

Skills of

Early Childhood Teacher

In the 21st Century

Vicharn Panich, MD

Keynote address : International Seminar “Construction Guidelines for Standard and Competency Framework of Early Childhood Education”

My Limitation

- No Formal Education in Education
- Learn from Reading, Observation and Reflection
- No Real Work or Action ... No Mastery Learning
- No practical experience, no practical points

Structure of the Presentation

- Early Childhood Development (ECD)
- Early Childhood Education (ECE)
- How Learning Works
- Roles of Teachers
- Roles of Parent
- Skills of ECE Teachers
- Conclusion

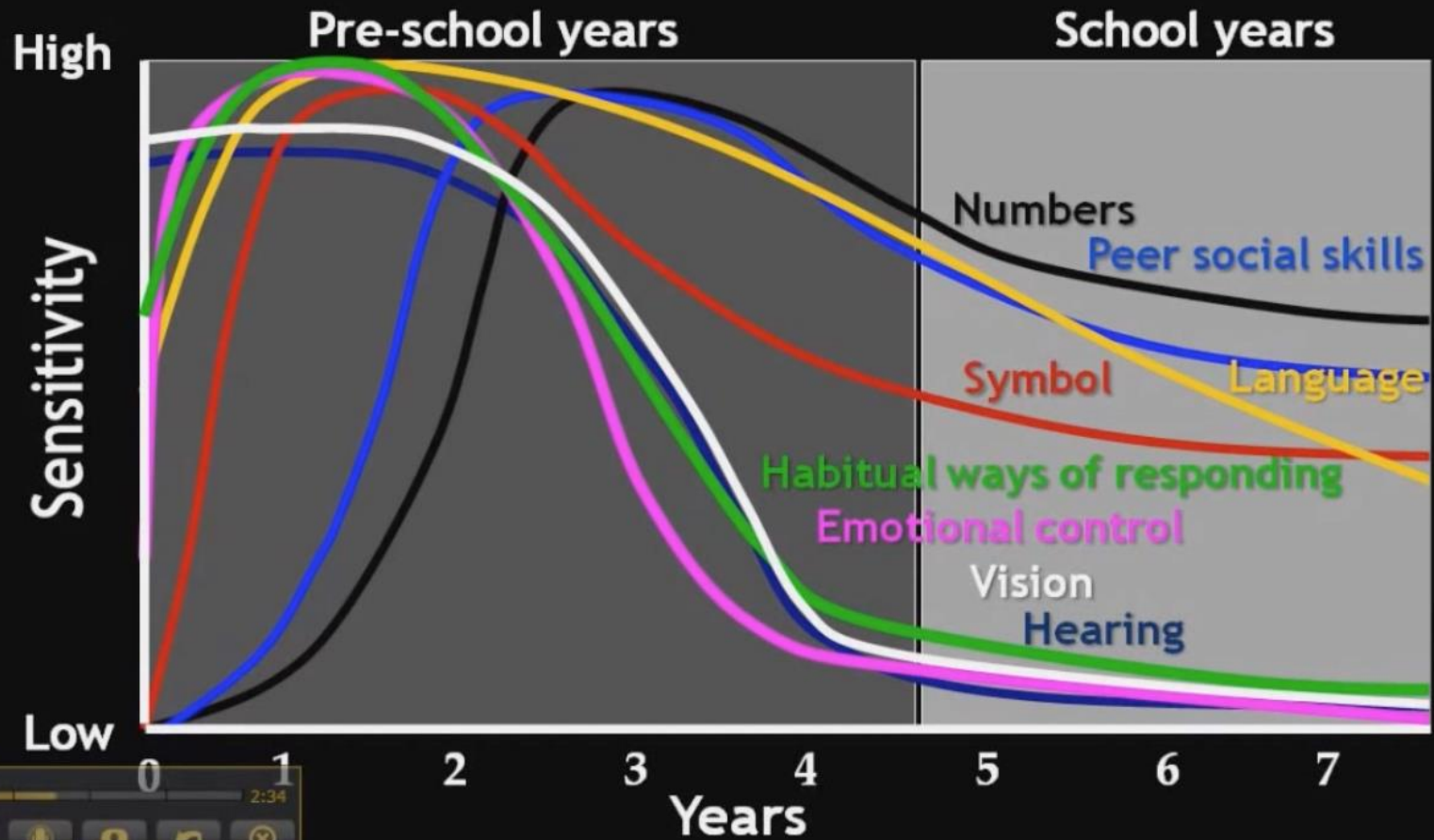
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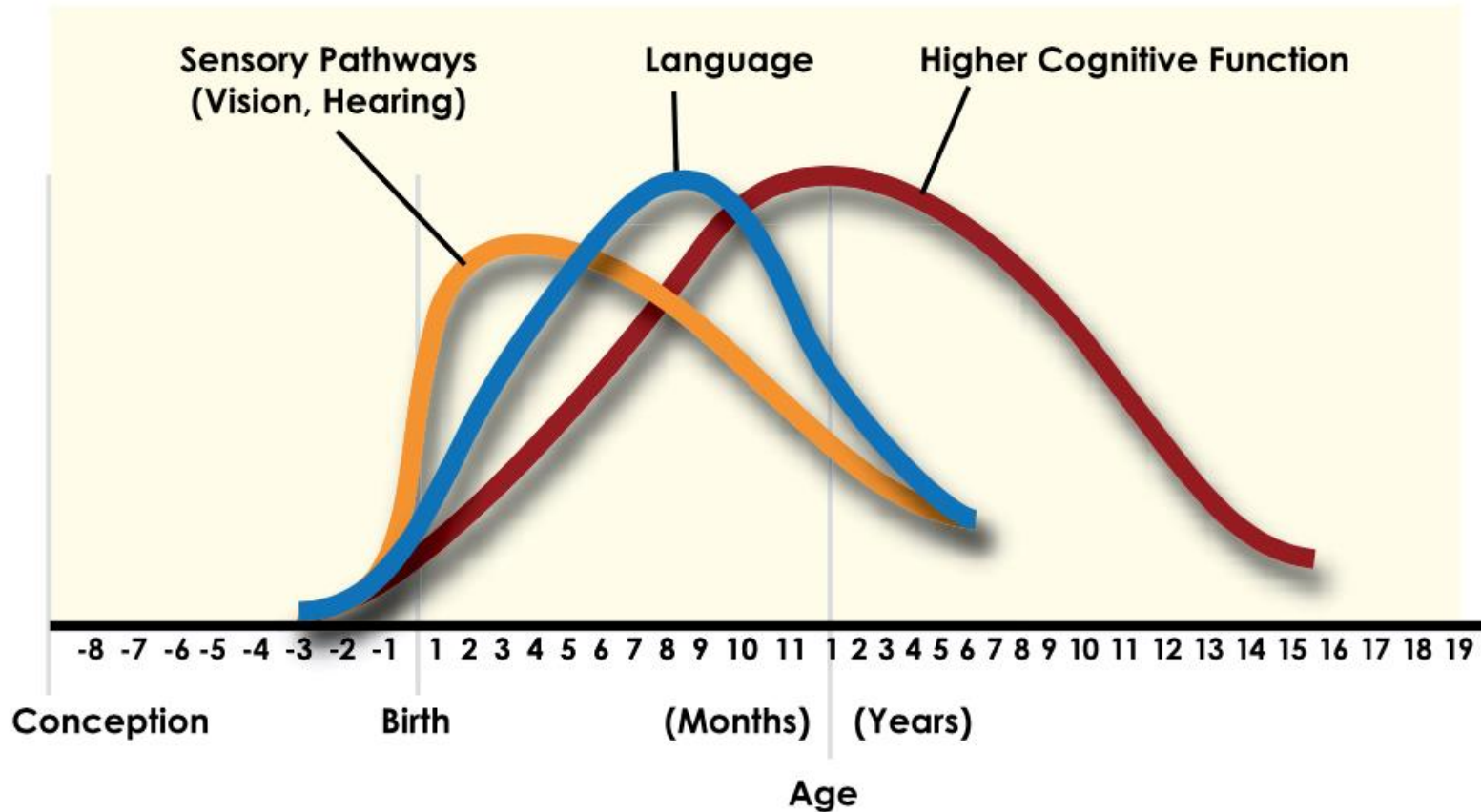
ECD : Foundation for the Whole Life

