REFERRAL (BY DR T. OTERO)

ACADEMIC:

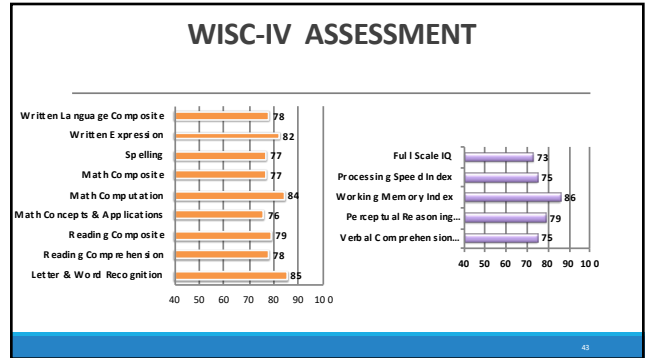
- Could not identify letters/sounds
- October 2013: Could only count to 39
- All ACCESS scores of 1

BEHAVIOR:


- Difficulty following directions
- Attention concerns
- Refusal/defiance

Case of Alejandro

Note: this is not a picture of Alejandro



Turn and Talk




What would you say about Alejandro's abilities based on this assessment?

Neurocognitive function

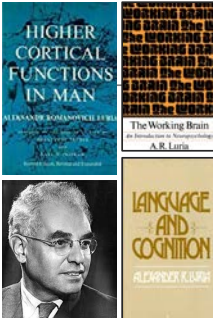
Luria theorized that human cognitive functions can be conceptualized within a framework of three separate but related brain systems that provide four basic psychological processes.

The three brain systems are referred to as "**functional units**" because the neurocognitive mechanisms work in separate but interrelated systems.

Recent neuroscience research has found Cognition and behavior are a product of **functional brain networks**.



PASS Neurocognitive Theory



Planning = THINKING ABOUT HOW YOU DO WHAT YOU DECIDE TO DO

Attention = BEING ALERT AND RESISTING DISTRACTIONS


Simultaneous = GETTING THE BIG PICTURE

Successive = FOLLOWING A SEQUENCE

PASS = 'basic psychological processes'

PASS Neurocognitive Theory

These neurocognitive processes are the foundation of learning and can reveal WHY a student with ADHD and/or SLD has difficulty meeting the demands of life (Naglieri & Otero, 2011)




Naglieri, J. A. & Otero, T. (2011). Cognitive Assessment System: Redefining Intelligence from A Neuropsychological Perspective. In A. Davis (Ed.), *Handbook of Pediatric Neuropsychology* (320-333). New York: Springer Publishing.

Intelligence as Neurocognitive Functions

Das and Naglieri (February 11, 1984) proposed that intelligence was better REinvented as neurocognitive processes. They began development of the Cognitive Assessment System (Naglieri & Das, 1997).


Naglieri and Das conceptualized intelligence as Planning, Attention, Simultaneous, and Successive (PASS) neurocognitive processes.



April 2018

Neuropsychological Correlates of PASS

Naglieri, J. A., & Otero, T. M. Redefining Intelligence as the PASS Theory of Neurocognitive Processes.

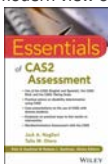


CHAPTER 28 Cognitive Assessment System: Redefining Intelligence from a Neuropsychological Perspective

Jack A. Naglieri and John M. Otero

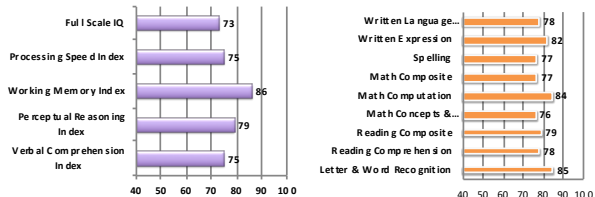
Brain & Intelligence 21st Century

The brain is the seat of abilities called PASS
 PASS is described by (Naglieri & Otero, 2011 & 2017) as a modern view of intelligence

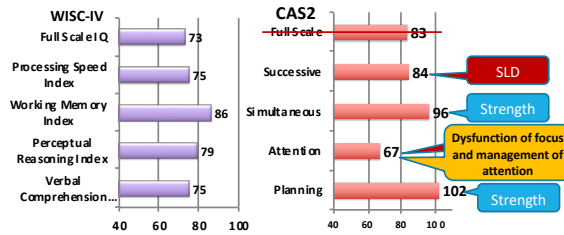


Back to Alejandro

WISC-IV and ACHIEVEMENT



PASS Scores show Strengths and Weaknesses



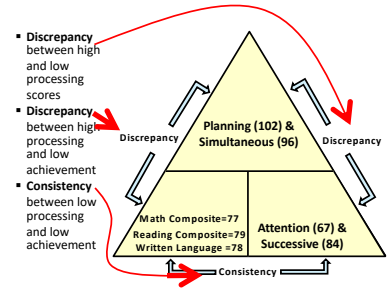
Stand and Share



- Did PASS scores change your mind about this student? How?
- Your thoughts...

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Discrepancy
Consistency
Method for SLD
Determination
Naglieri & Otero
(2017) Pattern of
Strengths and
Weaknesses



Kathleen's Intervention Plan for Alejandro

Be Intentional and Transparent

- Explain his PASS scores to him

Build on His Strengths

- Help him use his Planning and Simultaneous Strengths to support his learning challenges

Develop Effective Skill Sets to remediate his weaker skills

- Offer and encourage the use of strategies that can improve his attention and successive processing. (Stay tuned for more on strategies for this...)

Encourage a Growth Mindset and Self Efficacy



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Our Children Deserve Better...

We owe it to our students to identify patterns of strengths and weaknesses based on *Brain Function*, and not confounded by knowledge.

We must *Think Positive and Act Smart* to make more informed decisions about how to best respond to student's needs.

-Kryza, Naglieri, 2019





Intentional & Transparent

WANT STUDENTS TO OWN THEIR LEARNING?
BIG IDEA

Intentional and Transparent

Intentional: **YOU** Know why you're doing what you're doing.




Transparent - **THEY** know why you're doing what you're doing.



Brain Rule #4 - Medina

“We need to repeat to remember”



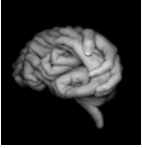
Talking
about an event
immediately after it has
occurred

enhances
memory
for that event

The Brain and Making Learning Stick

PRACTICE MAKES PERMANENT: Review material using multiple sensory lessons so different neural networks store the knowledge in multiple brain regions. Their brains will build multiple pathways leading to the stored memory, which makes retrieval more efficient. **When a memory has been recalled often, their repeated activation strengthens its neuronal circuits - like exercising a muscle**


Dr. Judy Willis



www.k12learning.com

Teaching for Transfer

If we want learning to stick, we have to make it sticky.



www.kathleenroyle.com

How To Measure PASS neurocognitive abilities

COGNITIVE ASSESSMENT SYSTEM SECOND EDITION (CAS2)
CAS: BRIEF AND CAS: RATING SCALE

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Discrepancy Consistency Method



1997



1999



2014



2017







Naglieri, J. A. & Otero, T. M. (2017). Essentials of CAS2 Assessment. New York: Wiley

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PASS Comprehensive System

(Naglieri, Das, & Goldstein, 2014)

CAS2 Rating Scale (4 subtests)	CAS2 Brief (4 subtests)	CAS2 Core (8 subtests)	CAS2 Extended (12 subtests)
Total Score Planning Simultaneous Attention Successive	Total Score Planning Simultaneous Attention Successive	Full Scale Planning Simultaneous Attention Successive	Full Scale Planning Simultaneous Attention Successive Supplemental Scales Executive Function Working Memory Verbal / Nonverbal Visual / Auditory
			

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CAS2 for (Ages 5-18 yrs.)

Administrative and Scoring Manual
Interpretive Manual
Stimulus Book, Part 1
Stimulus Book, Part 2
Stimulus Book, Part 3

CAS2

For PSYCHOLOGISTS
8 (40 minutes) or 12 (60 minutes) subtest versions
PASS and Full Scales provided (100 & 15) subtests (10 and 3)

CAS2

Supplementary Scales:
Executive Function (which relates to CEFI), Working Memory, Verbal, Nonverbal, Speed/Fluency
Added: A Visual and Auditory comparison

Subtest	Subtest Scores					
	EP with WM	EP w/ WM	EP w/ WM	VC	VC	VC
Planned Copies						7
Planned Connections	5	5				
Matrices						10
Verbal Spatial Relations			11	11	11	
Figure Memory						10
Explosive Attention	9	9				
Receptive Attention						9
Surveillance			7	7	7	
Surveillance Requisition Operations						
Sum of Subtest Subtest Scores	EP with WM	EP w/ WM	WM	VC	VC	
Composite Subtest Scores	91	91	94	99	94	
Executive Scale	21	21	34	30	30	
Speed	121	99	120	120	99	
% Confidence Interval	Lower	94	95	98	97	96

Notes: EP with WM = Executive Function with Working Memory; EP w/ WM = Executive Function with Working Memory; WM = Working Memory; VC = Verbal Content; VC = Nonverbal Content.

CAS2 Online Score & Report

Narrative report can be obtained in Word or PDF

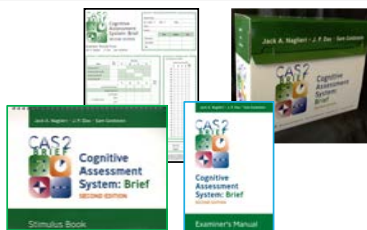
Scoring and Interpretive Report
Jack A. Nagler

NAME: Jack Nag
AGE: 8
GENDER: Male
DATE OF BIRTH: 01-12-2005
CITY: St. Louis
SCHOOL: East Lake

PASS and Full Scale Scores

CAS2: Brief for Ages 4-18 years

For special educators and others with some assessment training
 4 subtests (20 minutes)
 PASS and Total Scales provided



CAS2 Rating Scales (Ages 4-18 yrs.)

The CAS2: Rating measures behaviors associated with PASS constructs
 Completed by teachers and can be used by psychologists, special educators and regular educators



CAS2 Rating Scales

The CAS2: Rating Scale scores can be used as part of a larger comprehensive evaluation or for instructional planning

Let's Take a Break!



Mindful Moment and Self Regulation How's Your Engine Revving?

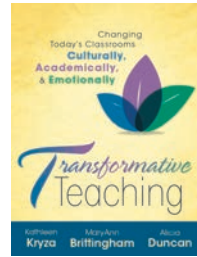
Too High? Too Low? Just Right?

Do you need to energize yourself or calm yourself?

- Energize: Do an energizing movement or activity
- Calm: Deep breathing and deep muscle stretches

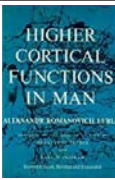

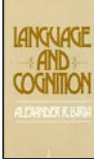


Research Into Practice



Six Foundations

- * Safe Environment
- * Routines and procedures
- * Growth Mindsets
- * Student Talk
- * Self Assessment
- * Mindfulness

PASS Neurocognitive Theory

Planning = THINKING ABOUT HOW YOU DO WHAT YOU DECIDE TO DO

Attention = BEING ALERT AND RESISTING DISTRACTIONS

Simultaneous = GETTING THE BIG PICTURE

Successive = FOLLOWING A SEQUENCE

PASS = 'basic psychological processes'


Building the Big Picture of PASS

*After we teach each section about **PASS**, you will write/draw information that captures **three big ideas** you learned about each key part of **PASS***

PASS
(What have you learned?)
Define/Describe
1,2,3...

