Understanding and Applying Executive Functioning Theory to Foster Resilience in Students

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Relevant Disclosure

- My expenses for this conference are supported by Multi Health Systems and Western Psychological Services.
- I have developed tests marketed by Multi- Health Systems, Pro-Ed and Western Psychological Services.
- I have authored books marketed by Springer, Wiley, Guilford, Double Day, McGraw Hill, Brookes, Kluwer and Specialty Press.
- I am Editor in Chief of the Journal of Attention Disorders (Sage) and Co-Editor of the Encyclopedia of Child Development (Springer)

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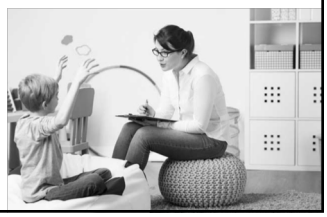
Steps Needed to Apply EF Strategies to Enhance Resilience

- What is EF?
- What is resilience?
- Can EF strategies be manualized and measured?
- Can the components of resilience be identified?
- Can those components be manualized?
- Can EF strategies be applied with fidelity to enhance resilience in students and staff?
- Is their a downside or cost to do this?

What is our primary responsibility as diagnosticians?



The Five Student Challenge

What variables predict the capacity to learn and the quality of performance?

How do we help children be skillful?

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What Neural Activities Require EF?

- Those that involve planning or decision making.
- Those that involve error correction or troubleshooting.
- Situations when responses are not well-rehearsed or contain novel sequences of actions.
- Dangerous or technically difficult situations.
- Situations that require the overcoming of a strong habitual response or resisting temptation.

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Goldstein, Naglieri, Princiotta, & Otero (2013)

- We found more than 30 definitions of EF(s).
- Executive function(s) has come to be an umbrella term used for many different abilities, including planning, working memory, attention, inhibition, self-monitoring, self-regulation and initiation carried out by pre-frontal areas of the frontal lobes.

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What is Executive Function(s)

1. Barkley (2011): "EF is thus a **self-directed set of actions**)" (p. 11).
2. Dawson & Guare (2010): "Executive skills allow us **to organize our behavior over time**" (p. 1).
3. Delis (2012): "Executive functions reflect the **ability to manage and regulate one's behavior** (p. 14).

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What is Executive Function(s)

4. Denckla (1996): "EF (is) a set of **domain-general control processes**…" (p. 263).
5. Gioia, Isquith, Guy, & Kenworthy (2000): "a **collection of processes that are responsible for guiding, directing, and managing cognitive, emotional, and behavioral functions**" (p. 1).

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What is Executive Function(s)

6. Pribram (1973): "**executive programmes …to maintain brain organization** " (p. 301).
7. Roberts & Pennington (1996): EF "**a collection of related but somewhat distinct abilities such as planning, set maintenance, impulse control, working memory, and attentional contro**l" (p. 105).

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What is Executive Function(s)

6. Stuss & Benson (1986): "**a variety of different capacities that enable purposeful, goal-directed behavior, including behavioral regulation, working memory, planning and organizational skills, and self-monitoring**" (p. 272).
7. Welsh and Pennington (1988): "the **ability to maintain an appropriate problem-solving set for attainment of a future goal**" (p. 201).

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What is Executive Function(s)

10. McCloskey (2006): "a **diverse group of highly specific cognitive processes collected together to direct cognition, emotion, and motor activity,** including …the **ability to engage in purposeful, organized, strategic, self-regulated, goal directed behavior**" (p. 1)

"think of executive functions as a set of independent but coordinated processes rather than a single trait" (p. 2).

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What is Executive Function(s)

10. Lezak (1995): "**a collection of interrelated cognitive and behavioral skills that are responsible for purposeful, goal-directed activity**," …
11. "**how and whether a person goes about doing something**" (p. 42).
12. Luria (1966): "… **ability to correctly evaluate their own behavior and the adequacy of their actions**" (p. 227).

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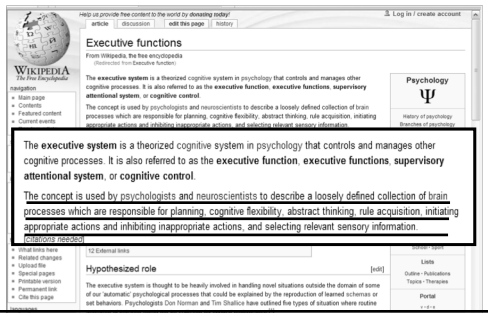
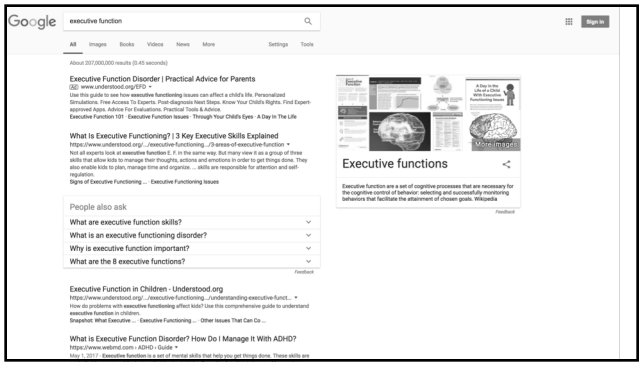
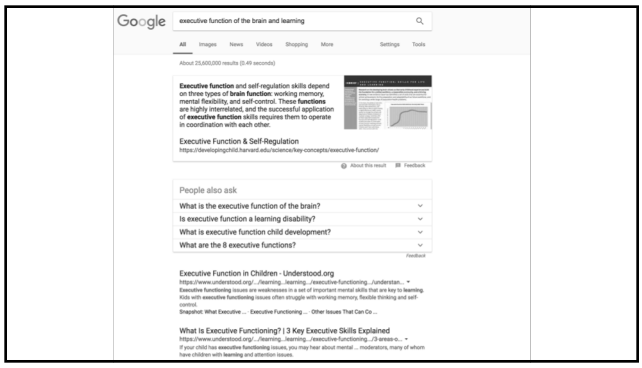
Executive Functions