Sensitive Periods in Early Brain Development



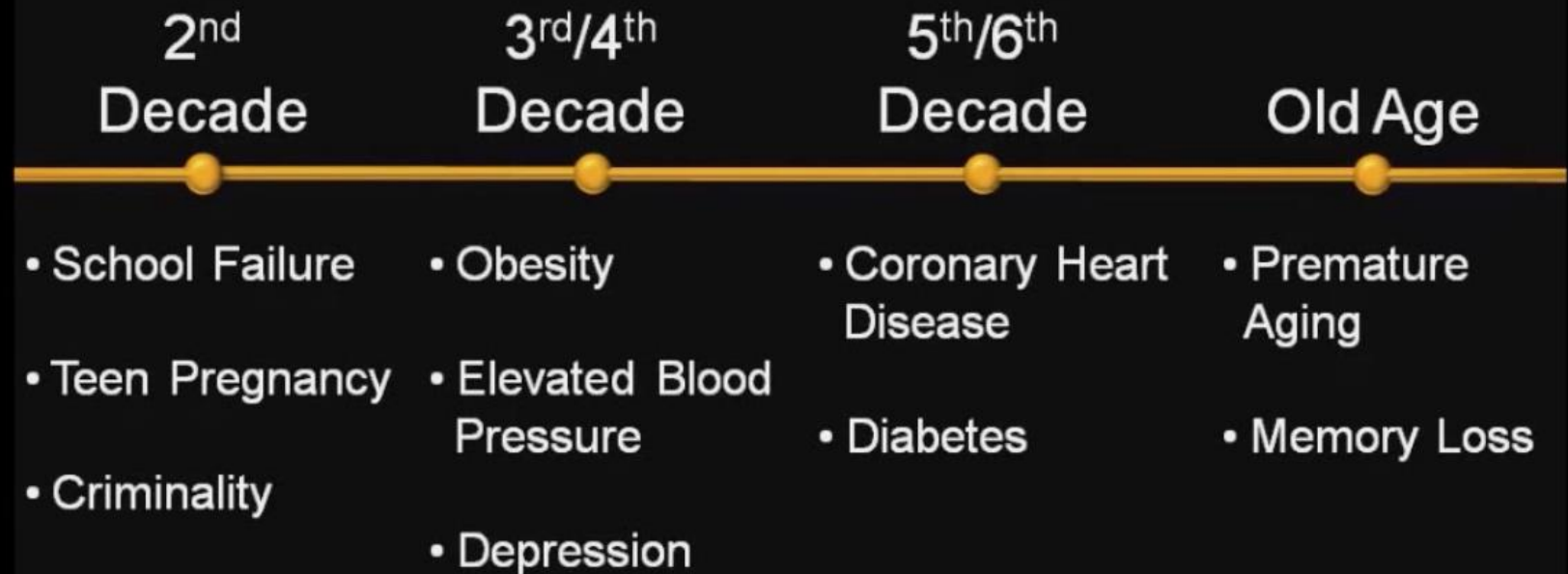
Human Brain Development

Synapse Formation Dependent on Early Experiences



Source: Nelson, C. A., in *Neurons to Neighborhoods* (2000). Shonkoff, J. & Phillips, D. (Eds.)

Life Course Problems Related to Early Life



Good Brain / สมองดี

And good life

Not borne

But from

birth + EC interactive learning

Major Factors Affecting ECD

- Biological Factors
- Environmental Factors
- Interpersonal Relationships
- Early Experiences and Relationships

http://www.beststart.org/OnTrack_English/2-factors.html



**World Health
Organization**

Early child development

Children should all be able to achieve their optimal physical growth and psycho-emotional development

The future of human societies depends on children being able to achieve their optimal physical growth and psychological development. Never before has there been so much knowledge to assist families and societies in their desire to raise children to meet their potential.



Evidence from Research (1)

- **Brains are built over time, and the foundations of brain architecture are constructed early in life**
- **The interaction of genes and experiences shapes the circuitry of the developing brain**

Evidence from Research (2)

- **Children develop within an environment of relationships**
- **Skill begets skill as brains are built from the bottom up**
- **The brain's many functions operate in a richly coordinated fashion with multiple systems throughout the body**

Evidence from Research (3)

- **Toxic stress responses can impair development, with lifelong consequences**
- **The interaction between genetic predisposition and exposure to significant adversity makes some children more susceptible to long-term problems in cognitive, social, and emotional development, as well as to impairments in health**

ECD

Social Risk Management
Longterm Risk Management

Highest-Yield Social Investment

New Understanding

- Brain has more plasticity in early childhood
- Need more skilled workforce in the 21st Century

Target of Proper ECD

- All Children, Especially Those from Underprivileged Families
- **Not Only** Children from Well-off Families

The Science of Child Development

Core Concepts

- **Relationships with caring, responsive adults and early positive experiences build strong brain architecture for children**
- **Significant stress from ongoing hardship or threat (e.g., exposure to violence, extreme poverty, or maltreatment) disrupts the biological foundations of learning, behavior, and health, with lifelong consequences**

The Science of Child Development

Core Concepts

- **Providing the right ingredients for healthy development—including protective factors that can counterbalance the effects of adversity—from the start produces better outcomes than trying to fix problems later**

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Early experiences determine whether a child's developing brain architecture provides a strong or weak foundation for all future **learning, behavior, and health.**

Build good brain

Objectives of ECE

- ***Social-Emotional Development:*** To learn about self and others - trusts known, caring adults, regulates own behavior, plays with other children, learns to be a member of a group, and uses personal care skills.
- ***Physical Development:*** To learn about moving - demonstrates basic gross motor skills, demonstrates basic fine motor skills.
- ***Cognitive Development:*** To learn about the world - sustains attention, understands how objects can be used, shows a beginning understanding of cause and effect, shows a beginning understanding that things can be grouped, uses problem solving strategies, engages in pretend play.
- ***Language Development:*** To learn about communicating - develops receptive language, develops expressive language, participates in conversations, understands and uses words, enjoys books and being read to, shows an awareness of pictures and print, experiments with drawing and writing.

Principles of Early Childhood Education

Age 0 - 8

- Learning Through Play
- Experiential Learning ... Learning by Doing
- Constructive Learning
- Socio-cultural Learning


Learning Through Play

- Develop PILES (Physical, Intellectual, Language, Emotion, Social) Skills
- Activity-Based Learning
- Inquiry-Based Learning
- PBL – Play-Based Learning
- S.O.L.E. -
http://www.ted.com/talks/sugata_mitra_the_child_driven_education



Key Concepts

Executive Function & Self-Regulation

 Watch the Overview Video

Executive function and self-regulation skills are the mental processes that enable us to plan, focus attention, remember instructions, and juggle multiple tasks successfully. Just as an air traffic control system at a busy airport safely manages the arrivals and departures of many aircraft on multiple runways, the brain needs this skill set to filter distractions, prioritize tasks, set and achieve goals, and control impulses.

When children have opportunities to develop executive function and self-regulation skills, individuals and society experience lifelong benefits. These skills are crucial for learning and development. They also enable positive behavior and allow us to make healthy choices for

<http://developingchild.harvard.edu/science/key-concepts/executive-function/>

Executive Function and Self-Regulation

- **Working memory** governs our ability to retain and manipulate distinct pieces of information over short periods of time.
- **Mental flexibility** helps us to sustain or shift attention in response to different demands or to apply different rules in different settings.
- **Self-control** enables us to set priorities and resist impulsive actions or responses.