Brain Function and Learning


- Each function defined
- A Case Study
- Intervention Protocol
- Take away Strategies



Topics for Today

- The Truth About IQ Tests
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- ADHD, SLD & Successive
- ADHD, SLD & Simultaneous

Planning (or lack of it!)



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PASS Deeper DIVE:

Intelligence Conceptualized as brain function

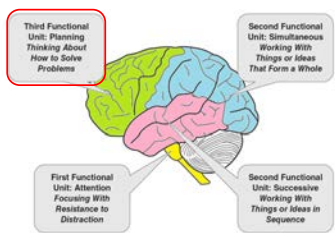


Figure 1.2 Three Functional Units and Associated Brain Structures
From: *Essentials of CAS2 Assessment*. Naglieri & Otero, 2017

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PASS Theory: Planning

Planning is a neurocognitive process that a person uses to determine, select, and use efficient solutions to problems

- problem solving
- developing plans and using strategies
- retrieval of knowledge
- impulse control and self-control

These can also be described as executive function, metacognition, strategy use

Which Lemming has good Planning?

PASS Theory: Planning

Planning is a term used to describe a neurocognitive function similar to metacognition and executive function

Planning is needed for setting goals, making decisions, predicting the outcome of one's own and others actions, impulse control, strategy use and retrieval of knowledge

➤ Planning helps us make decisions about how to solve any kind of a problem from academics to social situations and life in general

CAS2: Rating Scale Planning

Directions for Items 1–10. These questions ask how well the child or adolescent decides how to do things to achieve a goal. They also ask how well a child or adolescent thinks before acting and avoids impulsivity. Please rate how well the child or adolescent creates plans and strategies to solve problems.

During the past month, how often did the child or adolescent ...

	Never	Rarely	Sometimes	Frequently	Always
1. produce a well-written sentence or a story?	0	1	2	3	4
2. evaluate his or her own actions?	0	1	2	3	4
3. produce several ways to solve a problem?	0	1	2	3	4
4. have many ideas about how to do things?	0	1	2	3	4
5. have a good idea about how to complete a task?	0	1	2	3	4
6. solve a problem with a new solution when the old one did not work?	0	1	2	3	4
7. use information from many sources when doing work?	0	1	2	3	4
8. effectively solve new problems?	0	1	2	3	4
9. have well-described goals?	0	1	2	3	4
10. consider new ways to finish a task?	0	1	2	3	4

Planning Raw Score


Planned Codes Page 1

A	B	C	D
X	O	O	X


A	B	C	D	A
X	O	O	X	
A	B	C	D	A
X	O			
A	B	C	D	A
X	O			
A	B	C	D	A
X	O			

- ▶ Jack Jr. at age 5
- ▶ Child fills in the codes in the empty boxes
- ▶ After being told the test requirement, examinees are told: "You can do it any way you want"


Planned Codes Page 2 Jack Jr age 10



A 13 month old's Plan



At 19 months Planning & Knowledge

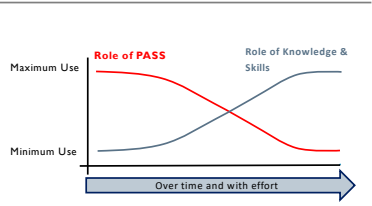


Planning Learning Curves

Learning depends upon many factors especially PASS

At first, PASS plays a major role in learning

When a new task is learned and practiced it becomes a skill and execution requires less thinking



Note: A skill is the ability to do something well with minimal effort (thinking)



PASS Theory: Planning Challenges

Examples of classroom problems related to Planning

- Using the same strategy even if it is not effective
- Struggling with how to complete tasks
- Not monitoring progress during a task
- Misinterpretation of what is read

Measure EF Behaviors

Supplement the CAS2 Executive Function Scale score with a behavioral measures of EF such as the Comprehensive Executive Function Scale Child or Adult versions (Naglieri & Goldstein, 2016; 2018)

CEFI Child:

- Parent (N=1,400), Teacher (N=1,400) & Self (N=700)

CEFI Adult: Self (N = 1,600) and Observer (N = 1,600)

- nationally representative samples aged 5 to 80 years (N = 6,700) indicates .. Executive Function best describes the concept – it is ONE DIMENSIONAL

Rating Scale of Impairment

“Impairment is a reduced ability to meet the demands of life because of a psychological, physical, or cognitive condition” (Goldstein & Naglieri, 2016, p. 6).

Scale is normed on a large representative sample of individuals aged 5 – 18 years.

RATING SCALE OF IMPAIRMENT (RSI)			
RSI (5-12 YEARS)		RSI (13-18 YEARS)	
PARENT FORM	TEACHER FORM	PARENT FORM	TEACHER FORM
Number of Items: 41 Reading Level: 5.8 Admin. Time: 30 mins.	Number of Items: 29 Reading Level: 6.6 Admin. Time: 15 mins.	Number of Items: 49 Reading Level: 5.9 Admin. Time: 30 mins.	Number of Items: 29 Reading Level: 6.6 Admin. Time: 15 mins.
RSI Scales School Social Mobility Domestic Family	RSI Scales School Social Mobility	RSI Scales School/Work Social Mobility Domestic Family Self-Care	RSI Scales School Social Mobility
TOTAL SCORE	TOTAL SCORE	TOTAL SCORE	TOTAL SCORE

The Case of Rocky

SPECIFIC LEARNING
DISABILITY AND
ADHD



The case of Rocky

- ▶ Rocky¹ is a real child with a real problem
- ▶ He lives in a large middle class school district
 - a wide variety of services are available
- ▶ In first grade Rocky was performing significantly below grade benchmarks in reading, math, and writing.
 - He received group reading instruction weekly and six months of individual reading instruction from a reading specialist
 - He made little progress and was retained

Note: This child's name and other potentially revealing data have been changed to protect his identity.

The case of Rocky

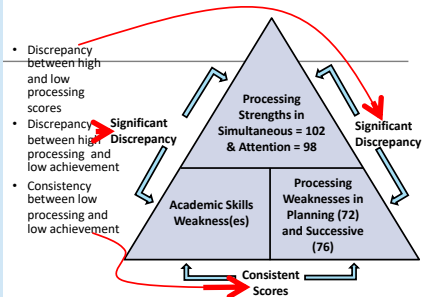
- ▶ By the middle of his second year in first grade Rocky was having difficulty with

- decoding, phonics, and sight word vocabulary; math problems, addition, fact families, and problem solving activities;
- and focusing and paying attention.”

After two years of special team meetings and special reading instruction he is now working two grade levels below his peers and is having difficulty in reading, writing, and math

A comprehensive evaluation was conducted

Discrepancy Consistency Method for Rocky shows: EF Disorder (Planning) and Specific Learning Disability (Successive)



Kathleen's Intervention Plan for Rocky



Be Intentional and Transparent

- Explain his PASS scores to him

Build on His Strengths

- Help him use his Attention and Simultaneous Strengths to support his learning challenges with Planning and Successive.

Develop Effective Skill Sets to remediate his weaker skills

- Offer and encourage the use of strategies that can improve his planning and successive processing.

Encourage a Growth Mindset and Self Efficacy

100

Interventions for Rocky

Using Plans to Overcome Anxiety
 When children feel anxious and the school's new plan, and they do not know what to do, they can use their plans to overcome anxiety.

Graphic Organizers for Connecting and Remembering Information
 Understanding and being able to use a graphic organizer is a common part of learning and doing. The students are given a graphic organizer to use for a variety of new and old learning situations. Learning how to use it is important.

Segmenting Words for Reading/Decoding and Spelling
 Identifying a written word requires the person to make sense out of printed letters and words and to identify what they mean. This strategy, understanding the sounds that make up a word, is called segmenting.

Chunking for Reading/Decoding
 Reading/decoding requires the student to look at the sequence of the letters in words and understand the organization of specific sounds in order. Some students have difficulty with long sequences of letters and may benefit from instruction that helps them break the words into smaller, more manageable units called chunks. Sometimes the order of the sounds in a word is more important than the order of the letters.

- Helping Children Learn Intervention Handouts for Use in School and at Home, *Second Edition* By Jack A. Naglieri, Ph.D., & Eric B. Pickering, Ph.D.,
- Spanish handouts by Tulio Otero, Ph.D., &
- Mary Moreno, Ph.D.



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The Big Picture of PASS: Planning



You will write/draw information that captures the big idea of each key part of PASS on your organizer after we teach each section.

103



Take Away Strategies

See Any Kids Like This...



Our Goal – Think Smart!

EMPOWER



NOT



ENABLE

Winning Formula for Success!



Mindsets + Skillsets = Results

- Mindsets & Skillsets include
 - Brain-based concepts such as
 - Executive Function
 - Metacognition
 - Self-Regulation
 - **These concepts are all closely related to the FRONTAL LOBES of the brain.**



Mindsets + Skillsets = Results

Mindsets

- Willingness to grow or acceptance of limitations
- Willingness to put forth the effort needed to develop skills sets and utilize knowledge



➤ Skillsets

- Being so fluent with knowledge that it is easily accessed and used
- Using strategies, paying attention, seeing the big picture, and working with information that is in a sequence

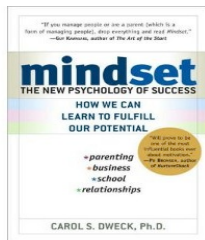
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Mindset = Optimistic Thinking



©2012 ANDRÉ HALLGREN

Carol Dweck, Growth Mindsets Stanford University



CAROL S. DWECK, Ph.D.

Dweck's findings: Two Mindsets



Fixed mindset:

- ❖ Intelligence and talent -fixed
- ❖ Innate talent creates success
- ❖ Effort will not make a difference
- ❖ You either get it or you don't
- ❖ LOOK GOOD AT ALL COSTS



Growth mindset:

- ❖ Thinking can be developed
- ❖ Brains and talent are just the starting point
- ❖ Enjoy effort and process of learning
- ❖ You can always grow and learn
- ❖ LEARN AT ALL COSTS

Pg. 12-14

“Think Smart” by Shaping Your Mindset

How you interpret challenges, setbacks, and criticism is a choice. You can choose to ramp up your strategies and effort, stretch yourself, and expand your abilities. It's up to you!

When people drop the good/bad, right/wrong thinking, they are better able to learn useful strategies that help with self control

Mindset Scholars Network, 2019

Lower-achieving students who attended schools in which the peer climate supported the pursuit of challenging work had the largest improvements in grades after receiving the mindset program

In these schools, the intervention increased core course GPA by 0.15 points and STEM course GPA by 0.17 points and reduced the likelihood of D or F averages in core courses by 8 percentage points among lower-achieving students.



Neuroplasticity

(Goldberg, 2009)

We used to think that brain growth essentially stopped when a person reached adulthood but now we know that is WRONG !!