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executive function of the brain and learning
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Executive function and self-regulation skills depend on three types of brain function: working memory, mental flexibility, and self-control. These functions are highly interrelated, and the successful application of executive function skills requires them to operate in coordination with each other.
Executive Function & Self-Regulation
https://developingchild.harvard.edu/science/key-concepts/executive-function/
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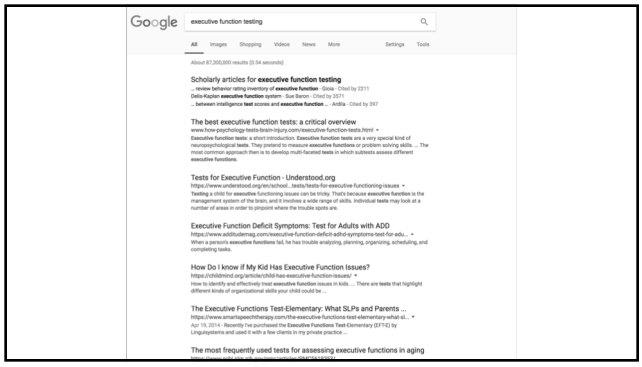
https://www.understood.org/.../learning...learning.../executive-functioning.../understan...
Executive functioning issues are weaknesses in a set of important mental skills that are key to learning. Kids with executive functioning issues often struggle with working memory, flexible thinking and self-control.
Snapshot: What Executive ... Executive Functioning ... Other Issues That Can Co ...
What Is Executive Functioning? | 3 Key Executive Skills Explained
https://www.understood.org/.../learning...learning.../executive-functioning.../3-areas-o...
If your child has executive functioning issues, you may hear about mental ... moderators, many of whom have children with learning and attention issues.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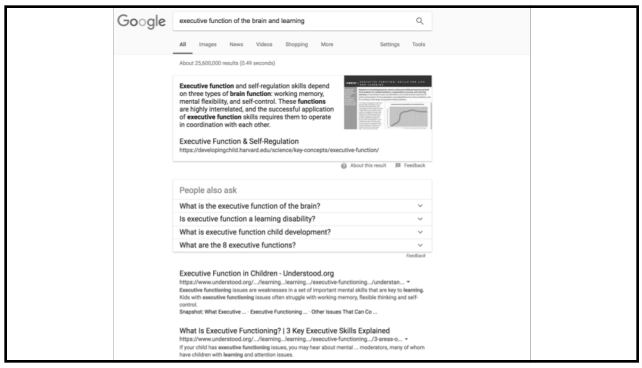
... review behavior rating inventory of executive function - Gioia - Cited by 2211
Delis-Kaplan executive function system - Sue Baron - Cited by 3371
... between intelligence test scores and executive function ... - Ardila - Cited by 397
The best executive function tests: a critical overview
www.how-psychology-tests-brain-injury.com/executive-function-tests.html
Executive function tests: a short introduction. Executive function tests are a very special kind of neuropsychological tests. They pretend to measure executive functions or problem solving skills. ... The most common approach then is to develop multi-faceted tests in which subtests assess different executive functions.
Tests for Executive Function - Understood.org
https://www.understood.org/en/school...tests/tests-for-executive-functioning-issues
Testing a child for executive functioning issues can be tricky. That's because executive function is the management system of the brain, and it involves a wide range of skills. Individual tests may look at a number of areas in order to pinpoint where the trouble spots are.
Executive Function Deficit Symptoms: Test for Adults with ADD
https://www.addstudemag.com/executive-function-deficit-adhd-symptoms-test-for-adu...
When a person's executive functions fail, he has trouble analyzing, planning, organizing, scheduling, and completing tasks.
How Do I know if My Kid Has Executive Function Issues?
https://childmind.org/article/child-has-executive-function-issues/
How to identify and effectively treat executive function issues in kids. ... There are tests that highlight different kinds of organizational skills your child could be ...
The Executive Functions Test-Elementary: What SLPs and Parents ...
https://www.smartspeechtherapy.com/the-executive-functions-test-elementary-what-sl...
Apr 15, 2014 - Recently I've purchased the Executive Functions Test-Elementary (EFTE) by Linguisystems and used it with a few clients in my private practice ...
The most frequently used tests for assessing executive functions in aging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And Finally. . . .

A NICHD panel in 1994
identified 33 EFs by consensus!