<http://developingchild.harvard.edu/science/key-concepts/executive-function/>

Executive Function Activities for 6- to 18-month-olds

These activities encourage infants to focus attention, use working memory, and practice basic self-control skills. During this stage of development, infants are actively developing their core executive function and self-regulation (EF/SR) skills. Supportive, responsive interactions with adults are the foundation for the healthy development of these skills. However, particular activities can strengthen key components of EF/SR.

In using these activities, adults should attend to the infant's interests and select activities that are enjoyable, while also allowing the infant to determine how long to play.



EF & SR Activities for 6-18 month-olds

- Lap games for younger infants
- Hiding games
- Imitation or copying games
- Simple role play
- Fingerplays
- Conversations

Executive Function Activities for 18- to 36-month-olds

During this stage of development, children are rapidly expanding their language skills. Language plays an important role in the development of executive function and self-regulation (EF/SR), as it helps children identify their thoughts and actions, reflect on them, and make plans that they hold in mind and use. Language also helps children understand and follow increasingly complex rules—both those that regulate behavior and those that apply to simple games. Additionally, bilingualism is associated with better EF/SR, so parents who are fluent in more than one language should use those languages with their children.



Active games

At this age, toddlers are actively developing many important physical skills, and they love physical challenges. The following activities require toddlers to focus and sustain their attention on a goal, inhibit unnecessary and in-

song games that require children to start and stop, or slow down and speed up, such as *Jack in the Box*; *Popcorn*; *Ring Around the Rosie*; or *Motorboat, Motorboat*.

■ **Song games with many movements** are also fun. Examples include *The Hokey Pokey*, *Teddy*

EF & SR Activities for 18-36 month-olds

- **Active games** : throwing & catching ball, walking balance beam, imitation game, song game
- **Conversation and storytelling**
- **Matching / sorting games**
- **Imaginary plays** : cooking play

Executive Function Activities for 3- to 5-year-olds

Children's executive function and self-regulation skills grow at a fast pace during this period, so it is important to adapt activities to match the skills of each child. Younger children need a lot of support in learning rules and structures, while older children can be more independent. Ultimately, the goal is to shift children away from relying on adult regulation, so when the child seems ready, try to reduce the support you provide.



Imaginary play

During intentional imaginary play, children develop rules to guide their actions in playing roles. They also hold complex ideas in mind and shape their actions to follow these rules, inhibiting impulses or actions that don't fit the "role." Players often take ideas from their own lives, such as going to the doctor's office. They

older children can re-purpose other things to turn them into play props (e.g., paper towel tube that is used as a cast for a "broken arm"). Reusing familiar objects in a new way also practices cognitive flexibility.

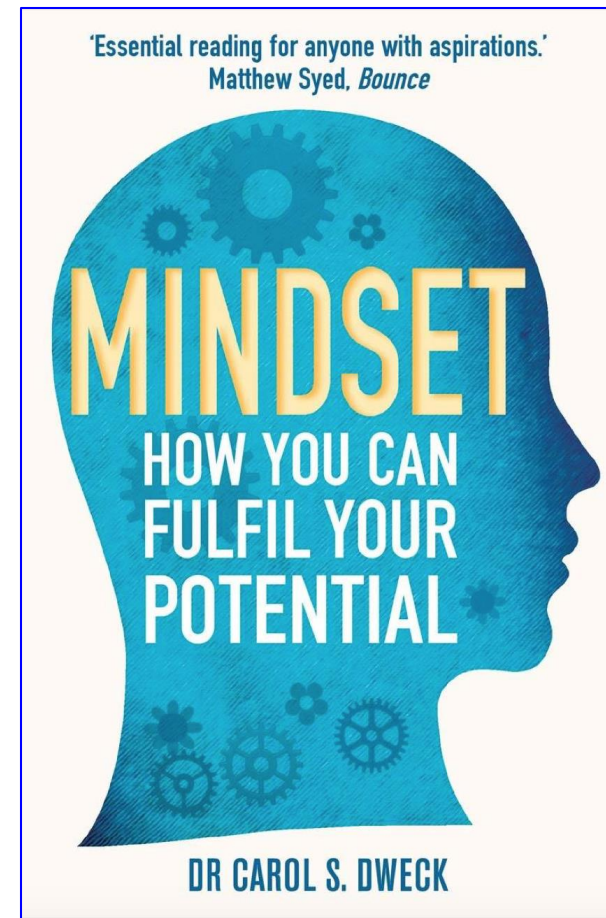
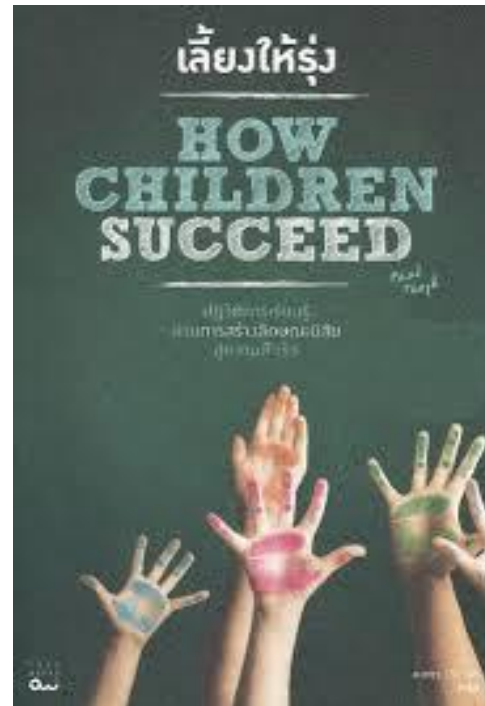
■ **Allow children to make their own play props.** Children must determine what is needed, hold this information in mind, and

EF & SR Activities for 3-5 year-olds

- Imaginary play
- Storytelling
- Movement challenges : songs and games
- Quiet games and other activities :
matching and sorting, complicated puzzles, cooking

Develop Growth Mindset

Not Fixed Mindset



Develop Growth Mind-set

- Praise persistence, hard work, good strategy, high quality work
- Do not praise talent, success
- Reflect on how to do it better

HOW BABIES THINK

By
Alison Gopnik



BABY BRAINS

- 1 Babies' and young children's cognitive abilities far surpass those that psychologists long attributed to them. They can, for instance, imagine another person's experiences and grasp cause and effect.
- 2 Children learn about the world much as scientists do—in effect, conducting experiments, analyzing statistics and forming theories to account for their observations.
- 3 The long helplessness of babies may be an evolutionary trade-off, a necessary consequence of having brains wired for prodigious feats of learning and creativity.

The Secret of Raising Smart Kids

Carol S. Dweck



Hint: Don't tell your kids that they are. More than three decades of research shows that a focus on "process"—not on intelligence or ability—is key to success in school and in life

Facilitate growth mind-set, not fixed mind-set

The Secret of Raising Smart Kids

- ① Many people assume that superior intelligence or ability is a key to success. But more than three decades of research shows that an overemphasis on intellect or talent—and the implication that such traits are innate and fixed—leaves people vulnerable to failure, fearful of challenges and unmotivated to learn.
- ② Teaching people to have a “growth mind-set,” which encourages a focus on “process” rather than on intelligence or talent, produces high achievers in school and in life.
- ③ Parents and teachers can engender a growth mind-set in children by praising them for their persistence or strategies (rather than for their intelligence), by telling success stories that emphasize hard work and love of learning, and by teaching them how the brain gets stronger as we learn.