The brain undergoes various forms of natural reorganization well in adulthood and possibly throughout the life span (pg. 234)

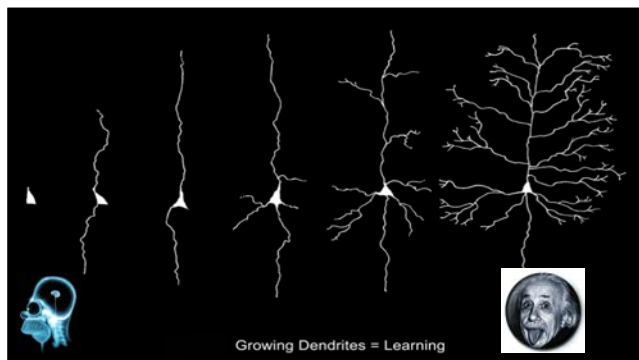
Effects of cognitive activity may actually change the brain by strengthening neural networks and improve information-processing capacity

Ongoing research continues to clarify what scientists are finding

From neuroscience we know that...

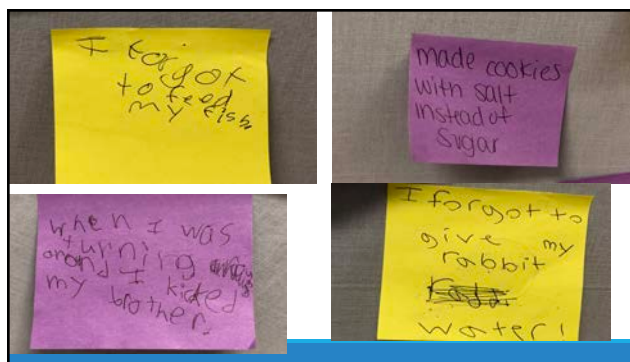
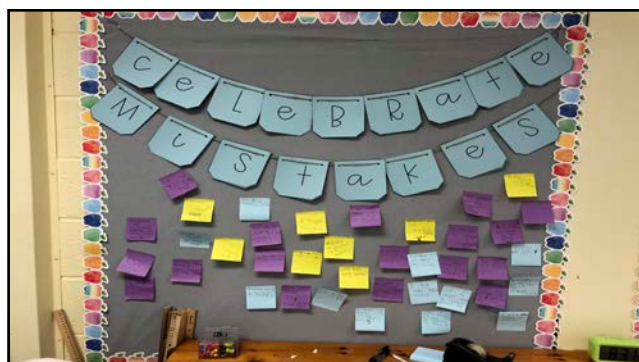
Neurons that fire together Wire together!





Encourage (Safe) Risk Taking and Mistake-Making

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Metacognitive Skill Sets



Planning Research

Planning Facilitation for Math Calculation

Math calculation is a complex activity that involves recalling basic math facts, following procedures, working carefully, and checking one's work. Math calculation requires a careful (i.e., planful) approach to follow all of the necessary steps. Children who are good at math calculation can move on to more difficult math concepts and problem solving with greater ease than those who are having problems in this area. For children who have trouble with math calculation, a technique that helps them approach the task planfully is likely to be useful. Planning facilitation is such a technique.

Planning facilitation helps students develop useful strategies to carefully complete math problems through discussion and shared discovery. It encourages students to think about how they solve problems, rather than just think about whether their answers are correct. This helps them develop careful ways of doing math.

How to Teach Planning Facilitation.

Planning facilitation is provided in three 10-minute time periods: 1) 10 minutes of math; 2) 10 minutes of discussion; and 3) 10 more minutes of math. These steps can be described in more detail.

Step 1: The teacher should provide math worksheets for the students to complete in the first 10-minute session. This gives the children exposure to the problems and ways to solve them. The teacher gives each child a worksheet and says, "Here is a math worksheet for you to do. Please try to get as many of the problems correct as you can. You will have 10 minutes." (Sight words on this instruction are okay, but do not give any additional information.)



A Cognitive Strategy Instruction to Improve Math Calculation for Children With ADHD and LD: A Randomized Controlled Study

Jackie S. Iseman¹ and Jack A. Naglieri¹

Abstract

The authors examined the effectiveness of cognitive strategy instruction based on PASS (Planning, Attention, Simultaneous, Successive) given by special education teachers to students with ADHD randomly assigned by classroom. Students in the experimental group were exposed to a brief cognitive strategy instruction for 10 days, which was designed to encourage development and application of effective planning for mathematical computation, whereas the comparison group received standard math instruction. Standardized tests of cognitive processes and math achievement were given at pretest. All students completed math worksheets throughout the experimental phase. Standardized achievement tests (Woodcock-Johnson Tests of Achievement, Third Edition, Math Fluency and Wordstar Individualized Achievement Test, Second Edition, Numerical Operations) were administered pre- and postintervention, and Math Fluency was also administered at 1 year follow-up. Large pre-post effect sizes were found for students in the experimental group but not the comparison group on math worksheets (0.85 and 0.26), Math Fluency (1.17 and 0.09), and Numerical Operations (0.40 and -0.14, respectively). At 1 year follow-up, the experimental group continued to outperform the comparison group. These findings suggest that students with ADHD evidenced greater improvement in math worksheets, far transfer to standardized tests of math (which measured the skill of generalizing learned strategies to other similar tasks), and continued advantage 1 year later when provided the PASS-based cognitive strategy instruction.

Journal of Learning Disabilities
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sagepub.com/journalsPermissions.nav
DOI: 10.1177/0022214X10381190
http://jld.sagepub.com
sagepub.com

Instructional Sessions

Math lessons were organized into "instructional sessions" delivered over 13 consecutive days

Each instructional session was 30-40 minutes

Each instructional session was comprised of three segments as shown below

10 minutes	10-20 minutes	10 minutes
10 minute math worksheet	Planning Facilitation or Normal Instruction	10 minute math worksheet

Experimental Group
19 worksheets with Planning Facilitation

Vs.

Control Group
19 worksheets with Normal Instruction

Planning (Metacognitive) Strategy Instruction

- ▶ Teachers *facilitated* discussions to help students become more self-reflective about use of strategies
- ▶ Teachers asked questions like:
 - What was your goal?
 - Where did you start the worksheet?
 - What strategies did you use?
 - How did the strategy help you reach your goal?
 - What will you do again next time?
 - What other strategies will you use next time?

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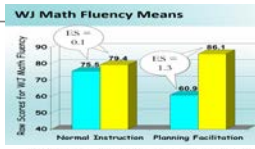
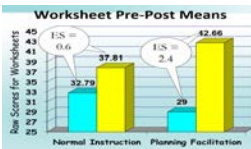
Student Plans

"My goal was to do all of the easy problems on every page first, then do the others."
 "I do the problems I know, then I check my work."
 "I do them (the algebra) by figuring out what I can put in for X to make the problem work."
 "I did all the problems in the brain-dead zone first."



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Pre-Post Means and Effect Sizes for the Students with LD and ADHD



At 1-year follow-up, 27 of the students were retested on the WI-III ACH Math Fluency subtest as part of the school's typical yearly evaluation of students. This group included 14 students from the comparison group and 13 students from the experimental group. The results indicated that the improvement of students in the experimental group ($M = 16.08$, $SD = 19$, $d = 0.85$) was significantly greater than the improvement of students in the comparison group ($M = 3.21$, $SD = 18.21$, $d = 0.09$).

Results

The experimental group did better than the control on math taken from the curriculum on standardized math tests

A year later the experimental group still outperformed the control group.

Summary of PASS Intervention Research in Essentials of CAS2

The collage includes several research abstracts:

- Effectiveness of a Cognitive Strategy Intervention in Improving Arithmetic Computation Based on the PASS Theory** (Jill A. Naglieri and Thomas Anderson)
- REORGANIZING READING COMPREHENSION STRATEGIES: A COGNITIVE PROCESSING APPROACH** (Marilyn Adams)
- Mathematics Instruction and PASS Cognitive Processes: An Intervention Study** (Jill A. Naglieri and Thomas Anderson)
- A Cognitive Strategy Intervention to Improve Math Calculation for Children With ADHD and LD: A Randomized Controlled Study** (Jill A. Naglieri and John A. Houghton)
- PLANNING FACILITATION AND READING COMPREHENSION INSTRUCTIONS: RELEVANCE OF THE PASS THEORY** (Jill A. Naglieri)

On the right is the cover of the book **Essentials of CAS2 Assessment** by Jill A. Naglieri.

Discuss: What does this research mean for your work as educators

You have to Think **SMART**
And have a...

The word 'PLAN' is spelled out using four colorful figures (green, yellow, orange, red) holding up blocks with the letters P, L, A, and N respectively.

First – Teach Intentionally and Transparently About Metacognition

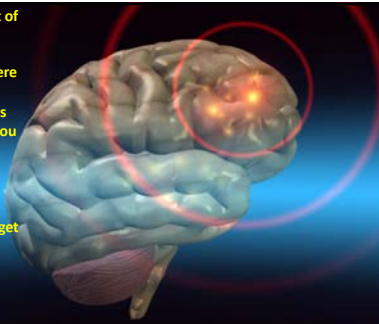
Metacognition is *thinking about your thinking*, having a plan of action for what to do when you don't know.

Core Groups: Come up with your own definition of metacognition

A 3x3 grid is shown to the right of the text. Below the grid is a small icon of a lit lightbulb.

The front part of your brain, or pre-frontal cortex, is where you come up with strategies or plans like you did for tic tac toe.

You can train your brain to get better at Planning



Planning Facilitation = Metacognition (Read "How People Learn" for more...)

METACOGNITION consists of three basic elements:

BEFORE:

- Developing a plan of action


DURING

- Maintaining / monitoring the plan

AFTER

- Evaluating the plan

The more students are aware of their thinking processes as they learn, the more they can control such matters as goals, dispositions, and attention. *Self-awareness promotes self-regulation*




