

The Foundations of Resiliency



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Resiliency research identified the specific risk factors that place individuals at-risk for poor life outcomes.

Poor Life Outcomes

- School failure
- Criminal involvement
- Mental illness
- Substance abuse
- Incarceration
- Vocational instability
- Poor health
- Failed relationships





Resiliency Research

- It was not which risk factors you had, but how many.
- Rutter determined that at three risk factors one begins to be at risk (Rutter, 1985).
- With each risk factor gained, your risk for poor life outcomes jumped incrementally.
- The more risk factors you gain' the more at-risk you become for obtaining more.

Risk

A. In the Child

- Fetal drug/alcohol effects
- Premature birth or complications
- Difficult temperament
- Shy temperament
- Neurological impairment
- Low IQ < 80
- Chronic medical disorder
- Psychiatric disorder
- Repeated aggression
- Substance abuse
- Delinquency
- Academic failure

D. Social Drift Factors

- School failure
- Negative peer group
- Teen pregnancy



B. Family Characteristics

- Low socioeconomic status
- Large family with 4 or more children
- Siblings born within 2 years of child
- Parent with depression
- Parent with substance abuse
- Parent with criminality

C. Family/Experiential

- Poor infant attachment to mother
- Long-term absence of caregiver in infancy
- Witness to extreme conflict or violence
- Neglect
- Separation /divorce/single parent
- Negative parent-child relationship
- Sexual abuse
- Physical abuse
- Removal from home
- Frequent family moves
- Teen pregnancy

The Resilient Population

- Researchers found a group of individuals with a high number of risk factors but having good life outcomes.
 - Good life outcomes as defined by resiliency research, are graduating high school, avoiding criminal involvement and substance abuse, stable mental health, vocational stability, good physical health, and maintaining positive long-term relationships.
- These individuals seem to have specific protective factors that insulated them from the risk in their lives.
- You needed enough protective factors to offset the number of risk factors you possessed.



Protective Factors

Qualities of the Child

- Positive temperament, adaptable, “easy baby”
- Autonomy and independence as a toddler
- Problem solving skills at school age
- Gets along with others
- Interpersonally engaging, “likable”
- Sense of humor
- Empathy
- Perceived competencies
- IQ > 100
- Good reader

Protective Outlook/Attitude

- Adolescent feels confident that life events are under his control
- The adolescent has positive and realistic expectations for the future
- Adolescent actively plans for the future
- Female teenager is independent-minded



Family Characteristics

- Lives at home
- Positive attachment with parents
- Perception of parental warmth
- Inductive, consistent discipline by parent
- Established routines in the home

Social Support from Outside the Family

- Adult mentor for child outside immediate family
- Extra adult help for caretaker of family
- Support for child from friends
- Support for child from school
- Support for family from church
- Support for family from work place

Example

- Emmy Werner studied everyone born on the island of Kauai in 1955
 - 698 infants
 - Birth to adulthood - age 32
- Individuals experiencing fewer risk factors did better in life
- One-third of children who experienced numerous risk factors were resilient
 - Protective factors were found to offset the risk factors present

Werner, E.E. 1989 High-risk children in young adulthood: A longitudinal study from birth to 32 years. American Journal of Orthopsychiatry 59:72-81



A stylized, purple wireframe illustration of a human brain, showing the intricate network of neural pathways and gyri. It is positioned in the background, centered horizontally, and partially obscured by the text.