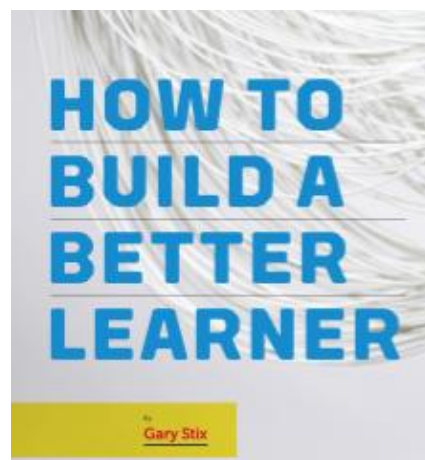


CALISTHENICS FOR A CHILD'S MIND



BEEFING UP YOUNG BRAINS

- 1 Psychologists long believed that thinking capacities such as attention, memory and reasoning are fixed, but evidence is mounting that they are not.
- 2 A smattering of brain-training workouts has emerged from neuroscience and psychology laboratories, and several of the programs are now being marketed and sold.
- 3 In many cases, the brain workouts are aimed at kids with learning problems, but some educators are offering them to all children as part of regular instruction.
 - Fast ForWord
 - EF Training
 - Music Training



EARLY EXERCISES

- 1 The technology and research methods of the neuroscientist have started to reveal, at the most basic level, what happens in the brain when we learn something new.
- 2 As these studies mature, it may become possible for a preschooler or even an infant to engage in simple exercises to ensure that the child is cognitively equipped for school.
- 3 If successful, such interventions could potentially have a huge effect on educational practices by dramatically reducing the incidence of various learning disabilities. But scientists, educators and parents must beware overstated claims for brain-training methods that purport to help youngsters but have not been proved to work.

Early Detection of Learning Disabilities

TREATING A TOXIN TO LEARNING

By
Clancy Blair



RELAX TO LEARN

- ① Psychological stress affects even very young children and can substantially shape the course of their cognitive, social and emotional development.
- ② Stresses that accompany low income directly impair specific learning abilities in children, potentially setting them back in many domains of life.
- ③ Children from more affluent backgrounds can also encounter stressful situations that weaken their capacity to learn. Reducing stress in young people could improve the well-being and cognitive performance of large numbers of schoolchildren.

A little stress heightens alertness; it improves people's performance on complex tasks. But as the dose exceeds a certain level, stress starts to erode performance.



A New Vision for Testing

Test that Teach

THE TESTING EFFECT

- 1 Since the enactment of No Child Left Behind in 2002, parents' and teachers' opposition to the law's mandate to test "every child, every year" in grades three through eight has intensified.
- 2 Critics charge that the high-stakes assessments inflict anxiety on students and teachers, turning classrooms into test-preparation factories instead of laboratories of meaningful learning.
- 3 Research in cognitive science and psychology shows that testing, done right, can be an effective way to learn—producing better recall of facts and deeper understanding.
- 4 Tests being developed to assess how well students have met the Common Core State Standards show promise as evaluations of deep learning.

Free Play

Free, imaginative play is crucial for normal social, emotional and cognitive development. It makes us better adjusted, smarter and less stressed



- 1 Childhood play is crucial for social, emotional and cognitive development.
- 2 Imaginative and rambunctious “free play,” as opposed to games or structured activities, is the most essential type.
- 3 Kids and animals that do not play when they are young may grow into anxious, socially maladjusted adults.

BODY PLAY

Participate in some form of active movement that has no time pressures or expected outcome. (If you are exercising just to burn fat, that is not play!)

OBJECT PLAY

Use your hands to create something you enjoy. (It can be anything; again, there doesn't have to be a specific goal.)

SOCIAL PLAY

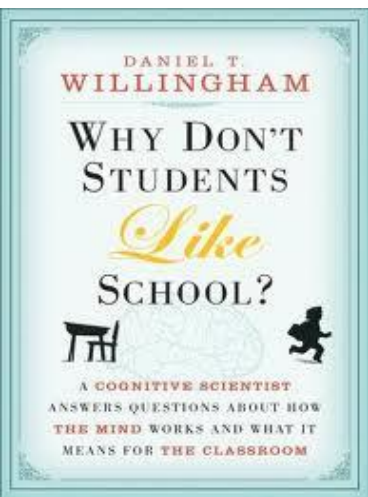
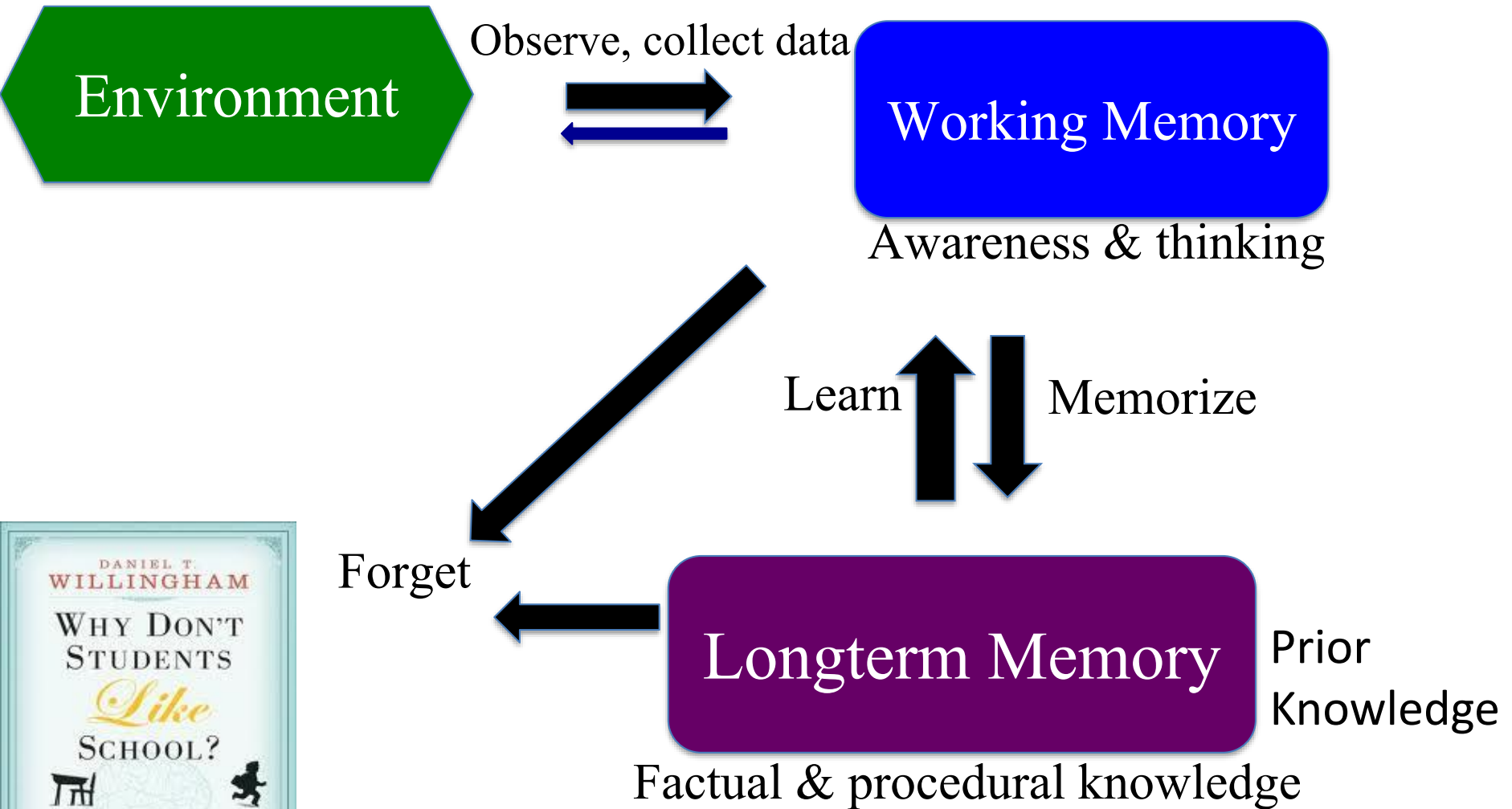
Join other people in seemingly purposeless social activities, “from small talk to verbal jousting,” Brown suggests.