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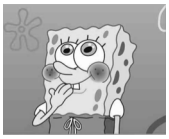
The Top Six Were:

- Self-regulation
- Sequencing of behavior
- Flexibility
- Response inhibition
- Planning
- Organization of behavior



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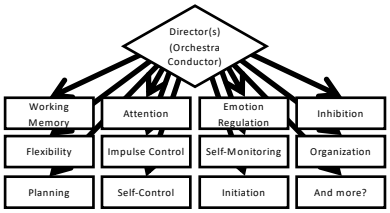
Three Categories of Theories

- Regulators that control
- Abilities (cognitive processes)
- Behaviors



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In fact EF ability likely forms the foundation reflected in behavior, achievement, emotional regulation and socialization.

The contributed variance likely is impacted by a host of other variables. Other basic abilities and knowledge interact with these variables to shape skillful behavior.

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Impaired Behavior Associated With Poor EF Can Result From:

- Lack of ability.
- Lack of knowledge.
- Lack of motivation.
- Internalizing symptoms.
- Externalizing symptoms.
- Poor impulse control.

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Executive Function

- EF is a **unitary** construct (e.g., Duncan & Miller, 2002; Duncan & Owen, 2000).
- EF is **unidimensional** in early childhood not adulthood.
- Both views are supported by some research (Miyake et al. , 2000), -- EF is a **unitary construct …but with partially different components**.

Executive Functions

- EF has **three components**: *inhibitory control, set shifting (flexibility), and working memory* (e.g., Davidson, et al., 2006; Miyake et al., 2000).
- EF has independent **abilities** (Wiebe, Espy, & Charak, 2008).
- Executive Function**s** is a **multidimensional** model (Friedman et al., 2006; Miyake et al., 2000).

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Executive Function(s)

Given all these definitions of EF(s) we wanted to address the behavioral question…

Executive Function***s …*** or

Executive Function?

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I Had a Revelation in St. Augustine

The World Operates Along a Normal Curve!

Executive Function(s)

- One way to examine this issue is to research the factor structure of behaviors related to EF(s)
- To do so, we examined the factor structure of the Comprehensive Executive Function Inventory (CEFI)
- We conducted a series of research studies to answer the following question:
  - What is the underlying structure of the behaviors assessed on the CEFI?
  - Is there is just one underlying factor called executive function), or do the behaviors group together into different constructs suggesting a multidimensional structure?

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ITEM FACTOR ANALYSES – PART 1

- For the *first half* of the normative sample for Parent, Teacher and Self ratings' **item scores** (90 items) was analyzed using exploratory factor analysis
- The *scree plots* and the *very simple solution* criterion both indicated that only **one factor**.
- The *ratio of the first and second eigenvalues* was greater than four for all three forms, which indicated a **one factor solution.**

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Item Factor Analyses – Part 1

Item level factor analysis clearly indicted that one factor was the best solution

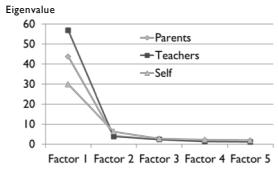

Table 8.2. Eigenvalues from the Inter-Item Correlations

	Factor						
Form	1	2	3	4	5	6	7
Parent	43.7	4.1	2.3	1.5	1.3	1.3	1.0
Teacher	56.8	3.8	2.3	1.3	1.1	1.1	0.8
Self-Report	29.9	6.3	2.7	2.1	1.9	1.8	1.5

Note. Extraction =pal Axis Factoring. Only the first 10 eigenvalues are presented.

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SCALE FACTOR ANALYSES – PART 2

- Using the *second half* of the normative sample EFA was conducted using raw scores for the Attention, Emotion Regulation, Flexibility, Inhibitory Control, Initiation, Organization, Planning, Self-Monitoring, and Working Memory scales
- Both the Kaiser rule (eigenvalues > 1) *and* the Eigenvalue Ratio criterion (> 4) unequivocally indicated **one factor**.

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Item Factor Analyses – Part 1

Scale level factor analysis clearly indicted that one factor was the best solution

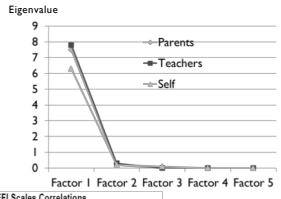

Table 8.4. Eigenvalues of the CEFI Scales Correlations

	Factor						
Form	1	2	3	4	5	6	7
Parent	7.5	0.2	0.0	0.0	0.0	0.0	0.0
Teacher	7.8	0.3	0.0	0.0	0.0	0.0	0.0
Self-Report	6.3	0.2	0.1	0.0	0.0	0.0	-0.1

Note. Extraction method: Prig.

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EXPLORATORY FACTOR ANALYSES

Conclusion:

When using parent (N = 1,400), teacher (N = 1,400), or self-ratings (N = 700) based on behaviors observed and reported for a nationally representative sample (N = 3,500) aged 5 to 18 years Executive Function *not* function**s** is the best behavioral term to use.