Neuroscience Has Helped to
Identify The Foundations of
Building Resiliency

Step 1: Ritualize Anchor Points

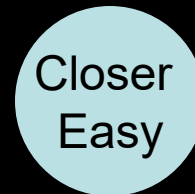
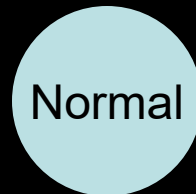
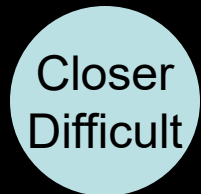




Temperament
“How you react”



"How you react"



Reinforcement

- Humans engage in behaviors that are rewarding
- There are natural (food, water, sex, nurturing) rewards as well as artificial rewards (money, drugs)
- The nucleus accumbens increases the release of dopamine in the reward pathway
- All behaviors that are maintained receive reinforcement in the brain



All Maintained Behaviors Are Reinforced



REWARD→

Change in behaviors
require change in
perception and
some form of
reinforcement

Designing A Successful Intervention

- Focus on actions
- Make it valued by the amygdala
 - Need to be safe
 - Need to be wanted
 - Need to be successful
- Establish a visual cue
- Maintain predictable persistent practice
- Recognize when it is successfully achieved





Predisposition of How You React to Stimuli

Based on your understanding of temperament

- **Learn**
 - Based on what we know
- **Ritualize**
 - To help chemical balance
- **Parenting helps reshape chemical reactions**
 - When tone between your heart beats does not decrease, it prevents the heart from appropriately responding to stress.
 - The improvement of the dopamine receptors damaged by stress.
 - Exposure to sensitive parenting counteracts some effects.

Anchor Points

- **Life – Wake-up, Main Meal, Bed-time**
- **Those resistant to building relationships require chemical stability first**



Neuroscience Research on Rituals

- Rituals are critical for maintaining homeostasis.
- Individuals with good rituals rebound from crisis faster



Step 1: Ritualize Anchor Points



Step 2: Promote Social Comfort





HIGH EMOTIONAL EXPERIENCES

“What you do when stressed”

The Role of the Amygdala

Action

- The primary role is survival
 - All stimuli pass through the amygdala.
- Intuitive understanding of nonverbal behavior and the environment
- It is the “pharmacist” of the brain.



The Amygdala

Three Values or Needs



- Safe
- Wanted
- Successful



The Amygdala & Emotions

- **First filter of the human brain**
- Remembers the best of things and the worst of things
- **Holds values & attractions**
- Alerted to differences
- **Eased by commonality**



The Cortex

- Logic and reasoning
- Along with the growth of the cortex, has come the evolution of language.
- Intercedes against the amygdala's innate or impulsive responses



The Evolution of the Cortex Has Led to the Theory That Man Is a Rational Creature

Two problems w/ the theory

- Although man has the most advanced **cortex** – making him the **most rational**.
- Man also has the dynamic **amygdala** – making him the **most dangerous**.
- Although the cortex has gotten bigger – the amygdala can still seize **control** – *hypersensitive*.



Every Social Interaction Is a Mystery



- Amygdala
 - Accurately reads the nonverbals of others
 - Tends to project less threatening nonverbals
- Insula
 - Predicts the actions of others
 - Predicts your actions



- Amygdala
 - Lacks the ability to read the nonverbals of others
 - Tends to project threatening nonverbals
- Insula
 - Does not predict the actions of others
 - Predicts your actions

The Amygdala

- **Alerted to differences**
- **Eased by commonality**



Lots of Easy Ways to Achieve Social Comfort in the Classroom



Stand if you like...

Stand if you like...

Pizza



Stand if you like...
Music



Stand if you like...
Movies



Stand if you like...

Diamonds



Stand if you like...

Sports



Studies on Social Comfort



Let's Do an Interest Survey



I would rather listen to



Rap



Pop



Rock

I am most likely to wear



Nike

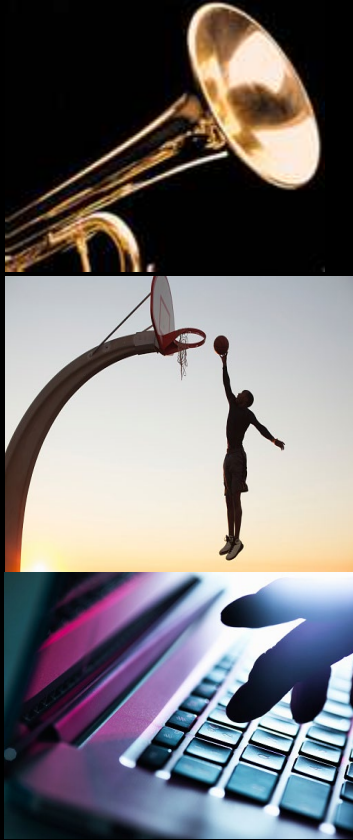


Adidas



Under Armour

I am more into



Music

Sports

Computers

“Thin Slices”