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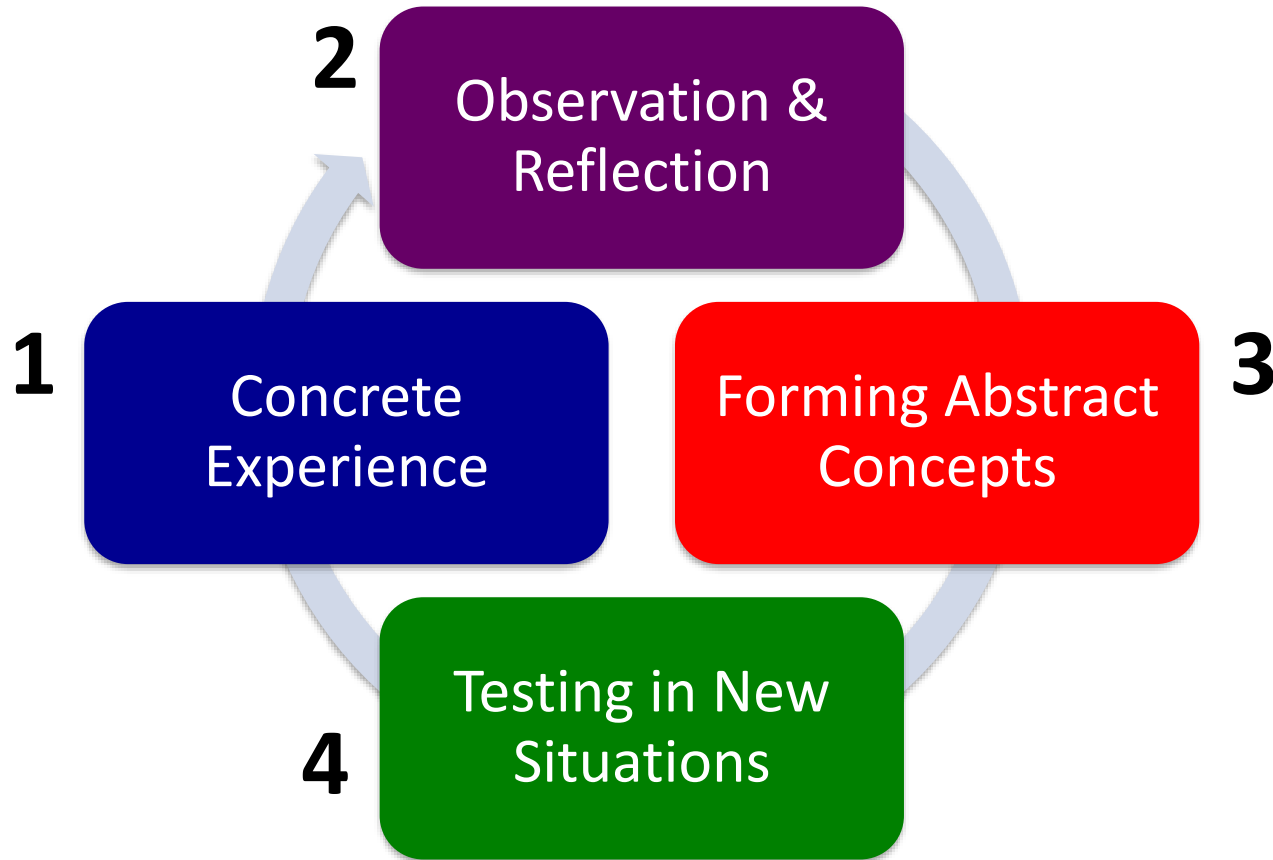
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Model of the Mind



Adult Learning



Student Learning = AL + Scaffolding

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Roles of Teachers

- To the child
- To parents (see next section)
- To the community (organize to help the poor) see networking partners
- To fellow teachers : PLC (Professional Learning Community)

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What makes a good parent?



ESSENTIAL PARENTING SKILLS

- ① Decades of research reveal 10 essential parenting skill sets. A study of 2,000 parents determined which skills are most important to bringing up healthy, happy and successful kids.
- ② Giving love and affection tops the list. Then comes a surprise: managing stress and having a good relationship with the other parent are more helpful than some child-focused behaviors.
- ③ All types of people are equally competent at child-rearing—and anyone can learn how to be a better parent with a little effort.

10 Essential Parenting Skill Set

1. Love & Affection
2. Stress Management
3. Relationship Skills
4. Autonomy & Independence
5. Education & Learning
6. Life Skills
7. Behavior Management
8. Health
9. Religion
10. Safety



An interactive parent-training program can stamp out behavior problems in kids—and abuse from parents



FAMILY MATTERS

- 1 A brand of parent training called Parent-Child Interaction Therapy (PCIT) can correct oppositional behavior in children two to seven years old.
- 2 Little kids with significant behavior problems are at high risk of serious antisocial behavior later on.
- 3 Because of its scientific backing, PCIT is gaining international recognition and making headway in states where large-scale training programs are in effect.
- 4 The approach has stopped parents in the child welfare system from continuing to abuse their children.

The brain is dynamic and changes according to what we do and experience, and the impact of experiences is greatest when specific regions of the brain are still developing.⁴³ Influences on prefrontal cortex development begin in utero or even before conception as a result of maternal health and well-being.

Negative influences on the prefrontal cortex include poor nutrition, exposure to excessive alcohol, drugs, toxins, neglect, abuse, and chronic stress. We know less about specific positive influences, but higher socioeconomic status, exercise, cognitive training, adequate sleep, and mindfulness all have protective influences.⁴⁴

Two Types of Parent

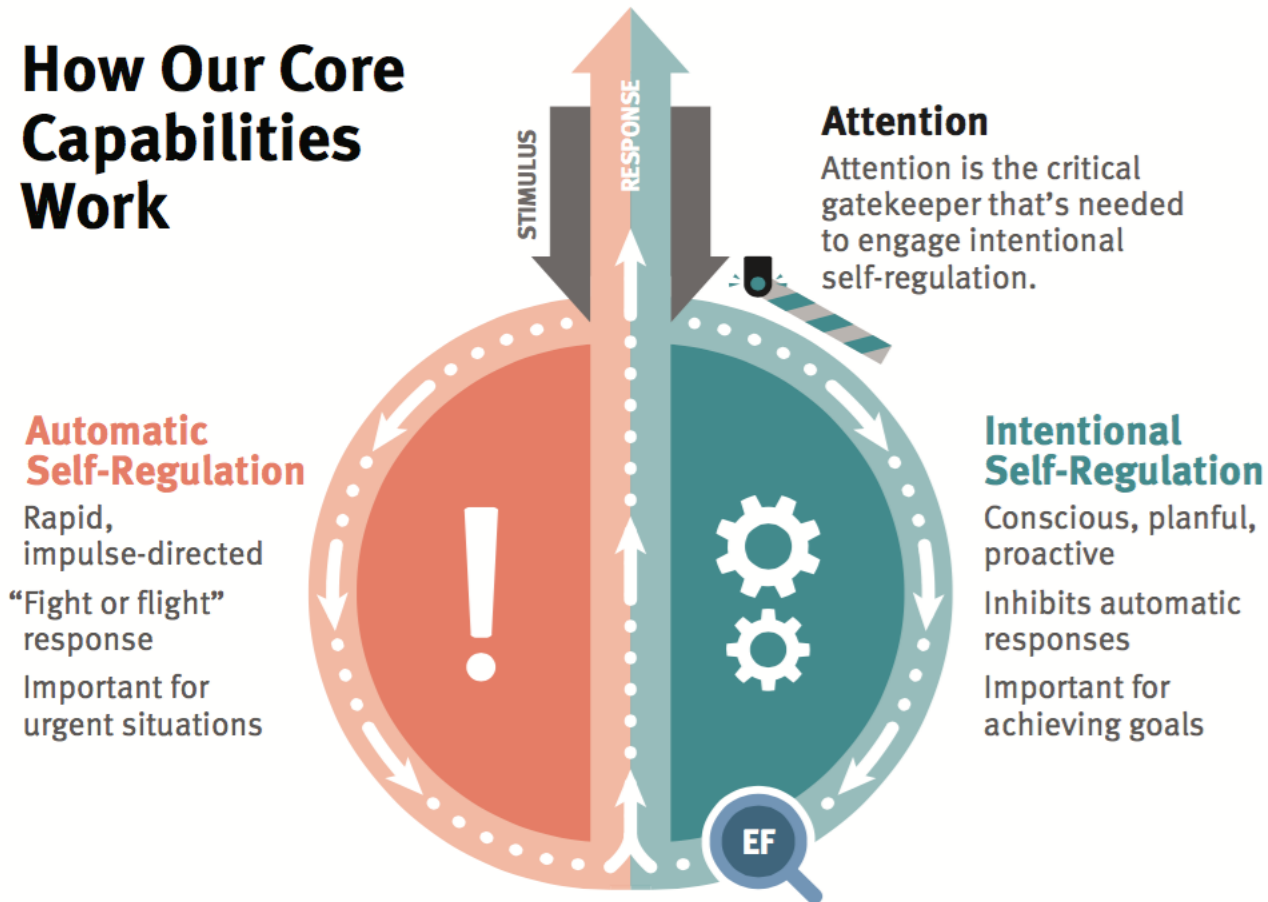
- Weak Core Capabilities
- Strong Core Capabilities