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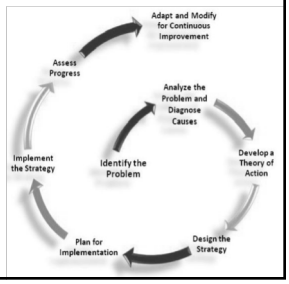
Our Conclusion. . .

The concept of Executive Function is best defined as a unitary construct….how you do what you do.

He got in it and he drew up the covers.

Naglieri & Goldstein, 2012

Executive Function is how efficiently you do what you decide to do.



EF as a Mediator of Ability and Knowledge

- Ability: The skills we use to acquire and manipulate knowledge to solve problems. Also referred to as intelligence.
- Knowledge: Everything we learn in life. Also referred to as achievement.
- Executive Function: How efficiently or skillfully you do what you decide to do.

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CEFI Scores by Diagnosis

- We expected that individuals with ADHD, mood disorders, and Autism Spectrum Disorders might earn a low CEFI Full Scale score.
- We compared groups matched on gender, race/ethnicity, and parental education

> Impairment in executive function is common in a number of internalizing and externalizing forms of psychopathology (Willcutt et al., 2005; see chapter 2, *Theory and Research*, for further discussion). For instance, research and theory has pointed to executive function deficits in Attention-Deficit/Hyperactivity Disorder (ADHD) and mood disorders (e.g., Weyandt et al., in press), as well as Autism Spectrum Disorders (ASD; e.g., Gilbert, Bird, Brindley, Frith, & Burgess, 2008; Gilotty, Kenworthy, Sirian, Black, & Wagner, 2002; Happé, Booth, Charlton, & Hughes, 2006; Ozonoff, Pennington, & Rogers, 1991; Solomon, Ozonoff, Ursu, Ravizza, Cummings, Ly, & Carter, 2009).

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Group Differences: ADHD

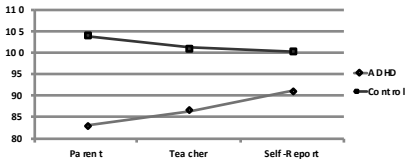

Table 8.19 Differences Between ADHD and Matched General Population Samples: CEFI Full Scale

Form		ADHD	Matched Gen. Pop.	*d*-ratio	*F* (*df*)	*P*
Parent	*M*	89.1	109.9	-1.59	216.56 (1, 340)	< .001
	SD	13.0	13.0			
	N	171	171			
Teacher	*M*	86.7	101.1	-1.07	79.93 (1, 276)	< .001
	SD	13.5	13.5			
	N	138	142			
Self-Report	*M*	91.3	100.3	-0.62	22.21 (1, 232)	< .001
	SD	14.7	14.7			
	N	117	117			

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Group Differences: ASD

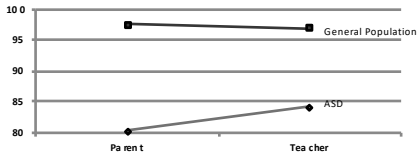

Table 8.20 Differences Between ASD and Matched General Population Samples: CEFI Full Scale

Form		ASD	Matched Gen. Pop.	*d*-ratio	*F* (*df*)	*P*
Parent	*M*	80.4	97.7	-1.41	48.96 (1, 96)	< .001
	SD	12.2	12.2			
	N	48	50			
Teacher	*M*	84.3	96.9	-0.99	23.11 (1, 92)	< .001
	SD	12.7	12.7			
	N	47	47			

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Group Differences: Learning Disabilities

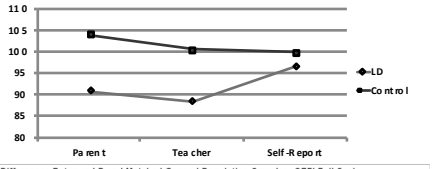

Table 8.22 Differences Between LD and Matched General Population Samples: CEFI Full Scale

Form		LD	Matched Gen. Pop.	*d*-ratio	*F* (*df*)	*p*
Parent	*M*	90.8	103.9	-0.92	19.89 (1, 93)	< .001
	SD	14.4	14.4			
	N	47	48			
Teacher	*M*	88.4	100.6	-0.91	37.29 (1, 178)	< .001
	SD	13.4	13.4			
	N	90	90			
Self-Report	*M*	96.6	100.0	-0.21	1.45 (1, 126)	0.231
	SD	15.9	15.9			
	N	64	64			

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Group Differences: Mood Disorders

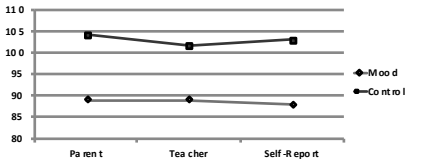

Table 8.21 Differences Between Mood Disorder and Matched General Population Samples: CEFI Full Scale

Form		Mood Disorder	Matched Gen. Pop.	*d*-ratio	*F* (*df*)	*p*
Parent	*M*	88.9	104.3	-1.11	22.66 (1, 71)	< .001
	SD	13.8	13.8			
	N	36	37			
Teacher	*M*	88.9	101.7	-1.01	14.9 (1, 57)	< .001
	SD	12.8	12.8			
	N	29	30			
Self-Report	*M*	88.0	103.1	-1.09	16.34 (1, 53)	< .001
	SD	13.9	13.9			
	N	27	28			