- Humans generate a range of instantaneous judgments on things like character, personality, and intentions.
- Based on 30-second video clip observations
 - Strangers were able to accurately predict the ratings of teachers by students who had interacted with the professor over a whole semester.
- Meta-analysis 44 studies
 - Nalini Ambady and Robert Rosenthal 1992



The Question Is

Why Do People Subconsciously Make
Instantaneous Decisions about Other
People?



In Every Encounter, the Emotional Brain Seeks

- Safety
 - Facial cues that place people at ease lower the reaction of the amygdala.
- Familiar
 - Familiarity is predictive of agreement.

Judge for Yourself



Public Speakers Who Smile Receive Better Ratings

Greeting Rituals

- A clear message that they are wanted
 - Smile
- Reinforce a rule
 - Smile



Paranoid Individuals Think You Are Out to Get Them

Learn to Focus on Commonality



- The amygdala is alerted to differences and eased by commonalities.
 - Conditioned to focusing on differences
 - Takes practice to change patterns

Neuroscience Research on Relationships

- Resiliency studies found relationships to be the universal protective factor.
- Neuroscience found relationships to elevate oxytocin.
- Regulates cortisol
- It enables the prefrontal cortex to maintain control over the limbic system.



Step 2: Promote Social Comfort

Not Just
Ice Breakers

Must Focus
on Commonalities



Not Just
Social Activities

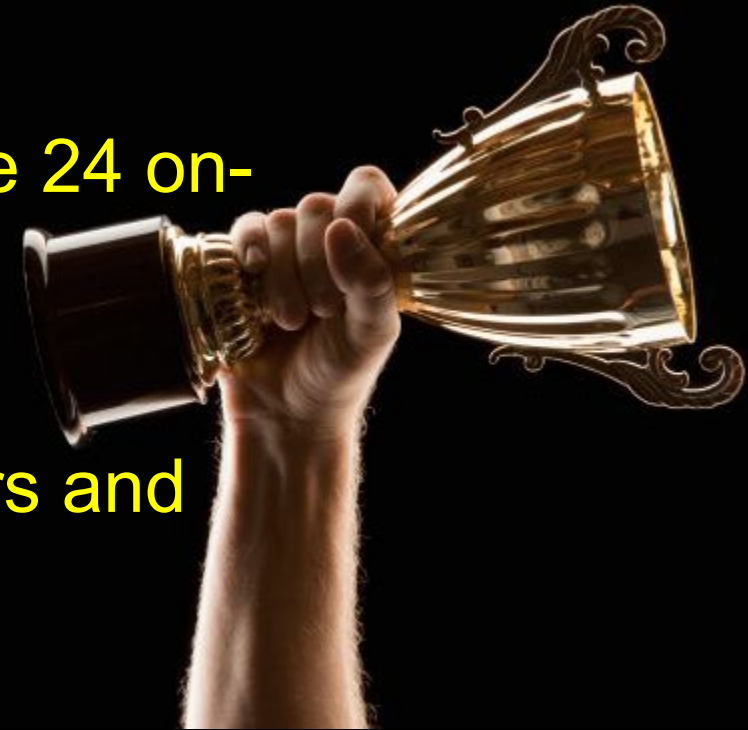
Step 3: Build Competencies

Every competency improves brain function
increasing the capacity to make better
decisions.



First Resiliency Based Mental Health Program

- Making sure children and adolescents were in homes with good rituals.
 - But we learned we had to support the home 24 on-call support.
- I assigned every client a mentor.
 - But we learned we had to teach our mentors and clients how to find social comfort.
- Build competencies
 - But there was an unforeseen issue of why competencies were gained so slowly.