Standard	Indicator	Assessment
1.1.1	1.1.1.1	1.1.1.1.1
1.1.2	1.1.2.1	1.1.2.1.1
1.1.3	1.1.3.1	1.1.3.1.1
1.1.4	1.1.4.1	1.1.4.1.1
1.1.5	1.1.5.1	1.1.5.1.1
1.1.6	1.1.6.1	1.1.6.1.1
1.1.7	1.1.7.1	1.1.7.1.1
1.1.8	1.1.8.1	1.1.8.1.1
1.1.9	1.1.9.1	1.1.9.1.1
1.1.10	1.1.10.1	1.1.10.1.1
1.1.11	1.1.11.1	1.1.11.1.1
1.1.12	1.1.12.1	1.1.12.1.1
1.1.13	1.1.13.1	1.1.13.1.1
1.1.14	1.1.14.1	1.1.14.1.1
1.1.15	1.1.15.1	1.1.15.1.1
1.1.16	1.1.16.1	1.1.16.1.1
1.1.17	1.1.17.1	1.1.17.1.1
1.1.18	1.1.18.1	1.1.18.1.1
1.1.19	1.1.19.1	1.1.19.1.1
1.1.20	1.1.20.1	1.1.20.1.1
1.1.21	1.1.21.1	1.1.21.1.1
1.1.22	1.1.22.1	1.1.22.1.1
1.1.23	1.1.23.1	1.1.23.1.1
1.1.24	1.1.24.1	1.1.24.1.1
1.1.25	1.1.25.1	1.1.25.1.1
1.1.26	1.1.26.1	1.1.26.1.1
1.1.27	1.1.27.1	1.1.27.1.1
1.1.28	1.1.28.1	1.1.28.1.1
1.1.29	1.1.29.1	1.1.29.1.1
1.1.30	1.1.30.1	1.1.30.1.1
1.1.31	1.1.31.1	1.1.31.1.1
1.1.32	1.1.32.1	1.1.32.1.1
1.1.33	1.1.33.1	1.1.33.1.1
1.1.34	1.1.34.1	1.1.34.1.1
1.1.35	1.1.35.1	1.1.35.1.1
1.1.36	1.1.36.1	1.1.36.1.1
1.1.37	1.1.37.1	1.1.37.1.1
1.1.38	1.1.38.1	1.1.38.1.1
1.1.39	1.1.39.1	1.1.39.1.1
1.1.40	1.1.40.1	1.1.40.1.1
1.1.41	1.1.41.1	1.1.41.1.1
1.1.42	1.1.42.1	1.1.42.1.1
1.1.43	1.1.43.1	1.1.43.1.1
1.1.44	1.1.44.1	1.1.44.1.1
1.1.45	1.1.45.1	1.1.45.1.1
1.1.46	1.1.46.1	1.1.46.1.1
1.1.47	1.1.47.1	1.1.47.1.1
1.1.48	1.1.48.1	1.1.48.1.1
1.1.49	1.1.49.1	1.1.49.1.1
1.1.50	1.1.50.1	1.1.50.1.1
1.1.51	1.1.51.1	1.1.51.1.1
1.1.52	1.1.52.1	1.1.52.1.1
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1.1.66	1.1.66.1	1.1.66.1.1
1.1.67	1.1.67.1	1.1.67.1.1
1.1.68	1.1.68.1	1.1.68.1.1
1.1.69	1.1.69.1	1.1.69.1.1
1.1.70	1.1.70.1	1.1.70.1.1
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1.1.72	1.1.72.1	1.1.72.1.1
1.1.73	1.1.73.1	1.1.73.1.1
1.1.74	1.1.74.1	1.1.74.1.1
1.1.75	1.1.75.1	1.1.75.1.1
1.1.76	1.1.76.1	1.1.76.1.1
1.1.77	1.1.77.1	1.1.77.1.1
1.1.78	1.1.78.1	1.1.78.1.1
1.1.79	1.1.79.1	1.1.79.1.1
1.1.80	1.1.80.1	1.1.80.1.1
1.1.81	1.1.81.1	1.1.81.1.1
1.1.82	1.1.82.1	1.1.82.1.1
1.1.83	1.1.83.1	1.1.83.1.1
1.1.84	1.1.84.1	1.1.84.1.1
1.1.85	1.1.85.1	1.1.85.1.1
1.1.86	1.1.86.1	1.1.86.1.1
1.1.87	1.1.87.1	1.1.87.1.1
1.1.88	1.1.88.1	1.1.88.1.1
1.1.89	1.1.89.1	1.1.89.1.1
1.1.90	1.1.90.1	1.1.90.1.1
1.1.91	1.1.91.1	1.1.91.1.1
1.1.92	1.1.92.1	1.1.92.1.1
1.1.93	1.1.93.1	1.1.93.1.1
1.1.94	1.1.94.1	1.1.94.1.1
1.1.95	1.1.95.1	1.1.95.1.1
1.1.96	1.1.96.1	1.1.96.1.1
1.1.97	1.1.97.1	1.1.97.1.1
1.1.98	1.1.98.1	1.1.98.1.1
1.1.99	1.1.99.1	1.1.99.1.1
1.1.100	1.1.100.1	1.1.100.1.1

www.kathleenkryza.com
Past Newsletter on Metacognition

High School EF Lessons www.efintheclassroom.net

> Start with Awareness of thinking about thinking



Metacognition Lesson:
EF in the Classroom

Planning Lesson

Phrase of the week: What is your plan?

<http://www.youtube.com/watch?v=bQLCZOG202k>

1. What had to happen so that the people could dance together in this video?
2. What are the parts of a good plan?
3. How do you know if a plan is any good?
4. What should you do if a plan isn't working?
5. How do we use planning in this class?

Go to student learning log and create a plan for the week.

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Students watched a Flash Mob at Antwerp train Station (2009)



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Planning Lesson Student responses

Q: What would you have to plan out?

- They had to learn the dance steps (knowledge)
- Someone had to start dancing (initiation)
- Permission from train station (planning)

Q: What are the parts of a good plan?

- Think of possible problems (strategy generation)
- Organize the dance (organization)
- Practice the dance steps (initiation)
- Have a good idea of what to do (knowledge)

Q3: How do you know if a plan is any good?

- Put the plan in action and see if it works (self-monitoring)
- Give it a try (perhaps learn by failing)

Q4: What should you do if a plan isn't working?

- Fix it. (self-correction)
- Go home ! (a bad plan)

Q5: How do you use planning in this class?

- We don't plan in this class
- Mrs. XXX does all the planning in this class so you don't have to think about planning

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Think
SMART!

Stop and THINK

Make a PLAN

Take **A**ction!

Revise/Reflect/Revise

Ta da! (or) Try Again

Developed by Naglieri and Kryza, 2014





Think SMART!


Stop and THINK

Make a PLAN

Take **A**ction!

Revise/Reflect/Revise

Ta da! (or) Try Again



Naglieri and Kryza, 2014 Pg. 11

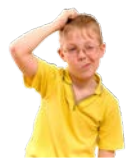
Let's Try: Academic Metacognition

I'll give you some examples and you tell me if this person is THINKING **SMART** or NOT.

Scott tried once, but couldn't do his math homework, so he watched TV.

Was he THINKING **SMART**?

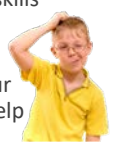
Let's help Scott THINK **SMART**



Think Smart: Reducing Anxiety

When you're really anxious, I've noticed that you often quit working. We've talked about how you can develop ways to use your planning skills to THINK **SMART**?

What are some things you could use to stop your amygdala from taking over and use your planning skills, your pre-frontal cortex, to help you THINK **SMART**?



The Limbic System: Feel it! Learning and Emotions Form Here

The diagram shows a lateral view of the brain with several regions highlighted. The Frontal Cortex is labeled as being involved in decision-making and self-control. The Limbic System is highlighted in green and includes the Amygdala (responsible for learning and emotions) and the Hippocampus. Other labeled regions include the Hypothalamus and Thalamus.



How Mindfulness Helps

Without Mindfulness: Stimulus → Reaction

With Mindfulness: Stimulus → Mindfulness → Response

Mindfulness creates space...
...replacing **impulsive reactions** with **thoughtful responses**.

www.kathleenkerr.com

Attention and Mindfulness Kathleen's Newsletter Feb. 2014

The screenshot shows a newsletter page with a header for 'Kathleen Kerr's Healthy Habits'. The main content includes a section titled 'BRAIN BEFORE AND AFTER 10 MINUTE MEDITATION' with two brain scan images. Below this, there is a section for 'Mindfulness Practices for Teachers' and another for 'Mindfulness Practices for Students, Parents, and Behavior'. The newsletter also includes a date 'February 2014' and social media icons for Facebook and Twitter.

Telling Talk vs. Metacognitive Questioning

Kathleen, ~~do this, do that, this way~~... Kathleen, what do you think you should ~~do now, or could do~~ with the sails, the anchor, the helm, the lines differently next time.



149

Ask Questions that Lead to Smart Thinking

<i>Before Learning</i>
Today you might find there are some things that are new to you and you are going to get to grow from trying them.
Does this remind you of something you've done before? How can you use that experience to help you with this new learning?
Looking at today's work, what part do you think will be the most challenging for you?
What can you do when learning gets to the GOOD part (the hard part), to help you continue learning?
<i>During Learning</i>
What parts are going well? What parts are making you grow?
Why do you think this part is challenging for you? What do you need to help you? Do you need more information? More practice? A different way to practice?
Have you done something like this before? What did you do when it got hard? Can you do it again?
What do you know about yourself as a learner that can help you continue learning?
<i>After Learning</i>
How did you grow as a learner?
Did you learn something new about yourself and how you learn?
How can you use that in the future when something gets tough?

150

Reframe your talk...

This is what you need to do...

- **How could you do/approach this task?**

You're stuck. Let me help you.

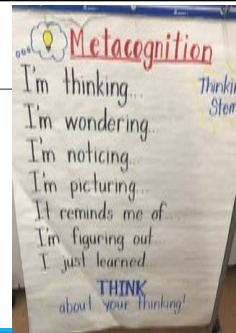
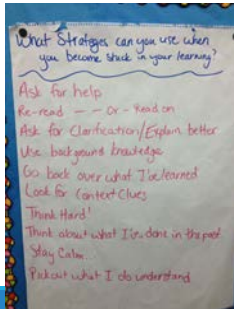
- **What options do you have for getting unstuck?**

Here's your grade for the test/project.

- **Look over your work. Your Exit ticket for today is to write down what worked for you and what you would do differently next time.**

152

Skill Set Anchor Chart: Making Thinking Visible



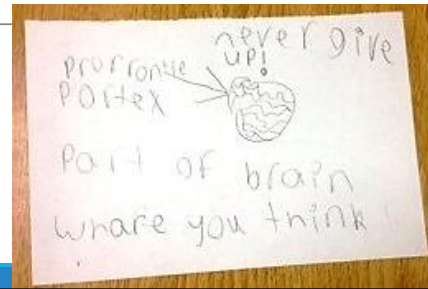
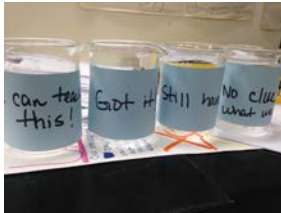
We must constantly remind ourselves that the ultimate purpose of evaluation is to have students become self evaluating. If students graduate from our schools still dependent upon others to tell them when they are adequate, then we've missed the whole point of what education is about.

-- Costa and Kallick, 1992

Student Reflection Rubric

- What was your mindset today?
 - Is that working for you?
- What did you do to prepare for learning today?
- During the learning process, did you stop and THINK SMART?
 - What resources do you have available?
- What would you need to do differently next time?

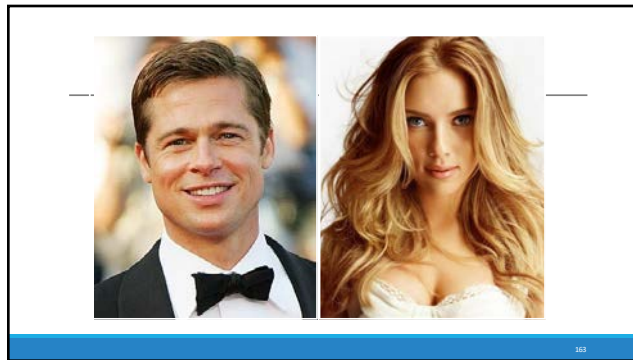
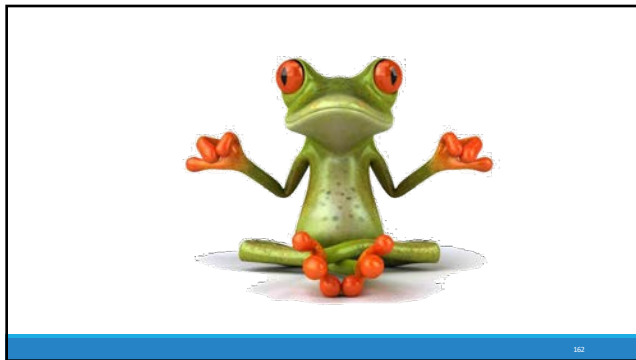
Name Sticks Placed in Jars



Dennis, 16, On Metacognition

What's metacognition?
 It's the recognition,
 Of how my brain works,
 Understanding my learning quirks.
 It means I've got to have a plan
 And more important, think, "I can!"
 Before, during, after, that's the trick
 Metacognition means that learning sticks.
 When I have a plan, I'm a stronger reader
 This can help me become a real leader!
 So I'll practice my skills each and every day.
 Metacognition will take me all the way!