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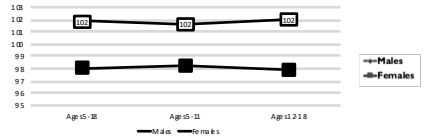
CEFI Gender Differences: Parent Raters

Girls are Smarter than Boys

Parents		**Mn**	SD	N	**Mn**	SD	**ES**
Ages 5-18	700	**98.1**	14.9	699	**101.8**	15.0	**-0.25**
Ages 5-11	350	**98.2**	14.3	349	**101.6**	15.6	**-0.22**
Ages 12-18	350	**97.9**	15.4	350	**102.0**	14.4	**-0.28**



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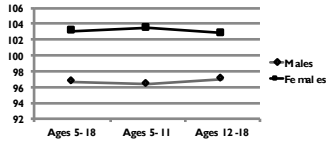
CEFI Gender Differences: Teacher Raters

Girls are Smarter than Boys

Teachers	N	**Mn**	SD	N	**Mn**	SD	**ES**
Ages 5-18	700	**96.7**	14.4	700	**103.2**	15.0	**-0.44**
Ages 5-11	350	**96.4**	14.5	350	**103.5**	14.9	**-0.49**
Ages 12-18	350	**97.0**	14.4	350	**102.9**	15.0	**-0.40**



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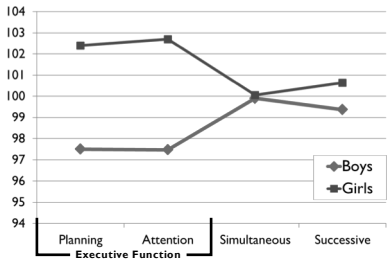
Gender Differences: Abilities Associated With EF



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CEFI Measurses Impact WISC-IV, CAS, and WJ III

- Data from the Neurology, Learning and Behavior Center in Salt Lake City, UT
- Children given the CEFI, WISC-IV (N = 43), CAS (N = 62), and the WJIII achievement (N = 58) as part of a typical test battery.

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CEFI and WISC IV

	WISC-IV					CEFI	
	FS	VC	PR	WM	PS	Mn	SD
CEFI							
Full Scale	.39	.44	.27	.30	.34	93.0	11.9
Attention	.39	.33	.32	.40	.35	91.8	11.2
Emotion Regulation	.14	.25	.08	-.06	.11	97.2	14.7
Flexibility	.57	.68	.45	.46	.37	93.8	11.0
Inhibitory Control	.21	.20	.13	.08	.27	97.7	13.5
Initiation	.25	.31	.14	.21	.25	91.2	15.1
Organization	.15	.17	.06	.14	.17	92.2	13.6
Planning	.46	.54	.31	.38	.39	93.6	11.1
Self-Monitoring	.39	.45	.31	.33	.27	92.0	11.3
Working Memory	.38	.43	.31	.36	.23	92.5	13.6
WISC-IV M	95.5	96.8	101.5	92.6	90.7	92.6	
WISC-IV SD	18.1	14.7	17.5	17.5	19.4	17.5	

16%!!!

Note: All correlations were corrected for range instability.

CEFI and CAS

	CAS					CEFI	
CEFI	FS	Plan	Sim	Att	Suc	Mn	SD
Full Scale	.45	.49	.43	.37	.32	91.4	13.2
Attention	.40	.42	.39	.30	.35	90.3	12.8
Emotion Regulation	.26	.22	.23	.24	.13	96.9	14.7
Flexibility	.52	.54	.51	.40	.42	92.2	13.0
Inhibitory Control	.27	.29	.22	.18	.21	96.0	13.9
Initiation	.40	.37	.31	.30	.20	89.0	16.3
Organization	.29	.36	.21	.20	.23	90.5	14.3
Planning	.47	.54	.46	.37	.38	92.5	12.4
Self-Monitoring	.48	.50	.49	.43	.35	91.2	12.4
Working Memory	.48	.46	.45	.38	.30	91.0	14.0
CAS Mn	95.8	92.4	101.6	96.5	98.0		
CAS SD	17.1	14.5	17.0	15.1	14.6		

Note: All correlations were corrected for range instability.

20%!!

CEFI and Woodcock III

	WJ-III Achievement Tests				
CEFI Scales	Total	Broad Reading	Broad Math	Broad Written Language	Median
Full Scale	.51	.48	.49	.47	.49
Attention	.59	.52	.46	.55	.54
Emotion Regulation	.18	.27	.15	.17	.18
Flexibility	.61	.50	.55	.54	.55
Inhibitory Control	.23	.32	.15	.26	.25
Initiation	.32	.26	.38	.28	.30
Organization	.32	.31	.33	.33	.33
Planning	.58	.54	.57	.50	.56
Self-Monitoring	.53	.51	.51	.49	.51
Working Memory	.57	.48	.60	.47	.53
	p < .05	p < .01			

25% !!

Harnessing the Power of EF

Is broad or global EF training effectively transferred to the natural setting?

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Four current reviews converge concluding that the efficacy of global EF training (e.g. training of attention, working memory, behavioral inhibition, etc.) has not been established.

Cortese et. al., 2015; Melby-Lervag et. al.,2013; Rapport et. al., 2015; Shipstead et. al.,2012.