Core Capabilities

- Self Regulation
- Executive Function
- Attention

Good Brain

How Our Core Capabilities Work



Essential capabilities such as planning, focus, and self-control are all orchestrated by the balance of two kinds of self-regulation mechanisms: **automatic** and **intentional**. The proper balance ensures appropriately responsive and productive actions.

REQUIRES
Executive Function

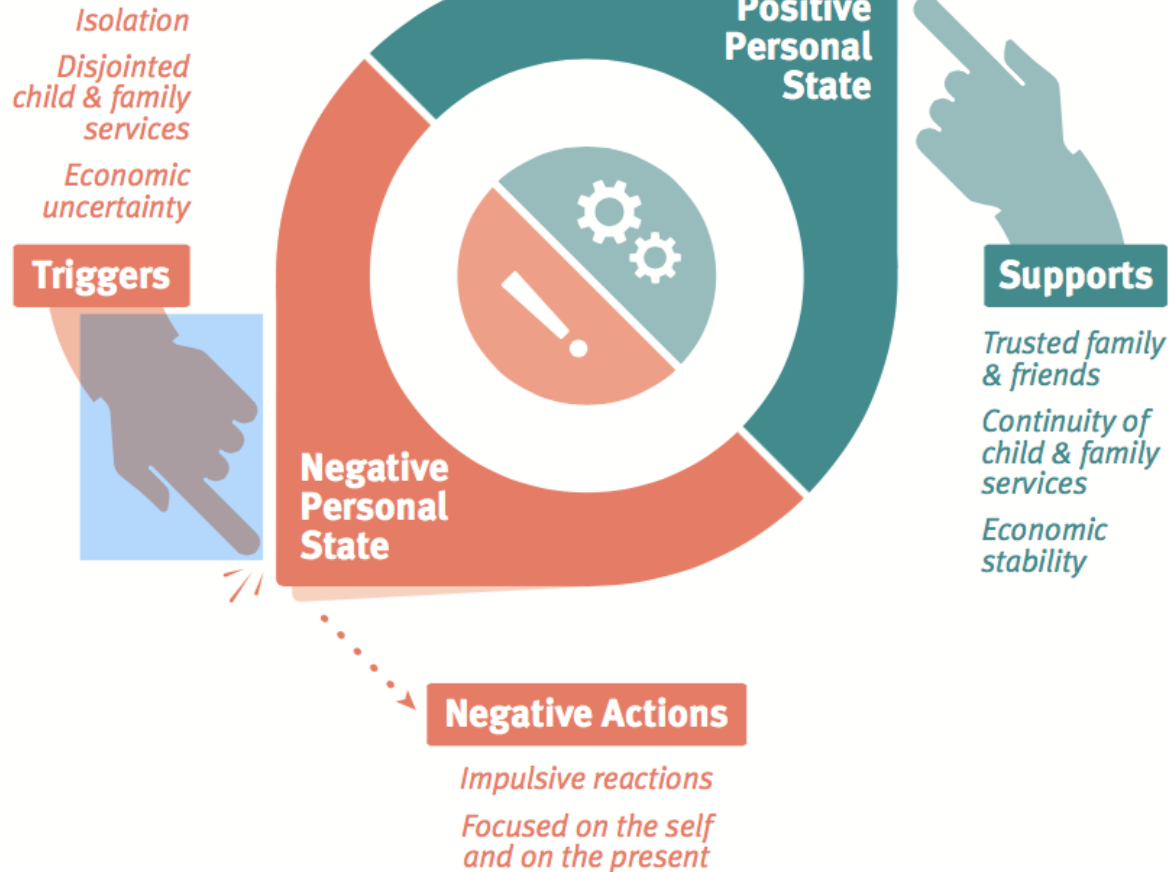
- 1 Inhibitory Control
- 2 Working Memory
- 3 Mental Flexibility

The core capabilities that adults use to manage life, work, and parenting effectively include, but are not limited to, **planning, focus, self-control, awareness, and flexibility.**

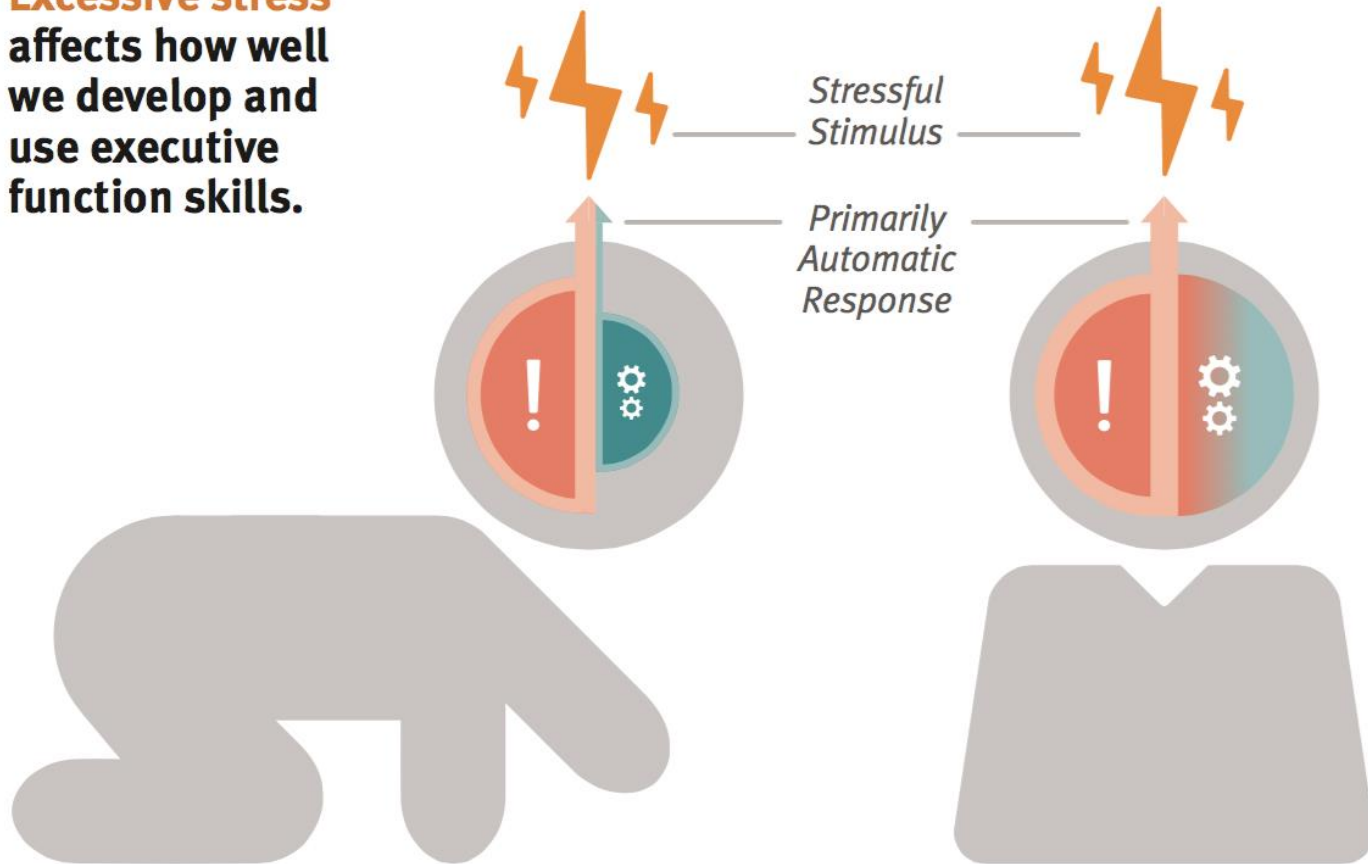
- **Severe, frequent stress experienced early in life** redirects the focus of brain development *toward* rapid response to threat and *away* from planning and impulse control.
- **Severe, frequent stress experienced as an adult** overloads our ability to use the capabilities we have and need most to overcome long-term life challenges.