Gaining competencies requires

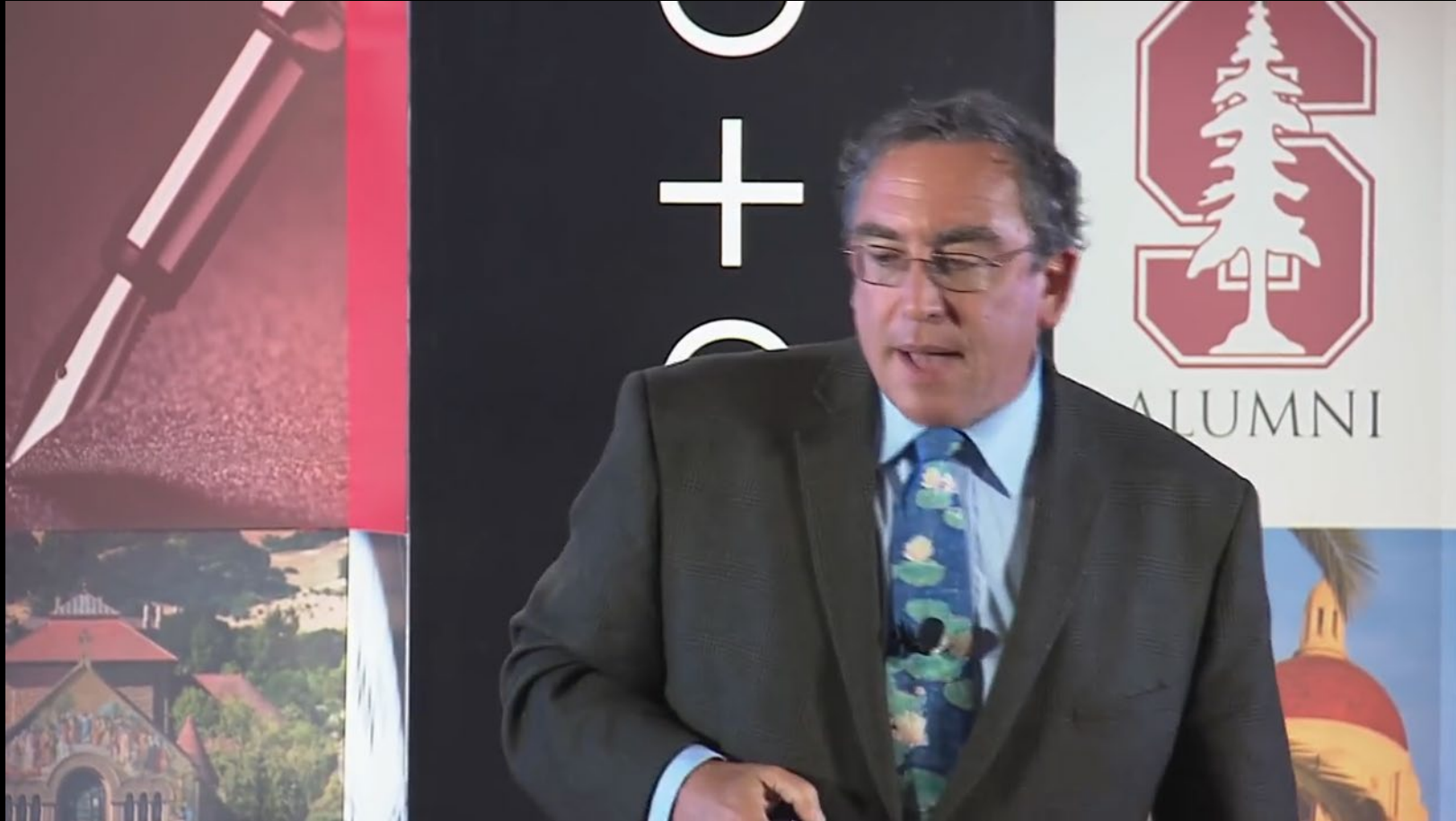


Drop in Ability to Focus

- Focus has been a casualty of technology.
 - Small, Moody, Siddarth and Booheimer 2009
- Internet searching appears much more stimulating than reading.
- Due to extensive exposure, the brain attends more to visual information.
- Constant use has the potential for impaired attention.