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These studies suggest that while training in game like activities improves performance on those tasks as well as related ones (near transfer) any transfer from these tasks to global functioning in natural settings (far transfer) remains unproven.

50

Most treatment studies have focused on a single type of EF behavior (e.g. working memory.

A recent study attempted to train multiple types of EF behaviors simultaneously. Their findings are similar to previous research. Near transfer effects do occur but transfer to the natural setting is limited.

Dovis, et. al., 2015

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Is real world, content based EF instruction effective?

Can strategic, direct instructional interventions provide remedial and compensatory support for children with EF deficits?

A modest group of studies has demonstrated that setting and work modifications as well as strategy development and mastery improves quality of work in near and far term activities related to the work for which strategies were practiced.

Jang, Schunn, & Nokes, 2011; Alloway, 2011; Gathercole & Alloway, ; de Jong, 2010; McNamara & Scott, 2001

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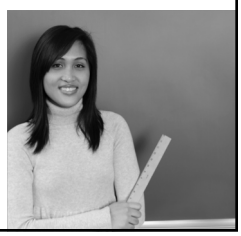
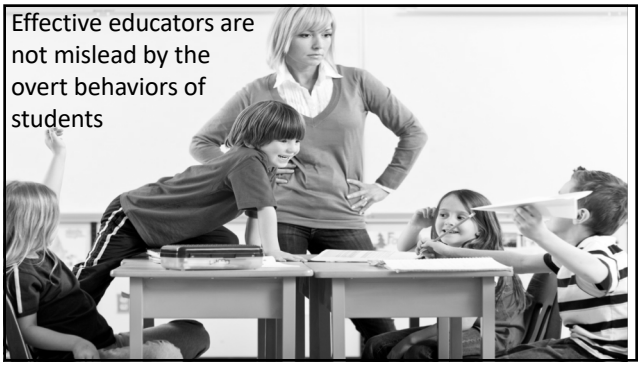
Effective educators focus on the self-esteem and the social-emotional lives of students.

Effective educators recognize that they have a lifelong impact upon student's capacity to be resilient.



Effective educators understand the mindset of resilient students.

Effective educators are not mislead by the overt behaviors of students



Coping Behaviors of Students

- Quitting and avoiding
- Cheating
- Rationalizing
- Clowning and regression
- Controlling
- Aggressiveness and bullying
- Passive/aggressive behavior
- Complaining of boredom
- Rushin

Effective educators are knowledgeable about frameworks for understanding the components of self-esteem, motivation, and resilience.

Effective educators appreciate the importance of identifying, reinforcing and displaying each student's island of competence.

Effective educators develop and implement strategies for reinforcing self-esteem, motivation and hope. These form the foundation of resilience in students.

Resilience

- A process leading to good outcome despite high risk
- The ability to function competently under stress
- The ability to recover from trauma and adversity

Resilience is a developmental process that involves individual differences in children's attributes (e.g. temperament, cognitive abilities) and environments (e.g. supportive parenting, enriched classrooms).

Kirby Deater-Deckard

Resilient children are not simply born that way nor are they made from scratch by their experiences. Genetic and environmental experiences loom large as protectors against a variety of risks to healthy development ranging from resistance to bacteria and viruses to resilience to maltreatment and rejection.

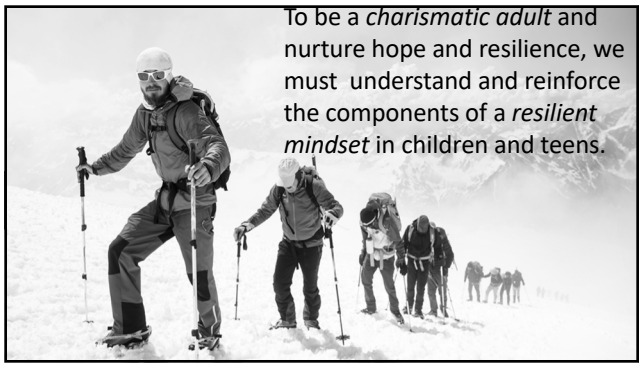
Kirby Deater-Deckard

Resilience is a process focusing upon strengths to overcome adversity.

Most Powerful Predictors of a Resilient Child

- Easy temperament
- Consistent family relationships
- Competent caregivers
- Development of self-esteem
- A sense of emotional security

What Components Define the Mindset of Resilient Children?

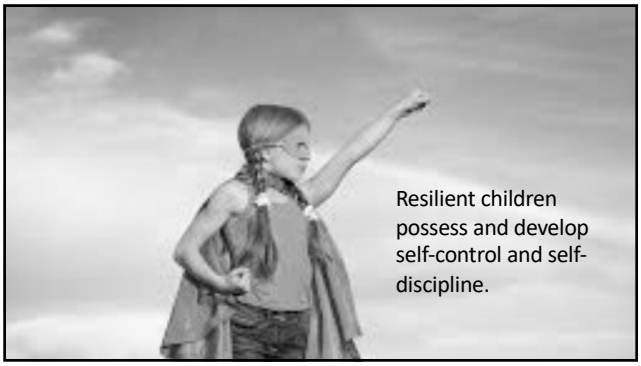


To be a *charismatic adult* and nurture hope and resilience, we must understand and reinforce the components of a *resilient mindset* in children and teens.