Topics for Today →

- The Truth About IQ Tests
- ADHD, SLD & Planning
- ADHD, SLD & Attention
- ADHD, SLD & Successive
- ADHD, SLD & Simultaneous

PASS Deeper DIVE:
Intelligence Conceptualized as brain function

 A diagram of a human brain with four functional units highlighted in different colors and labeled with text boxes:

- Third Functional Unit:** Planning Thinking About How to Solve Problems (green)
- Second Functional Unit:** Simultaneous Working With Things or Ideas That Form a Whole (blue)
- First Functional Unit:** Attention Focusing With Resistance to Distraction (red)
- Second Functional Unit:** Successive Working With Things or Ideas in Sequence (pink)

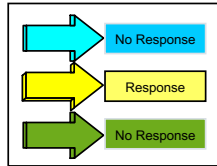
Figure 1.2 Three Functional Units and Associated Brain Structures
From: *Essentials of CAS2 Assessment*. Naglieri & Otero, 2017

PASS Theory

▶ **Attention** is a basic psychological process we use to selectively attend to some stimuli and ignores others

- focused cognitive activity
- selective attention
- resistance to distraction

RED
BLUE



166

CAS2: Rating Scale Attention

Directions for Items 21–30. These questions ask how well the child or adolescent pays attention and avoids distractions. The questions also ask about how well someone attends to one thing at a time. Please rate how well the child or adolescent pays attention.

During the past month, how often did the child or adolescent ...

	Never	Rarely	Sometimes	Often	Always
21. work well in a noisy area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22. stay with one task long enough to complete it?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23. not allow the actions or conversations of others to interrupt his or her work?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24. stay on task easily?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25. concentrate on a task until it was done?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26. listen carefully?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27. work without getting distracted?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
28. have a good attention span?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29. listen to instructions or directions without getting off task?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
30. pay attention in class?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

---+---+---+---+---+
Attention Raw Score

167

CAS2 Expressive Attention

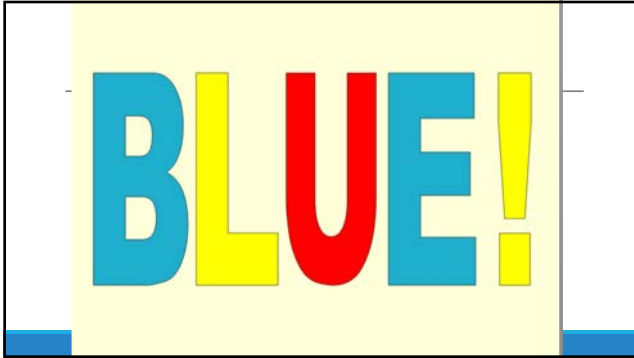


RED	BLUE	GREEN	YELLOW
YELLOW	GREEN	RED	BLUE
RED	YELLOW	YELLOW	GREEN
BLUE	GREEN	RED	BLUE
GREEN	YELLOW	RED	YELLOW

168

READY ?

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Expressive Attention - Italiano

ROSSO	BLU	VERDE	GIALLO
GIALLO	VERDE	ROSSO	BLU
ROSSO	GIALLO	GIALLO	VERDE
BLU	VERDE	ROSSO	ROSSO
VERDE	GIALLO	BLU	GIALLO

Attention

11. A 3:15 A.M. B 3:30 P.M. C 3:15 P.M. D 3:15 A.M.

leave school

12. Trent began studying at 5:00 P.M. and finished 1 hour and 22 minutes later. What time did he finish?
A 6:22 A.M. B 5:22 P.M. C 6:10 P.M. D 6:22 P.M.

13. Maura began basketball practice at 3:00 P.M. and finished 50 minutes later. What time did she finish?
A 3:50 P.M. B 3:05 A.M. C 4:05 P.M. D 4:50 A.M.

Handwritten notes: 11. 3:15 P.M., 12. 6:22 P.M., 13. 3:50 P.M.

Reading comprehension is difficult because of the similarity of the options

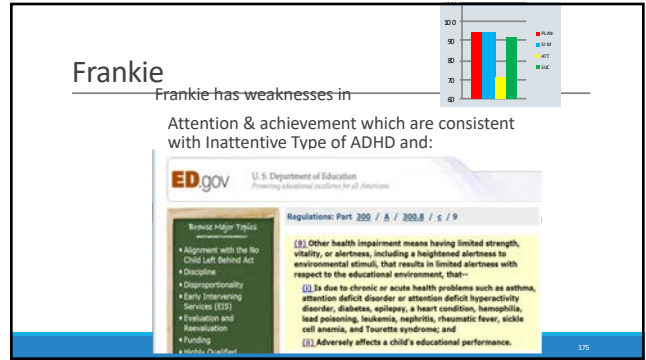
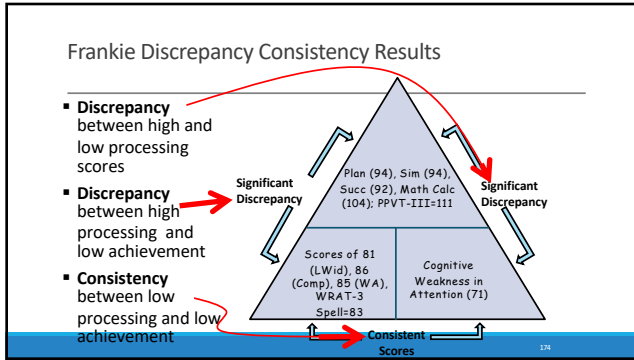
Frankie at age 11 years

Referred by parents (at age 11) after a history of reading and self esteem problems

High level of anxiety

- he was too anxious to look closely at the words, and he would rather get the task completed and move on.
- Frankie could not attend to the details of the sequence of letters for correct spelling, and the order of sound-symbol associations

Figure 3.4. Frankie's self-portrait.



Think and Talk

What would you recommend as possible interventions for Frankie's attention challenges? (Keep in mind his strengths)

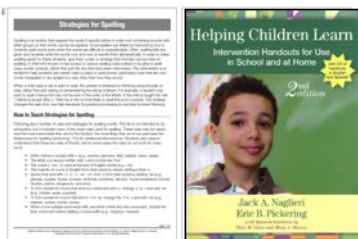
NOTE: STOP AND TALK is important because the brain retains 50% through talk.

www.k12learning.com

Kathleen's Intervention Plan for Frankie

- Be **Intentional and Transparent**
 - Explain his PASS scores to him
- Build on His Strengths**
 - Help him use his Planning, Simultaneous and Successive Strengths to support his learning challenges with Attention
- Develop Effective Skill Sets** to remediate his weaker skills
 - Offer and encourage the use of metacognitive strategies that can improve his attention.
- Encourage a Growth Mindset** and Self Efficacy

Frankie - Use Planning Strength




DEVELOPED BY JULIA A. HANCOCK, PhD, JIMMO@SPEDSPECIAL.COM

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What Should Teachers & Parents do?

How to Teach Students to Attend

Think smart and look at the details!



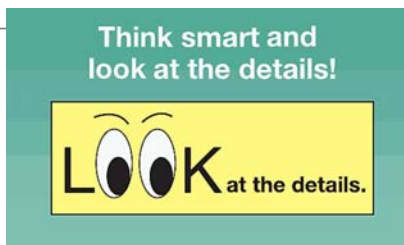
The first step in teaching children about their own abilities is to explain that they have many different types of abilities and that Attention is one of them. They also need to be aware of when their attention is focused and they are needing distractions, as well as when it is divided among too many things, which leaves them unfocused and overloaded. In Figure 1 (which also appears in the INDS poster on the CD), we provide a fast and simple message: "Think smart and look at the details!" During appropriate times during the day, remind students to closely attend to information being discussed. We need to teach children to approach all their work with an understanding of how well they are focused on the details and resisting distractions in their environment. Throughout the day, the teacher should:

1. Teach children to be aware of their level of attention and resistance to distraction.
2. Encourage children by asking, "Are you able to focus?" or "Are you getting distracted?"
3. Remind the students that Attention is necessary for reading, writing, and arithmetic, as well as in sports, playing a musical instrument, driving a car, and so forth.
4. Teach children that they may have to modify their environment so that they can attend better.
5. Remind students that learning requires attention to detail and resisting distractions.



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Focus: Am I paying attention?



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Frankie

Help Frankie better manage his attention problem

Overcoming Problems with Inattention

Inattention is the person's poor ability to focus, thinking on a particular stimulus while ignoring others. Though a person may be able to focus, attention must be directed to the teacher, the instructions being given, what must be done, and what specific material or resource will provide the answer. Inattention is often characterized by a child who is unable to listen, read, or understand being directed to important lights and sounds. Inattention is often characterized by a child who is unable to listen to the teacher and not the car in the lot. Sustained attention is continued focus over time.

Some children have difficulty with focused thinking and resisting distractions. These children fit the description of attention deficit hyperactivity disorder (ADHD), predominantly inattentive type (American Psychiatric Association, 2013). Children with the inattentive type of ADHD are different from those with the predominantly hyperactive/impulsive type of ADHD, which is characterized by excessive activity, impulsivity, and a lack of the development of inhibition. Sustained attention and lower vigilance over time. Children with ADHD, hyperactive/impulsive type control control the behavior and have attention problems that are related to a failure in the process of planning on the Cognitive Assessment System (CAS; Nugent, 1988).

How to Help a Child Overcome Problems with Inattention

The first step is to help the child understand the nature of his or her attention problems, including:

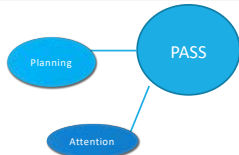
1. Concepts such as Attention, resistance to distraction, and control of attention.
2. Recognition of those attention deficit tasks/behaviors.
3. Recognition that the child can be someone.
4. Basic elements of the environment.

Second, teachers and parents can help the child improve his or her inhibition and persistence.

1. Provide success in small steps.
2. Encourage success in school and at home.
 - Allow for and encourage to rest.
 - Encourage positive reinforcement.
3. Teach self-management skills.
 - Help the child to define tasks accurately.
 - Assess the child's knowledge of priorities.
 - Encourage the child to consider all possible solutions.
 - Teach the child to use a correct task strategy (Perry & Henninger, 1985).

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Building the Big Picture: Attention



You will be capturing the big idea of each key part of PASS on your organizer after we teach each section.