How Multitasking Is Affecting the Way You Think



Focus Improves Brain Function



- Longitudinal study
 - 20 years of focus training produced intricate connections between prefrontal and parietal cortex, and insula
 - More efficient communication between regions
 - Eileen Luder 2012
- This connection is responsible for
 - Improved understanding of nonverbal cues
 - Improved monitoring of body functions
 - Improved perception of self-image

Focus Improves Performance

- Study of 51 marines
 - Half did 12 minutes of focus exercises for eight weeks
- Marines that did exercises
 - Improved memory capacity
 - Better mood stability
 - Better ability to perform under pressure
 - A. P. Jha 2010



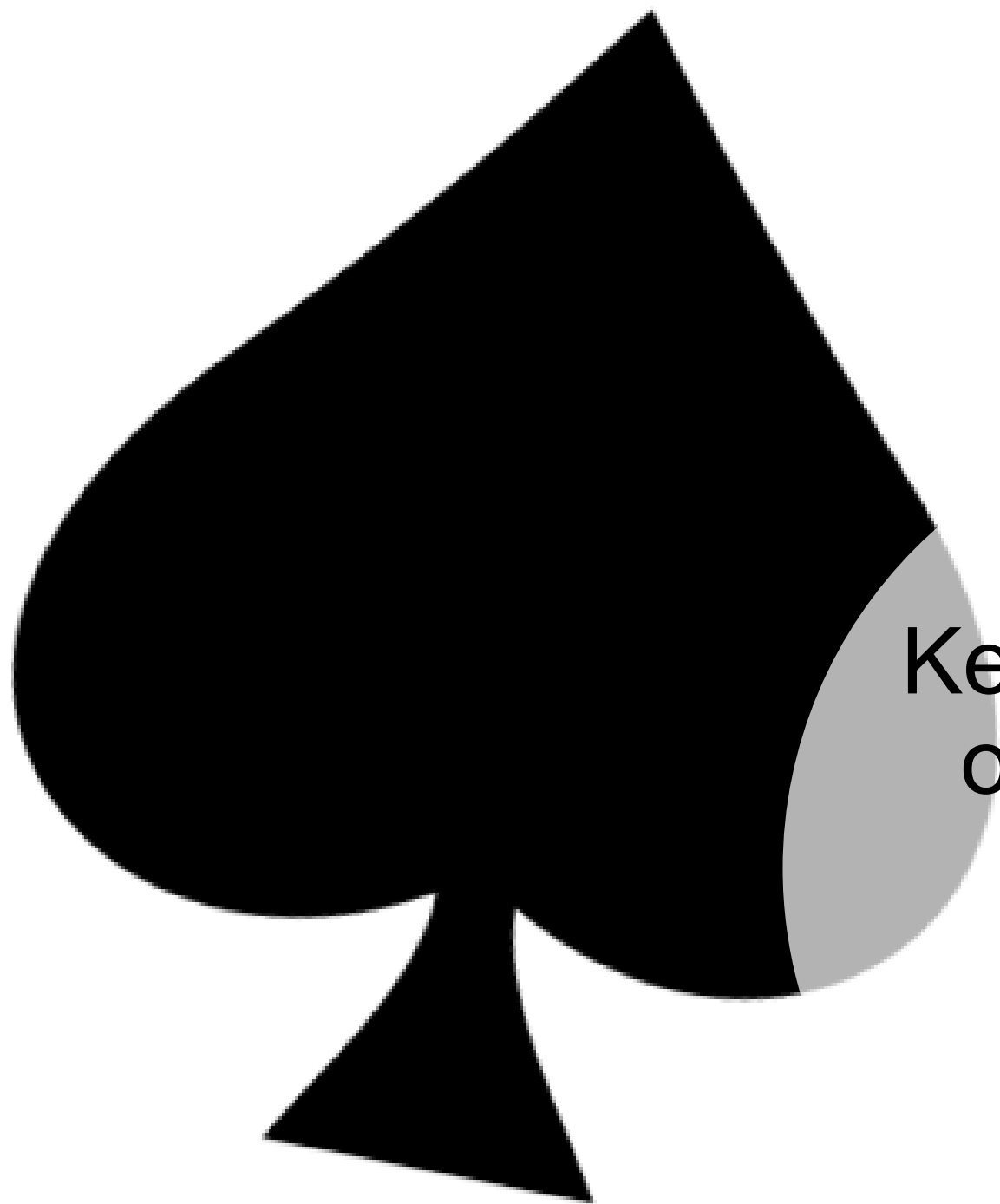
Focus Improves Emotional Stability

- A meta-analysis of six studies with a total of 593 patients who did focus exercises or placebo