Resilient children recognize the boundaries of their control and focus their energy on these areas of control, acting proactively.

Resilient children develop competence in effective problem solving and decision making. They are flexible in reaching goals through multiple means.

Resilient children are comfortable and appreciate that others truly care about them and can be of support and help.



Resilient children believe they can contribute to and make a positive difference in the world.

Resilient youth possess islands of competence or strengths that define their identity.

Resilient children can deal effectively with mistakes and failure.

Stress Hardiness

- Committed to finding a meaningful purpose in life.
- A belief that you can influence your surroundings and outcome of events,
- A belief that you can learn and grow from both positive and negative life experiences.

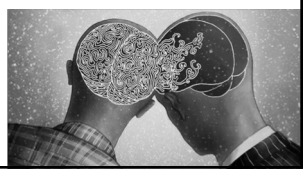
Focus on Well Being!

- COMPETENCE in academic, social and vocational areas
- CONFIDENCE or a positive identity
- CONNECTIONS or healthy relations
- CHARACTER or positive values, integrity, and values
- CARING and compassion

(Lerner et al, 2000)

Five Strategies To Foster a Resilient Mindset

- Teach empathy by practicing empathy.
- Teach responsibility by encouraging contributions.
- Teach decision making and problem solving skills that foster self-discipline.
- Offer encouragement and positive feedback.
- Help children deal with mistakes.



Through the Eyes of Others

- Do you practice what you have learned and lived?
- It is difficult to be empathic when you are disappointed or angry.
- Do you make assumptions about the motives of others?
- Do you hold the erroneous belief that if you are too empathic people will take advantage of you?

Changing The Words of Life: Re-writing Your Negative Scripts

Learn to identify obstacles that prevent progress:

- A lack of awareness of the role negative scripts play in your life.
- Insisting that others must change first if you are to change.
- Hiding behind the stress of every day life to avoid having to change.
- Giving up.

Changing The Words of Life: Re-writing Your Negative Scripts

- Seek out negative scripts in your life and assume responsibility to change them.
- Take the time to define short and long-term goals.
- Consider new scripts or plans of actions in accordance with your goals.

Changing The Words of Life: Re-writing Your Negative Scripts: Becoming the Author of Your Life:

- Select from these new scripts the one you believe has the greatest probability for success. Decide what success means to you.
- Anticipate the possible obstacles that might interfere with your success.
- Put the new script into action and assess effectiveness.
- Make changes if things aren't working but keep moving forward.

Through the Eyes of Others

Steps to becoming an empathic person:

- Take the time to complete empathy exercise. Consider how you would like other people to describe you versus how they might actually describe you. Act on the discrepancy.
- Use your experiences as a guide.
- Make an effort to put empathy into practice every day.

Communicating Effectively

- What am I attempting to achieve in this communication?
- Am I saying or doing things in a manner in which others will be most responsive to listening to what I have to say?
- Would I want anyone to speak to me the way I speak to others?
- How would others describe me as I communicate with them?

Communicating Effectively

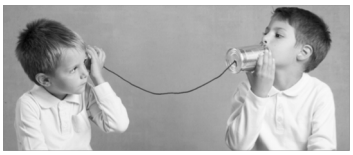
- What makes it easiest for me to listen to what others have to say?
- What do others say or do that turns me off and keeps me from listening to their message?
- Even if I disagree with someone, do I at last validate their point of view?

Obstacles to Communicating Effectively

- It is difficult to communicate when you are disappointed, angry or frustrated.
- It is difficult to communicate when you lose sight of your goal.
- Are you trapped by models from your past?

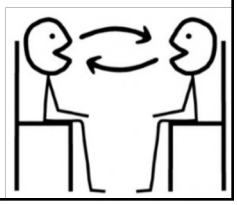
Steps to Communicating Effectively

- Become an active listener.
- Validate: Let others know they have been heard.
- Live by the golden rule.



Steps to Communicating Effectively

- Avoid ultimatums and all or none statements.
- Serve as a model of honesty, integrity and dignity.
- Make humor an essential part of your communication.
- Practice and then practice more.



Dealing with Mistakes

Steps to manage mistakes and setbacks:

- Examine your assumptions about mistakes.
- Challenge self-defeating attributions.
- Learn something positive from every situation.
- Decide on a plan of action to attempt new scripts based on new attributions.

The Lessons of Resilience: Maintaining Your Resilient Lifestyle

Exercising resilience on a daily basis:

- Have I truly listened during the past day and attempted to understand the viewpoints of others?
- How have I related to others? Have I practiced empathy and respect?
- How have I responded to stress, mistakes and setbacks? What will I do differently the next time?
- In what areas did I do well? How do I maintain and/or reproduce these positive behaviors tomorrow?

The Lessons of Resilience: Maintaining Your Resilient Lifestyle

Guiding principles for the long term:

- Revisit the principles of a resilient mindset.
- Periodically assess your progress in terms of leading a resilient life.
- Do not wait for other people to change first for you to achieve your goals and happiness.