Triggers & Supports

Environmental triggers and supports can affect the balance of impulsive and well-considered behavior.



Excessive stress affects how well we develop and use executive function skills.



Early Childhood

Severe, frequent stress redirects children's brain development away from planning and impulse control toward building the capacity for rapid threat response.

Adulthood

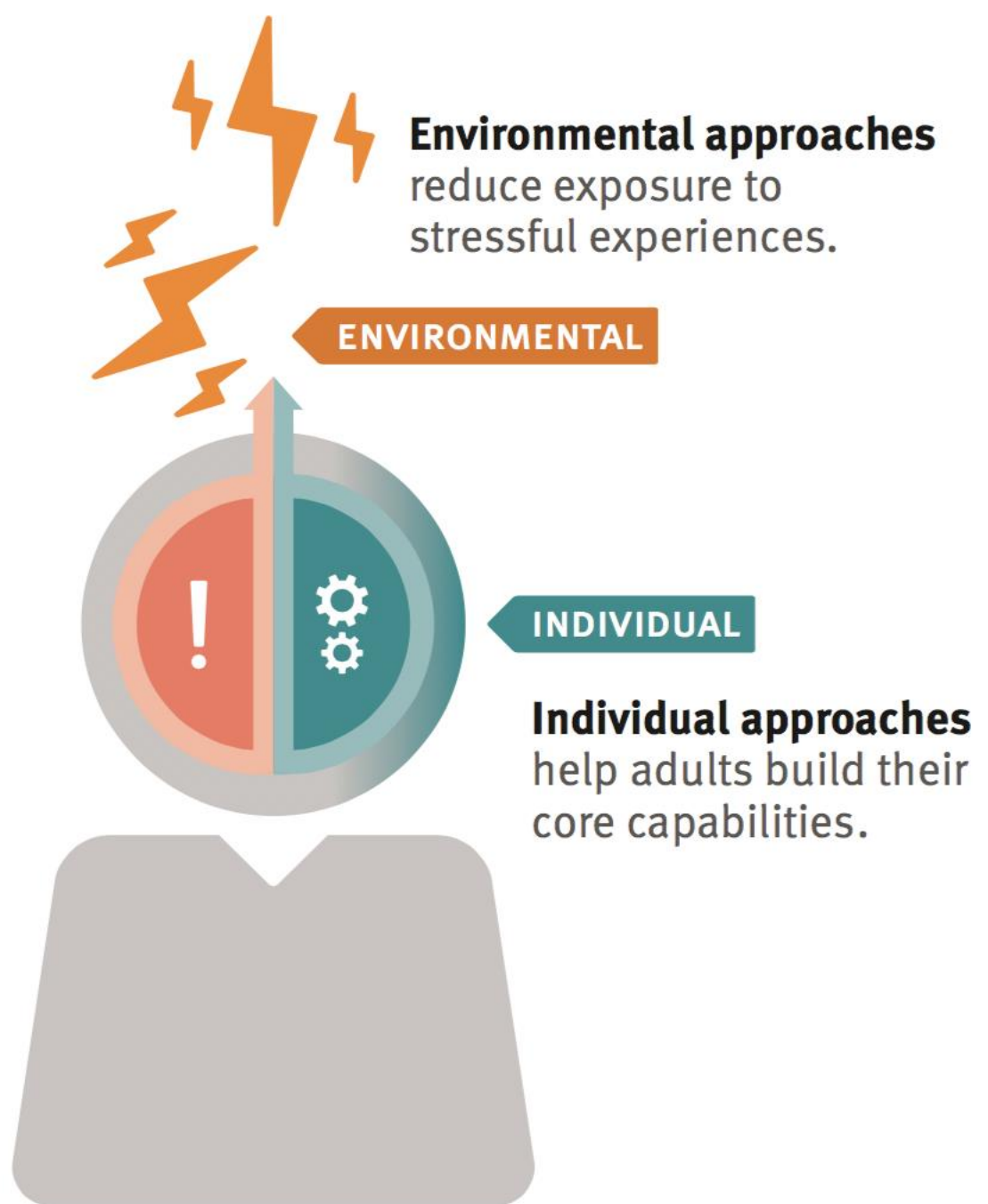
Excessive stress overloads adults' ability to use executive function and intentional self-regulation skills, leaving them to rely primarily on automatic responses.

Highly rewarding stimuli such as food or drugs can also hijack the brain's attention system and cue more automatic responses.⁷²⁻⁷⁹

Even without the addition of serious trauma, poverty can overload self-regulation, potentially as a result of a pile-up of stresses associated with trying to survive in the face of inadequate resources.^{80,82-85}

The prefrontal cortex is still sensitive to experience in adulthood, and the adult brain is still able to build the complex networks required for executive function and self-regulation. Although there is age-related decline, when it comes to performance, these skills and the brain regions that support them are malleable, and can be strengthened depending on how much they are practiced.

Two approaches can reset the balance of self-regulation in adulthood.



Hint

In poor socioeconomic families intervention should aim at both the child and the family

Beware that the intervention does not give more stress to the family

Training Techniques

- ABMT (Attention Bias Modification Training)
- CBT (Cognitive Behavioral Therapy)
- Reappraisal (Cognitive Reappraisal / Cognitive Reframing) from negative to positive
- Motivational Interviewing ... reflective listening

ECD and National Development Policy

Having a better understanding of the physiological, psychological, and self-regulatory toll of adversity and poverty can help policymakers and practitioners approach solutions to persistent social problems in new ways.

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ECE Teachers' Personal Traits

Teaching preschool requires patience and the ability to reteach material until the students understand it. Preschool teachers need to have a well-developed imagination, creativity, and the flexibility to create lessons and activities to operate effectively in the classroom. They must also enjoy working in an unstructured environment. Laura J. Colker, curriculum developer and teacher trainer working in Washington, D.C., believes that effective preschool teachers also have an enthusiasm for teaching young children and the ability to create a loving and warm atmosphere for learning.