 - Patients who had three or more episodes of major depression had significantly lower rates of relapse if they were in the focus group.
 - Piet and Hougaard 2011
- Focus training has been found to alleviate
 - Anxiety
 - Panic disorders
 - Phobias



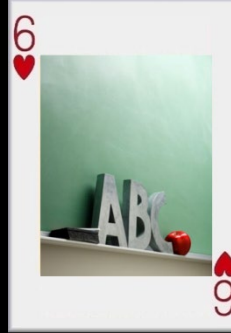
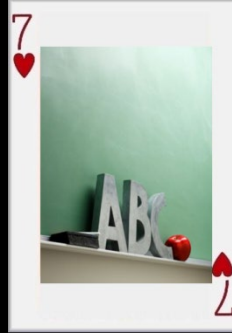
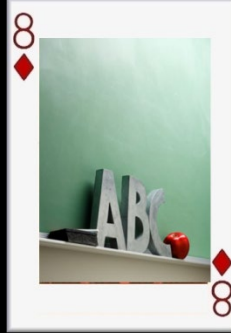


Help
Individuals
Improve
Their Focus



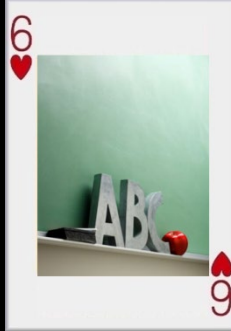
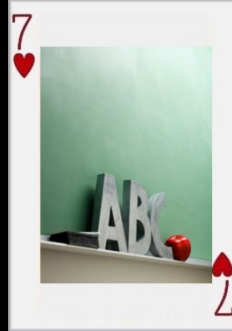
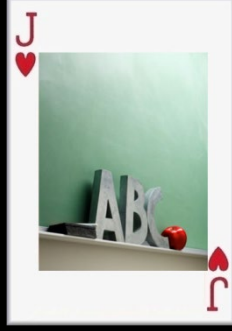
Keep Your Eyes
on the Ace of
Spades



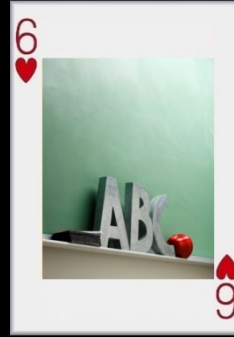






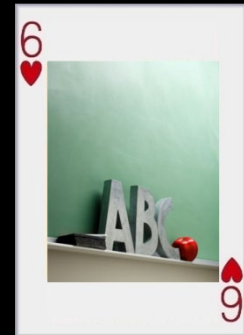








Under Which Card is the Ace of Spades



Two Keys to Improving Focus

1. Increase speed

- Allows the brain to reduce energy

2. Increase duration

- Allows the brain to increase efficiency
- More significant for children and adolescents