The Lessons of Resilience: Maintaining Your Resilient Lifestyle

- Articulate and evaluate short and long-term goals that are realistic, achievable and in concert with your values.
- Anticipate mistakes and setbacks. Be prepared with a back-up plan.
- Relish your accomplishments.
- Develop and maintain connections with people, ideals, causes and faith.

The Mindset of a Resilient Person

- Optimistic and hopeful.
- Feel special and appreciated in the eyes of others.
- Set realistic goals and expectations.
- View mistakes, hardships and obstacles as challenges.
- Solve problems and make decisions.
- Internal locus of control.
- Believe and set out to solve problems.
- Possess empathy.

Cognitive Strategy = EF Instruction

- A strategy is a procedure that the learner uses to perform academic tasks
- Using a strategy means the child thinks about 'how you do what you do'
- Successful learners use many strategies.
- Some of these strategies include visualization, verbalization, making associations, chunking, questioning, scanning, using mnemonics, sounding out words, and self-checking and monitoring.

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Steps to Strategic Instruction:

- **Describe the strategy**. Students obtain an understanding of the strategy and its purpose-why it is important, when it can be used, and how to use it.
- **Model its use.** The teacher models the strategy, explaining to the students how to perform it.
- **Provide ample assisted practice time.** The teacher monitors, provides cues, and gives feedback. Practice results in automaticity so the student doesn't have to "think" about using the strategy.
- **Promote student self-monitoring and evaluation of personal strategy use.** Students will likely use the strategy if they see how it works for them; it will become part of their learning schema.
- **Encourage continued use and generalization of the strategy.** Students are encouraged to try the strategy in other learning situations.

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My Granddaughter Hones Her EF Skills

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Practice Pays Off!

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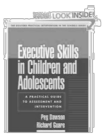
EF Instruction



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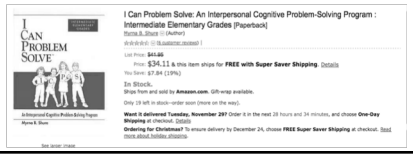

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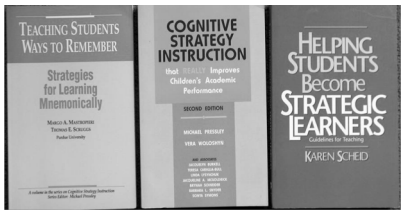
Cognitive Instructional Methods



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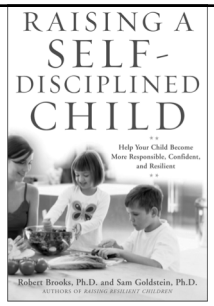
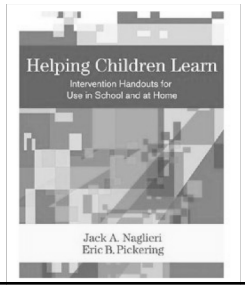
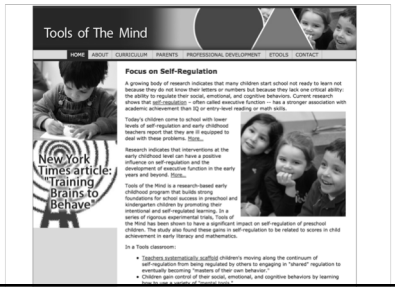




Tools of the Mind



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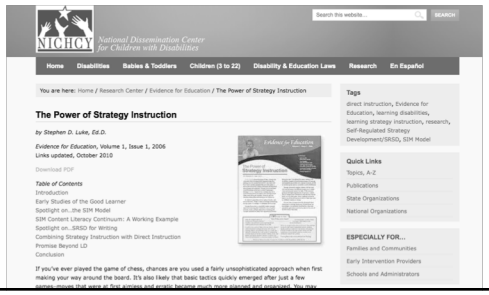
http://www.hoagiesgifted.org/eric/e638.html

http://nichcy.org/research/ee/learning-strategies



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http://www.ncld.org/at-school/especially-for-teachers/effective-teaching-practices/strategic-instruction-model-sim-how-to-teach-how-to-learn

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Benefits of Strategy Instruction

- Students trust their minds
- Students know there is more than one right way to do things
- They acknowledge their mistakes and try to rectify them
- They evaluate their products and behavior
- Memories are enhanced
- Learning increases
- Self-esteem increases
- Students feel a sense of power
- Students become more responsible
- Work completion and accuracy improve
- Students develop and use personal study process
- They know how to "try"
- On-task time increases, students are more "engaged"

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Conclusions

- The concept of EF is evolving.
- Data from the CEFI Standardization indicate that when measured using observable behaviors the term Executive Function is supported.
- The CEFI provides a well normed measure of EF that has demonstrated reliability & validity.
- There is emerging evidence that children can be taught to be more strategic – an important indication of good EF behavior and outcome.

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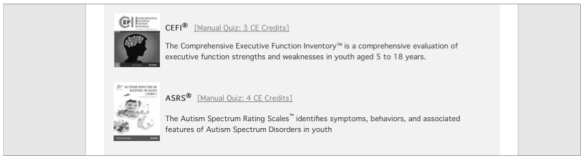
Continuing Education



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Questions?

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TEDx: https://www.youtube.com/watch?v=isfw8JJ-eWM