182

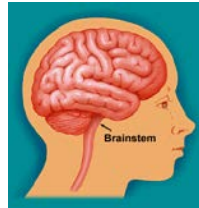


Take Away Strategies

PLAN to Pay Attention

Intentionally and Transparently Teach Students...

- **Focus** and know what to focus on
- Learn to **Resist** distractions
- **Sustain** attention over time



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Focus: Pay Attention to the Text

Notice and Name (call attention to...)

- Text Features
- Text Structures

Read in Chunks/Stop and Chew

- Annotate – Text in report covers
- Sticky notes
- Reading logs
- Double Entry Journals

Teach In Chunks with time to **Chew**



185

Put Your Phone's Down!

"People can't multitask very well, and when people say they can, they're deluding themselves," said neuroscientist Earl Miller.

"The brain is very good at deluding itself."



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Pay Attention Constructively!



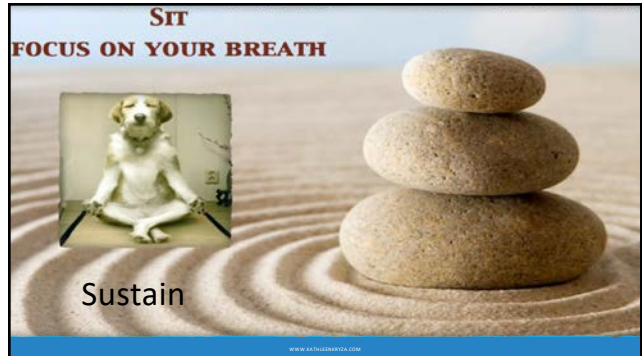
Ironing Boards as Desks and Bouncy Balls For Kids Who Need to Wiggle to Learn

187

Resist: Interacting vs. Distracting Voice

Interacting voice: The voice inside the reader's head that pays attention by making connections, asking questions, identifying confusions, agreeing and disagrees with ideas.

Distracting voice: The voice inside the reader's head that pulls him away from the meaning of the text. It begins a conversation with the reading but gets distracted by a connection, a question, or an idea.



Is Frankie a Typical ADHD Child?

NOTE THE HYPERACTIVE-IMPULSIVE TYPE

Case of Christopher - Is He ADHD?

Problems

- behavior problems
- impulsive & disorganized
- forgets assignments
- can't stay on task
- poor grades

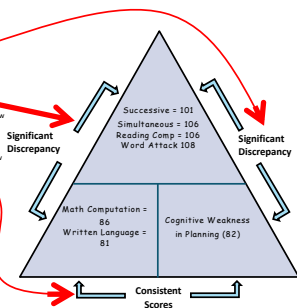
Clinical Observations

- anxious about testing
- used simple strategies
- did sloppy work
- control problems (threw pencil when frustrated)
- impulsive choices made

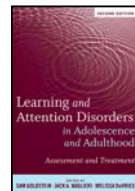


Christopher Discrepancy Consistency Method

- Discrepancy between high and low processing scores
- Discrepancy between high processing and low achievement
- Consistency between low processing and low achievement



ADHD Profiles by Ability Test



CHAPTER 6
Assessment of Cognitive and Neuropsychological Processes

Jack A. Nagam
Sara Galambos

INTRODUCTION

Assessment of intelligence plays an important role in the process of diagnosing if an adolescent or adult has a disability. For those suspected of having a Specific Learning Disability (SLD), the intelligence test provides an important reference point to compare to levels of achievement. For those who may have Attention Deficit/Hyperactivity Disorder (ADHD), the measure of intelligence is used to rule out other disabilities that may better explain the present behavior. Intelligence tests have and will continue to provide a critical component of any comprehensive assessment needed to determine the presence of disabilities, such as SLD and ADHD. Thus, intelligence, however defined, through understanding of the strengths and limitations of these tests of ability, an appreciation of the research on their effectiveness, and an examination of various uses of scoring methods. The goal of this chapter is to address these issues.

The chapter examines intelligence as assessed by traditional IQ tests with special attention to the scales each has been used for diagnosis. In order to achieve this goal, the chapter includes a brief overview of the history and definition of intelligence and examines examples of measures of intelligence more closely. Emphasis will be placed on the importance of understanding how intelligence is conceptualized and assessed by different tests and the implications this has for assessment. The chapter also provides a conceptual model of assessment of basic psychological processes and how the adolescents can aid in the diagnostic process and treatment of attention and ability.

Naglieri & Goldstein (2011)

GROUP PROFILES BY ABILITY TEST

Because ability tests play such an important role in the diagnostic process, it is crucial to understand the sensitivity each test may have to any unique characteristics of those with an SLD or attention deficit. Clinicians need to know if an adolescent or adult has a specific deficit in ability that is related to a specific academic learning problem. There has been considerable research on, for example, Wechsler subtest profile analysis, and most researchers conclude that no profile has diagnostic utility for individuals with SLD or ADHD (Kavale & Forness, 1995). The failure of subtest profiles has led some to argue (e.g., Naglieri, 1999) that scale, rather than subtest, variability should

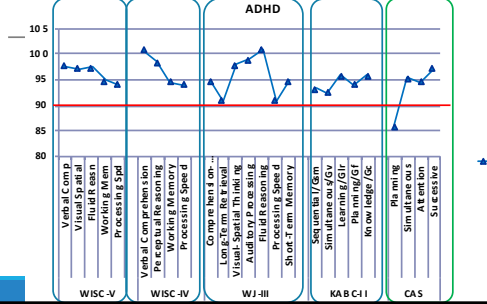
1. We need to know if intelligence tests yield distinctive profiles

2. Subtest profile analysis is UNSUPPORTED so use scale profiles instead

BASED BY JACK A. NAGLIERI, PH.D. (2011)

106

Profiles for students with ADHD



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Canivez & Gaboury (2010)

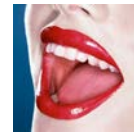
“the present study demonstrated the potential of the CAS to correctly identify students who demonstrated behaviors consistent with ADHD diagnosis.”
gcanivez@iu.edu



Think and Talk



&



What would you recommend as possible interventions for Christopher's planning challenges?

NOTE: STOP AND TALK is important because the brain retains 50% through talk.

WWW.KATULLERWORLD.COM

Kathleen's Intervention Plan for Christopher



Be Intentional and Transparent

- Explain his PASS scores to him

Build on His Strengths

- Help him use his Attention, Simultaneous and Successive Strengths to support his learning challenges with Planning

Develop Effective Skill Sets to remediate his weaker skills

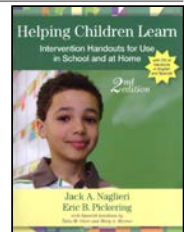
- Offer and encourage the use of metacognitive strategies that can improve his planning. Think Smart!

Encourage a Growth Mindset and Self Efficacy

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Helping Children Learn Resources

- Planning Facilitation
- Strategies for Learning Basic Math Facts
- Touch Math for Calculation
- Seven Step Strategy for Math Word Problems
- Chunking Strategy for Multiplication
- Other ideas?



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A teacher is one who makes himself progressively unnecessary.

~Thomas Carruthers

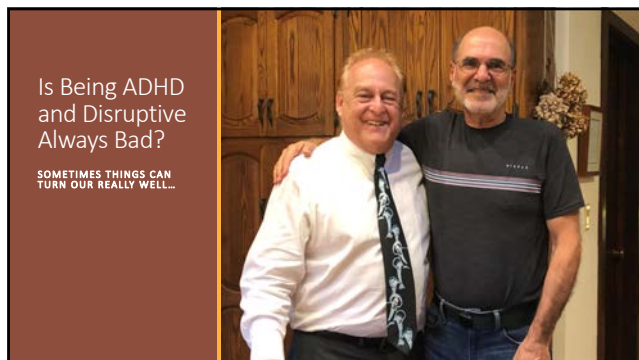


Comprehensive Executive Function Inventory (CEFI)

Jack A. Naglieri & Sam Goldstein

- **STRENGTH BASED** EF MEASURES
- ITEMS ARE **POSITIVELY** WORDED
- HIGHER SCORES = **GOOD** BEHAVIORS RELATED TO EF
- SCORES SET AT MEAN OF **100** SD OF **15**
- AGES 5-80+ YEARS RATED BY A PARENT, TEACHER, OBSERVER OR THE CHILD/YOUTH/ADULT.

201



Topics for Today

- The Truth About IQ Tests
- ADHD, SLD & Planning
- ADHD, SLD & Attention
- ADHD, SLD & Successive
- ADHD, SLD & Simultaneous

PASS Deeper DIVE:
Intelligence Conceptualized as brain function

Figure 1.2 Three Functional Units and Associated Brain Structures
From: *Essentials of CAS2 Assessment*. Naglieri & Otero, 2017

PASS: Successive

- Successive processing is used whenever we do something in a specific serial order
 - Anything we comprehend, speak, or do in a sequence requires successive processing

CAS2: Rating Scale Successive

Directions for Items 31–40. These questions ask how well the child or adolescent remembers things in order. The questions ask about working with numbers, words, or ideas in order. The questions also ask about doing things in a certain order. Please rate how well the child or adolescent works with things in a specific order.

During the past month, how often did the child or adolescent ...

	Never	Rarely	Sometimes	Frequently	Always
31. recall a phone number after hearing it?	1	2	3	4	5
32. remember a list of words?	1	2	3	4	5
33. juggle short lists of words?	1	2	3	4	5
34. correctly repeat long, new words?	1	2	3	4	5
35. remember how to spell long words after seeing them once?	1	2	3	4	5
36. imitate a long sequence of sounds?	1	2	3	4	5
37. recall a summary of ideas word for word?	1	2	3	4	5
38. repeat long words easily?	1	2	3	4	5
39. repeat sentences easily, even if unsure of their meaning?	1	2	3	4	5
40. follow three to four directions given in order?	1	2	3	4	5

Successive Rate Score

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Let's Take a TEST !

First a word repetition test

I will say some words and you need to write them in order -- AFTER I finish the saying the words.

Next, I'll show you numbers, then take them away, and you need to write them in order

DO NOT ADVANCE SLIDE

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Word Recall

Examiner says the words and the subject repeats them in order

1. Man Cow Key
2. Book Shoe Girl Dog Car
3. Girl Book Dog Car Wall Cow Key

208

CAS2 Visual Digit Span (Successive Processing)

Now write the numbers

209

CAS2 Visual Digit Span (Successive Processing)

Now write the numbers

210

CAS2 Visual Digit Span (Successive Processing)

Now write the numbers

211

PASS Theory: Successive

- ▶ **Successive** processing is used when information is in a specific serial order
 - Decoding words
 - Letter-sound correspondence
 - Phonological tasks
 - Understanding the syntax of sentences
 - Comprehension of written instructions
 - Sequence of words, sentences, paragraphs
 - Remembering the sequence of events in a story that was read

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Successive and Syntax

Sentence Repetition

- Child repeats sentences exactly as stated by the examiner such as:
- *The red greened the blue with a yellow.*

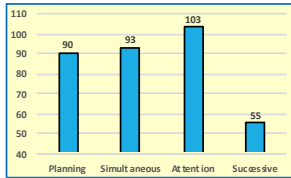
Sentence Questions

- Child answers a question about a statement made by the examiner such as the following:
- *The red greened the blue with a yellow. Who got greened?*

213

PASS and Handwriting

Acquisition of handwriting demands Successive processing



The First Amendment, 1791
 "Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof, or abridging the freedom of speech, or of the press, or the right of the people peaceably to assemble, and to petition for a redress of grievances"

Purpose
 After reading the Case Background and the First Amendment - Do you think the school has the right to require students to speak in its public spaces in their personal time?