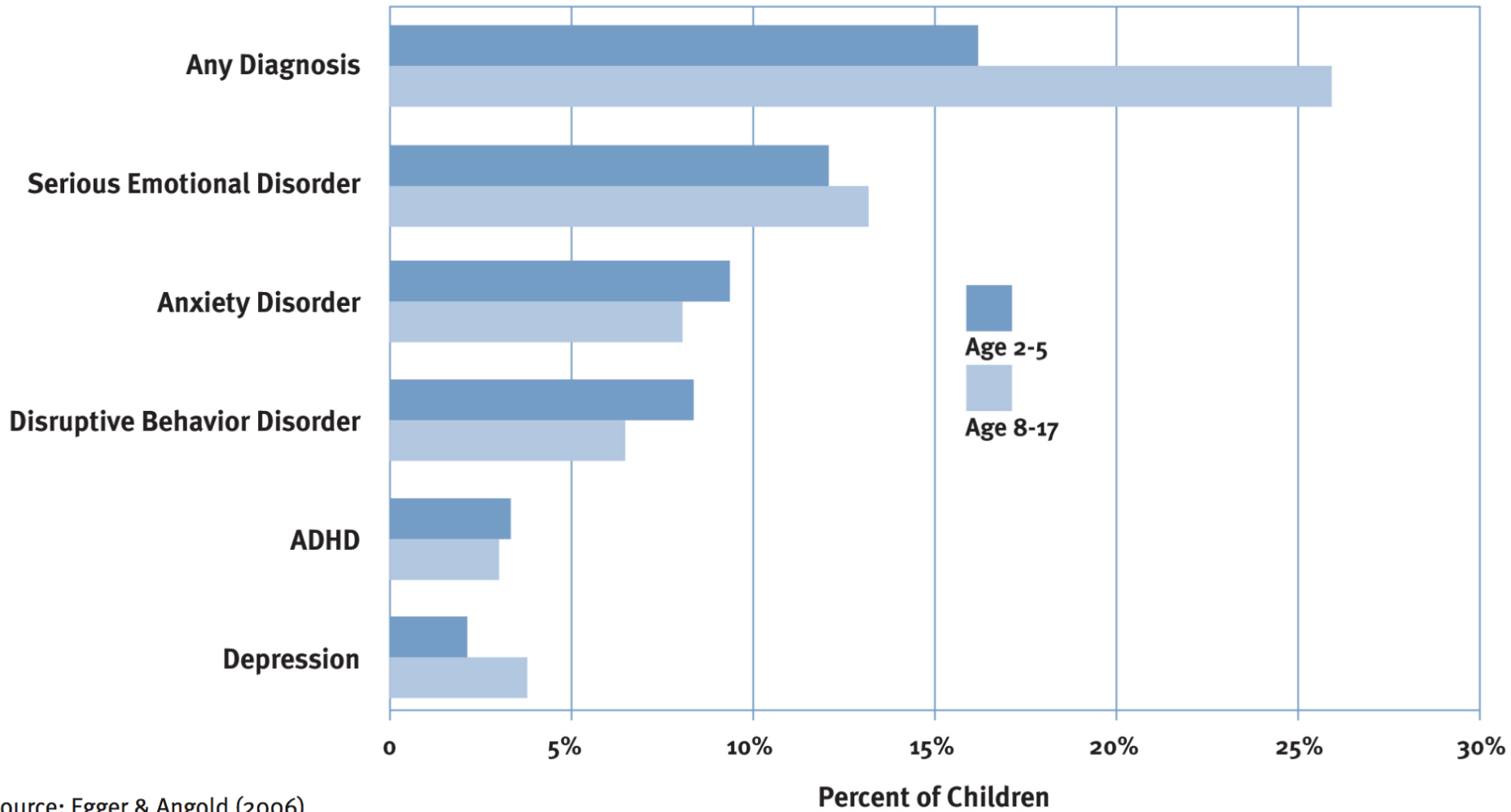
ECE Teachers' Skills (1)

The job skills needed to be an effective preschool teacher include the abilities to keep accurate records and to communicate with parents and administrators, and the interpersonal skills to network with other teachers. Teachers must have a clear understanding of the curriculum standards for preschool classes, and the knowledge and skills to plan lessons to teach students the core content to meet the learning benchmarks listed in the state and federal education standards.

ECE Teachers' Skills (2)

These standards require teachers to understand the basics of motor development, the different ways children learn, early language and literacy development, and how the child's brain develops. These skills also help the teacher plan lessons and activities to assist students in understanding and retaining the general knowledge necessary to learn in advanced grades.

Mental Health Problems Can Occur Across Childhood



Source: Egger & Angold (2006)

<http://developingchild.harvard.edu/resources/inbrief-early-childhood-mental-health/>

ECE Teachers' Understanding

Of Mental Health

- Significant mental health problems can and do occur in young children
- Cause by genetic + adversity in the environment
- Toxic stress & biological responses
- Limited tolerance to adversity
- Treat / help in the context of family, home and community

12 Twelve Characteristics

Laura J. Colker

of Effective Early Childhood Teachers

WHAT DOES IT TAKE to be an effective early childhood teacher? This is a question that has long gnawed at reflective teacher educators, idealistic teachers (especially those just beginning their careers), and worried families who place their young children in the care of another adult. Many educators feel that effectiveness as a teacher stems from a combination of knowledge, skills, and personal characteristics (Katz 1993).

While aspiring teachers can increase their knowledge and develop their skills, their personal characteristics—which involve the socioemotional and spiritual realms in addition to the cognitive—are likely to be more

© Tyler Hamlet



- Passion
- Perseverance
- Willingness to take risks
- Pragmatism
- Patience
- Flexibility
- Respect
- Creativity
- Authenticity
(knowing who you are and what you stand for)
- Love of learning
- High energy
- Sense of humor

Facilitate Learning by

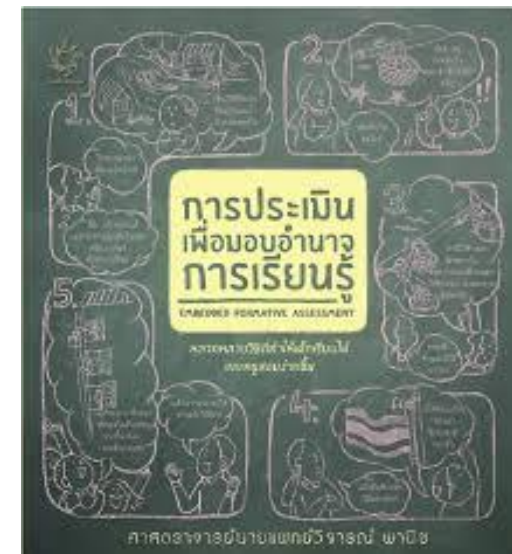
- Embedded Formative Assessment
- Followed by Constructive Feedback

Approve by

- Summative Evaluation

90 : 10

https://www.gotoknow.org/posts/tags/Dylan_Wiliam



Networking Partners in the Community

- Health Promotion Hospital (รพสค.)
- Reading campaign to young children



มานพ ขาววิมล

ครรชิต จักรสาร

พิชญา ตันธนวิกรัย

ครรชิต จักรสาร รพสต. สร้างมิ่ง อ. เลิงนกทา จ. ยโสธร 13 June 2016

การพัฒนาเด็กด้วยหนังสือ

ครรชิต จักรสาร

นักวิชาการสาธารณสุขชำนาญการ
รพ.สต.สร้างมิ่ง อ.เลิงนกทา จ.ยโสธร



สนับสนุนโดยกองทุนหลักประกันสุขภาพ อบต.สร้างมิ่ง

การดำเนินงานในพื้นที่

- โครงการวิจัยชวนกันอ่านหนังสือให้เด็กฟัง ปี 2552
- การส่งเสริมการอ่านโดย อสม.
- การส่งเสริมพัฒนาการเรียนรู้ในเด็กปฐมวัย โดยกระบวนการมีส่วนร่วมของโรงเรียนและชุมชน
- การส่งเสริมพัฒนาการเด็กด้วยหนังสือโดยครอบครัว
ต้นแบบ

ECE Teacher Knowledge & Skills

All of the above

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Know – Do Gap

- In Policy Systems
- In Education Systems ...
Knowledge and Skills of ECE
Teachers
- In Social Systems ... low socio-economic segment

Change Mindset on **GOOD BRAIN**

- 25% Borne
- 75% Acquire from ECD changing brain architecture & quality

Skills of ECE Teachers

- Learn from Rapid Advancement ... Neuroscience & EC Learning Research
- Follow Manuals **and**
- Learn from Action + Reflection
- Team Learning ... PLC
- Facilitating development of :
 - both normal & disadvantaged children
 - cognitive, social and emotional development
 - Lay foundation of EF & Growth Mindset

Skills of ECE Teachers

- Facilitating development of **parents** and community child rearing practice, eg. No TV / iPad