Directions
 Please support your answer with cited evidence from the Case Background, and complete a 3 paragraph response to the prompt.

Insights...

Even thought tasks were different in content and modality, they required the same kind of thinking



Phonemic Awareness = Successive

"Now I am going to say parts of words. I want you to put the parts together to make a whole word."

Blending: Advantage

Item	Correct response	# of syllables	Score
ad : van : tage	advantage	3	0 1

Successive Processing & Reading Decoding

➤ The ability to sequence and sequence multiple sounds together to identify a word in print is critical for reading decoding



Positioning Sounds: Successive

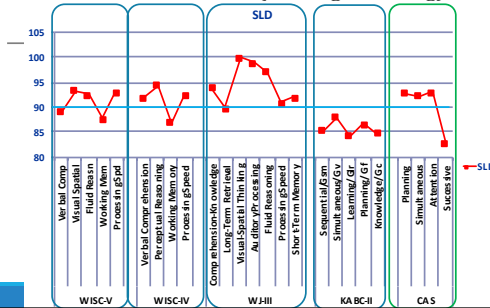
"I'm going to say a word. I want you to tell me which sounds are missing in the word."

Pre-K to 1st: doll

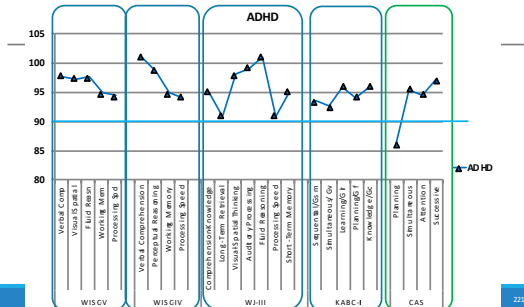


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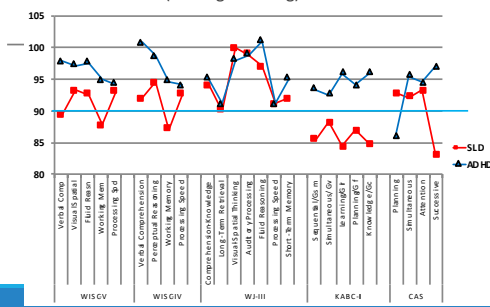
Profiles for SLD (reading decoding)



Profiles for students with ADHD

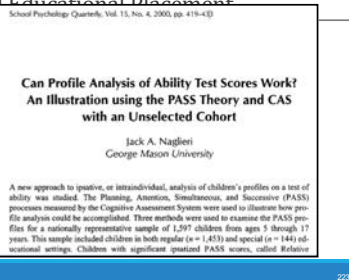


Profiles for SLD (reading decoding) & ADHD



PASS Profiles and Educational Placement

Students receiving special education were more than four times as likely to have at least one PASS weakness and a comparable academic weakness than those in regular education



Intervention Protocol

Help child understand their PASS strengths and areas of challenges (Intentional & Transparent)

- Encourage Motivation & Persistence (Mindsets)
- Teach/Stress strategies for approaching tasks (Skill Sets)
 - Student generated
 - Model and Scaffold as needed
- Encourage independence and self efficacy (Metacognition/Self Assessment)

Naglieri, Rojahn, Matto (2007)

Hispanic White difference on CAS Full Scale of 4.8 standard score points (matched)



PASS scores – English and Spanish



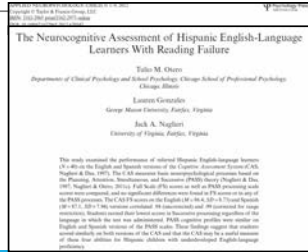
Means, SDs, *r* values, Obtained and Correction Correlations Between the English-Spanish Version of the CAS (N = 55)

	CAS English		CAS Spanish		<i>r</i> value	Correlations
	Mean	SD	Mean	SD		
Planning	92.6	13.1	92.6	13.4	.98	.96
Simultaneous	89.0	12.8	93.0	13.7	-.30	.90
Attention	94.8	13.9	95.1	13.9	-.02	.98
Successive	78.0	13.1	83.1	12.6	-.40	.82
Full Scale	84.6	13.6	87.6	13.8	-.22	.96

Very similar scores in both versions
 >90% agreement between PASS weakness & strengths using English and Spanish CAS

Otero, Gonzales, Naglieri (2013)

Very similar PASS scores when giving the CAS English and Spanish versions
 >90% agreement between PASS weakness & strengths using English and Spanish CAS



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CAS in Italy

Using US norms, Italian sample (N = 809) CAS Full Scale was 100.9 and matched US sample (N = 1,174) was 100.5 and factorial invariance was found



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Race & IQ

- Neurocognitive tests yield smaller differences
- CAS and CAS2 have the smallest differences



Mean Score Differences in Total scores by Race by Intelligence Test.	
Traditional IQ tests	
SB-IV (matched samples)	12.6
WISC-V (normative sample)	11.6
WISC-IV (normative sample)	11.5
WI-III (normative sample)	10.9
WISC-IV (matched samples)	10.0
WISC-V (statistical controls normative sample)	8.7
RIAS-2 (normative sample)	8.0
Second Generation Intelligence Tests	
K-ABC (normative sample)	7.0
K-ABC (matched samples)	6.1
KABC-2 (matched samples)	5.0
CAS-2 (normative sample)	6.3
CAS (statistical controls normative sample)	4.8
CAS-2 (statistical controls normative sample)	4.3

Note: The data for these results are reported for the Stanford-Binet IV from Wasserman (2000), Woodcock-Johnson III from Edwards & Dakin (2006), Kaufman Assessment Battery for Children from Naglieri (1988), Kaufman Assessment Battery for Children-II from Lieberberg, Soltes-Oreaga & Kaufman (2005), CAS from Naglieri, Rojahn, Matto & Aquilino (2005), CAS-2 from Naglieri, Das & Goldstein (2014), Wechsler Intelligence Scale for Children - IV (WISC-IV) from O'Donnell (2008), WISC-V from Kaufman, Ballard & Costello (2014), Wechsler Intelligence Assessment Scale - Third Edition (WISC-III) from Kaufman, B. M. (2001).

Naglieri & Rojahn (2001)

White children earned the same mean scores on WISC-III and CAS

Black children earned lower VIQ than PIQ scores due to language / achievement tasks → low Full Scale

Black children earned higher scores on CAS than whites

Fewer Black children would be identified as having intellectual disability based on Full Scale scores using CAS than WISC-III

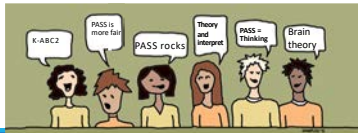
THIS IS A SOCIAL JUSTICE ISSUE.

Intellectual Classification of Black and White Children in Special Education Programs Using the WISC-III and the Cognitive Assessment System

Jack A. Naglieri
 George Mason University
 Johannes Rojahn
 The Ohio State University

Core Group Activity

- **Organizer** – Have the group discuss this question: “What thoughts are there about these research studies on Race, IQ and PASS?”
- **Coach** – guide the discussion
- **Reporter** – will record and report to the group
- **Energizer** – keep the discussion going !



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Think and Talk



What would you recommend as possible interventions for Jacob's Successive Processing challenges?

NOTE: STOP AND TALK is important because the brain retains 50% through talk.

www.kathleenortega.com

Kathleen's Intervention Plan for Alejandro

Be Intentional and Transparent

- Explain his PASS scores to him

Build on His Strengths

- Help him use his, Planning and Simultaneous and Strengths to support his learning challenges with Attention and Successive Processing

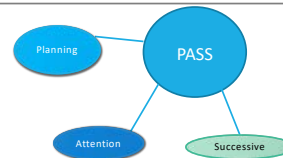
Develop Effective Skill Sets to remediate his weaker skills

Offer and encourage the use of metacognitive strategies that can improve his Attention and Successive Processing skills.

Encourage a Growth Mindset and Self Efficacy

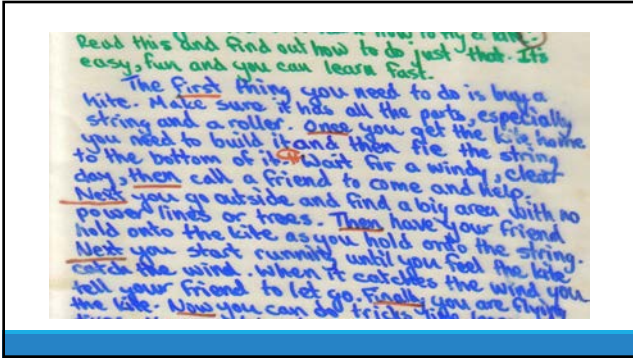
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Building the Big Picture: Successive



Capture the big idea of each key part of PASS on your organizer after we teach each section.

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How to Make Mashed Potatoes

By Chase

Eating mushy mashed Potatoes is my favorite thing to do. The best thing is that they are easy to make.

First you get out the potatoes. Then you peel the skin off the potatoes and put them in a pan with water. After you are done boiling the potatoes, then drain the potatoes and put them back in the pan. Now put butter and milk on them. Then you mash the potatoes. When you are done, you serve the potatoes. Then you eat them.

So go home and make your self some mashed potatoes. Follow the instructions I told you and they'll turn out just fine.




Math Sequencing

Encouraging students to write out the steps for solving problems. (For example: Steps for solving addition and subtraction problems that include regrouping)

Use a simple sheet of paper folded into four squares. Ask students to write the steps in order in the squares.

Sequencing Games




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Moving Sequences

Give kids cards sequencing
Ask them to sequence the information.

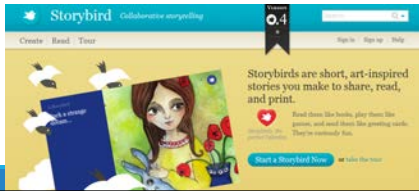
- They can do this at their tables
- Or each students could have a card and build the sequence.

What is something in your subject/grade that you could sequence?



Using Digital Storytelling in the Classroom

Load pictures from a story out of order, and then save the file as a project. Have students rearrange the pictures to assess them for their understanding of sequencing.



Sticky Note Bingo

Sticky Note Bingo Example (for practicing just a few letters)

b	m	s	t
a	f	m	b
m	t	b	a
s	m	f	b

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Let's Take a Break!



Topics for Today

The Truth About IQ Tests

ADHD, SLD & Planning

ADHD, SLD & Attention

ADHD, SLD & Successive

ADHD, SLD & Simultaneous

PASS Deeper DIVE: Intelligence Conceptualized as brain function

Third Functional Unit: Planning Thinking About How to Solve Problems

Second Functional Unit: Simultaneous Working With Things or Ideas That Form a Whole

First Functional Unit: Attention Focusing With Resistance to Distraction

Second Functional Unit: Successive Working With Things or Ideas in Sequence

Figure 1.2 Three Functional Units and Associated Brain Structures
From: *Essentials of CAS2 Assessment*. Naglieri & Otero, 2017

PASS Theory

Simultaneous processing is used to integrate stimuli into groups

- Stimuli are seen as a whole
- Each piece must be related to the other

- Whole language
- Seeing word as a whole
- Verbal concepts
- Geometry, math word problems

CAS2: Rating Scale Simultaneous

Directions for Items 11–20. These questions ask how well the child or adolescent sees how things go together. They also ask about working with diagrams and understanding how ideas fit together. The questions involve seeing the whole without getting lost in the parts. Please rate how well the child or adolescent visualizes things as a whole.

During the past month, how often did the child or adolescent ...

	Never	Rarely	Sometimes	Frequently	Always
11. see to draw designs?	1	2	3	4	5
12. figure out how parts of a design go together?	1	2	3	4	5
13. clearly things into groups correctly?	1	2	3	4	5
14. work well with patterns and designs?	1	2	3	4	5
15. see how objects and ideas are alike?	1	2	3	4	5
16. work well with physical objects?	1	2	3	4	5
17. find it easy to see visual relations?	1	2	3	4	5
18. see the links among several things?	1	2	3	4	5
19. show interest in complex shapes and patterns?	1	2	3	4	5
20. recognize faces easily?	1	2	3	4	5

Simultaneous Raw Score

PASS Theory

Simultaneous processing is what Gestalt psychology was based on

Seeing the whole

1 2 3 4 5

Test Yourself !

Solve these analogies:


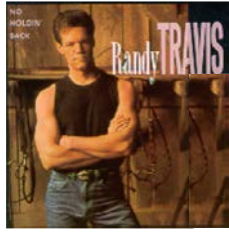
Girl is woman as boy is to ____?

C⁷ is to F as E⁷ is to ____?

Simultaneous Verbal Task







Simultaneous processing using verbal content

Who is this song about?

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CAS2 Verbal-Spatial Relations

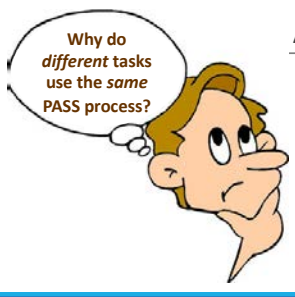
 1	 2	 3
 4	 5	 6

Which picture shows a boy behind a girl?

Why do different tasks use the same PASS process?

And Consider this...

Even though the tasks were different in content (shapes, words, numbers & musical notations) and modality (auditory and visual), they required **Simultaneous processing!**

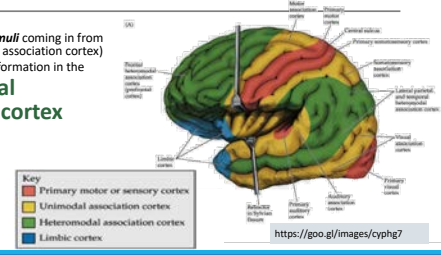


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Heteromodal Association Cortex

(Goldberg, 2006)

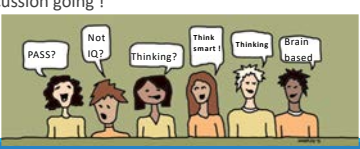
Our brains *merge stimuli* coming in from the senses (unimodal association cortex) into one stream of information in the **Heteromodal association cortex** (green areas)



https://goo.gl/images/cyphg7

Core Group Activity

- Organizer – Have the group discuss this question: "How is PASS more socially just?"
- Coach – guide the discussion
- Reporter – will record and report to the group
- Energizer – keep the discussion going!



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Numbers from 1 to 100

Write the numbers 1 to 100 in order.

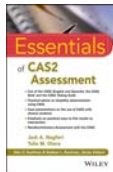
Simultaneous processing facilitated by this work sheet

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

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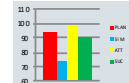
Case of Nelson (Naglieri & Feifer, 2017, Intervention Chapter 5)

- Nelson (9 year-old 4th grader) for 3 years
 - difficulty with spelling and written language math facts, and inconsistent with reading comprehending skills.
 - difficulty keeping pace with his peers and often failed to complete his work in a timely manner.
 - The Child Development Team (CDT) recommended a comprehensive psychological evaluation.



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Case of Nelson (Naglieri & Feifer, 2017)



INTERVENTION 171

Table 5.2 Nelson's CAS2 Scoring

PASS Scales	Scaled Score	Percentile	Ability Range
CAS2 Planning: The ability to apply a strategy and self-monitor performance while working toward a solution	94	34	Average
CAS2 Attention: The ability to selectively focus on a stimulus while inhibiting responses from competing stimuli	98	45	Average
CAS2 Simultaneous Processing: The ability to reason and problem-solve by integrating separate elements into a conceptual whole, often involving visual-spatial tasks	74	4	Very low
CAS2 Successive Processing: The ability to put information into a serial order or particular sequence	90	25	Average
CAS2 Total Composite Score	89	23	Below average

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Case of Nelson (Naglieri & Feifer, 2017)

Table 5.6 Nelson's Scores on the Feifer Assessment of Reading (FAR)

FAR Index	Standard Score (95% CI)	Percentile	Qualitative Descriptor
Phonological Index	90 (±5)	25	Average
Fluency Index	73 (±7)	3	Moderately below average
Mixed Index	81 (±5)	10	Below average
Comprehension Index	97 (±8)	42	Average
FAR Total Index	84 (±5)	14	Below average

Table 5.3 Nelson's Scores on the KTEA-III Reading Subtests

Reading	Age Norms	Percentile	Range
Reading Comprehension: The student reads a word and points to its corresponding picture or reads a simple instruction and responds by performing the action.	83 ± 10	15	Below average
Silent Reading Fluency: The student is required to read as many statements as possible in 2 minutes and must respond either "yes" or "no" as to whether each statement is valid.	80 ± 11	9	Below average
KTEA-III Reading Composite Score	81 ± 6	10	Below average

Table 5.4 Nelson's Scores on the KTEA-III Math Subtests

Math	Age Norms	Percentile	Range
Math Computation: The student solves math equations in the response booklet including addition and subtraction.	87 ± 10	19	Below average
Math Fluency: This is a timed task requiring the student to solve as many single-digit addition, subtraction, multiplication, and division problems in a minutes.	89 ± 11	23	Below average
KTEA-III Math Composite Score	90 ± 6	25	Average
Spelling: The student is required to spell words of increasing difficulty dictated by the examiner.	86 ± 5	18	Below average
Writing Fluency: The student has 5 minutes to write as many sentences as possible describing various pictures.	88 ± 14	21	Below average
KTEA-III Written Language	87 ± 6	19	Below average

Case of Nelson (Naglieri & Feifer, 2017)

Case of Nelson

- Nelson's history of reading problems and interventions to address this, slower reading speed, difficulty reading phonetically irregular words, and poor **Simultaneous**

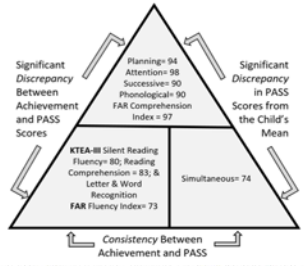


Figure 5.5 Nelson's Discrepancy/Consistency Method of SLD Results

PASS Intervention Protocol

Help child understand his/her PASS strengths and areas of challenges (**Intentional & Transparent**)

Encourage Motivation & Persistence (**Mindsets**)

Teach/Stress strategies for approaching tasks (**Skill Sets**)

- Student generated
- Model and Scaffold as needed

Encourage independence and self efficacy

(**Metacognition/Self Assessment**)

Kathleen's Intervention Plan for Nelson

Be Intentional and Transparent

- Explain his PASS scores to him

Build on His Strengths

- Help him use his Planning, Attention, and Successive Strengths to support his learning challenges with Simultaneous Processing

Develop Effective Skill Sets to remediate his weaker skills

- Offer and encourage the use of metacognitive strategies that can improve his Simultaneous Processing Skills

Encourage a Growth Mindset and Self Efficacy

Building the Big Picture: Successive



You will be capturing the big idea of each key part of PASS on your organizer after we teach each section.



Who's Teaching Summarization?

What skills does it take to be able to summarize?
How can you make summarization more concrete for your students?

[Headlines](#)
[Twitter/The Gist of It](#)



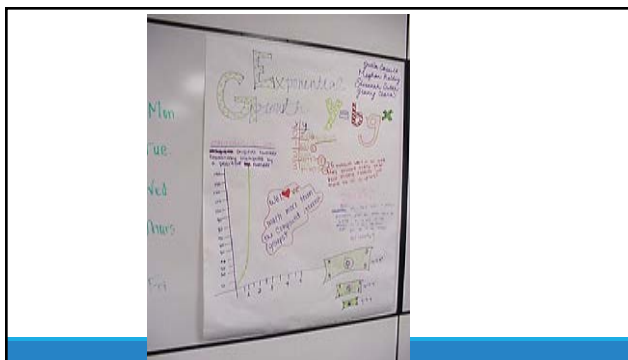
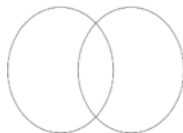
Use Graphic Organizers to See the BIG PICTURE

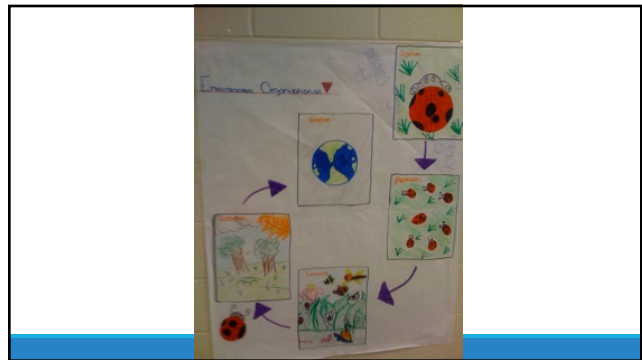
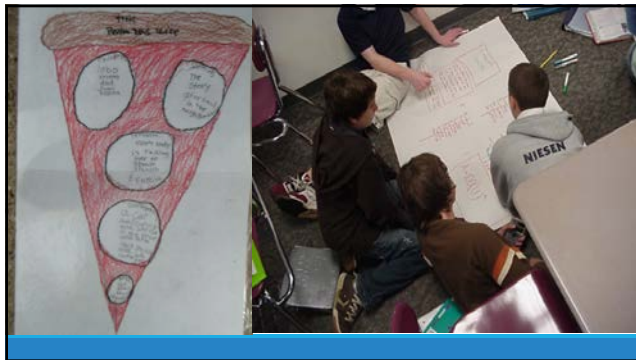
Model and scaffold instruction of graphic organizers and explain WHY they work?

What is MOST important is that students know what kind of thinking they are doing – compare/contrast, word exploration, etc.

Graphic organizers are more powerful if they are students created and BIG and ALIVE!

Students can use their planning skills to choose how they organize their thoughts.





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ADD BELIZE and WRAP message

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Alpha Beta 1917

- We have had more than 100 years of the Wechsler approach to intelligence testing



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Crazy Ones...start a movement!



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Thank you for sharing and learning with us.



JACK A. NAGLIERI, PH.D.
KATHLEEN KRYZA, MA,
CIO

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