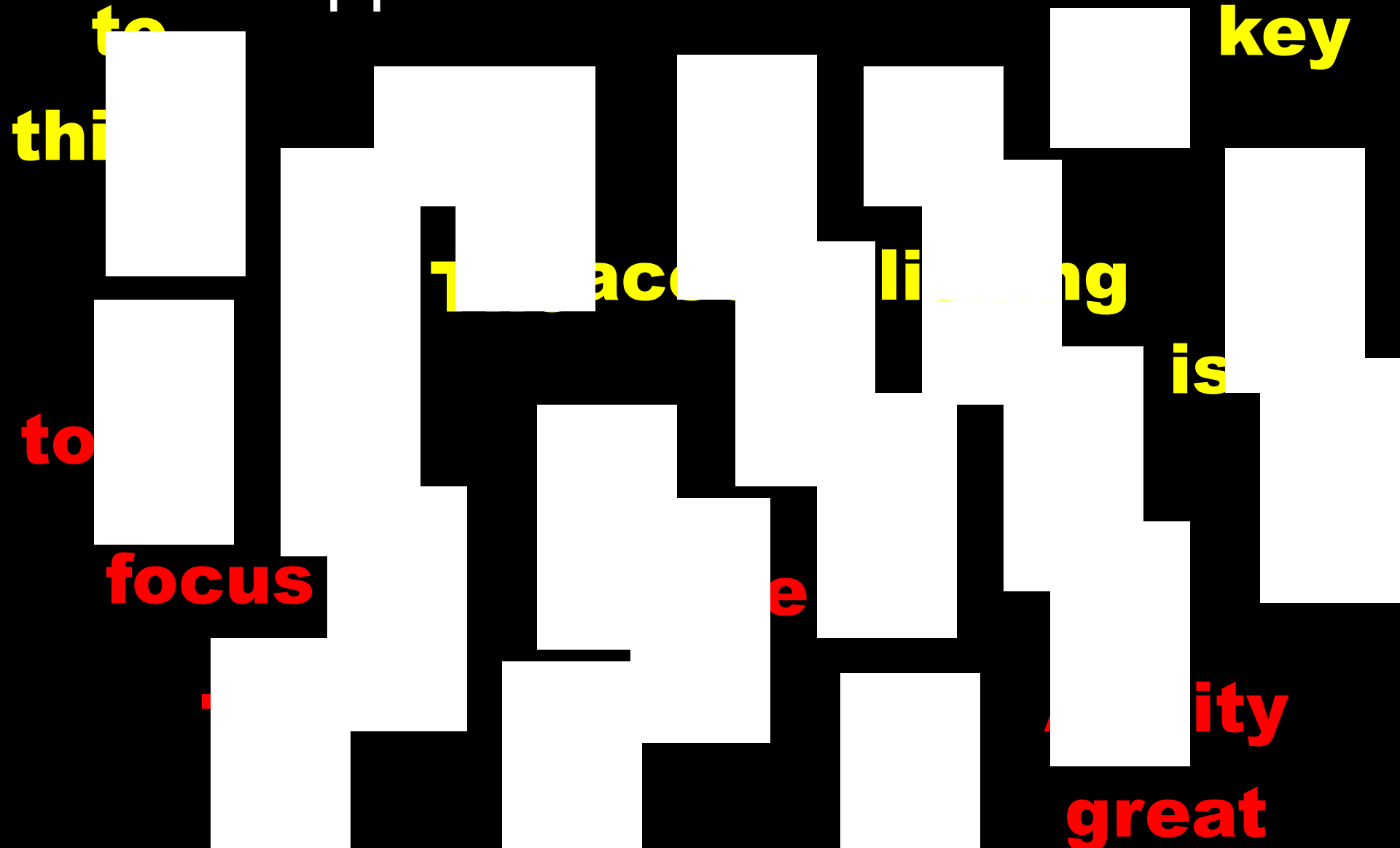
Example of Increased Speed



A hand is shown with the index finger pointing upwards. A red string is tied around the middle joint of the index finger in a small bow. The background is a solid teal color.

Remember the Phrase that Appears

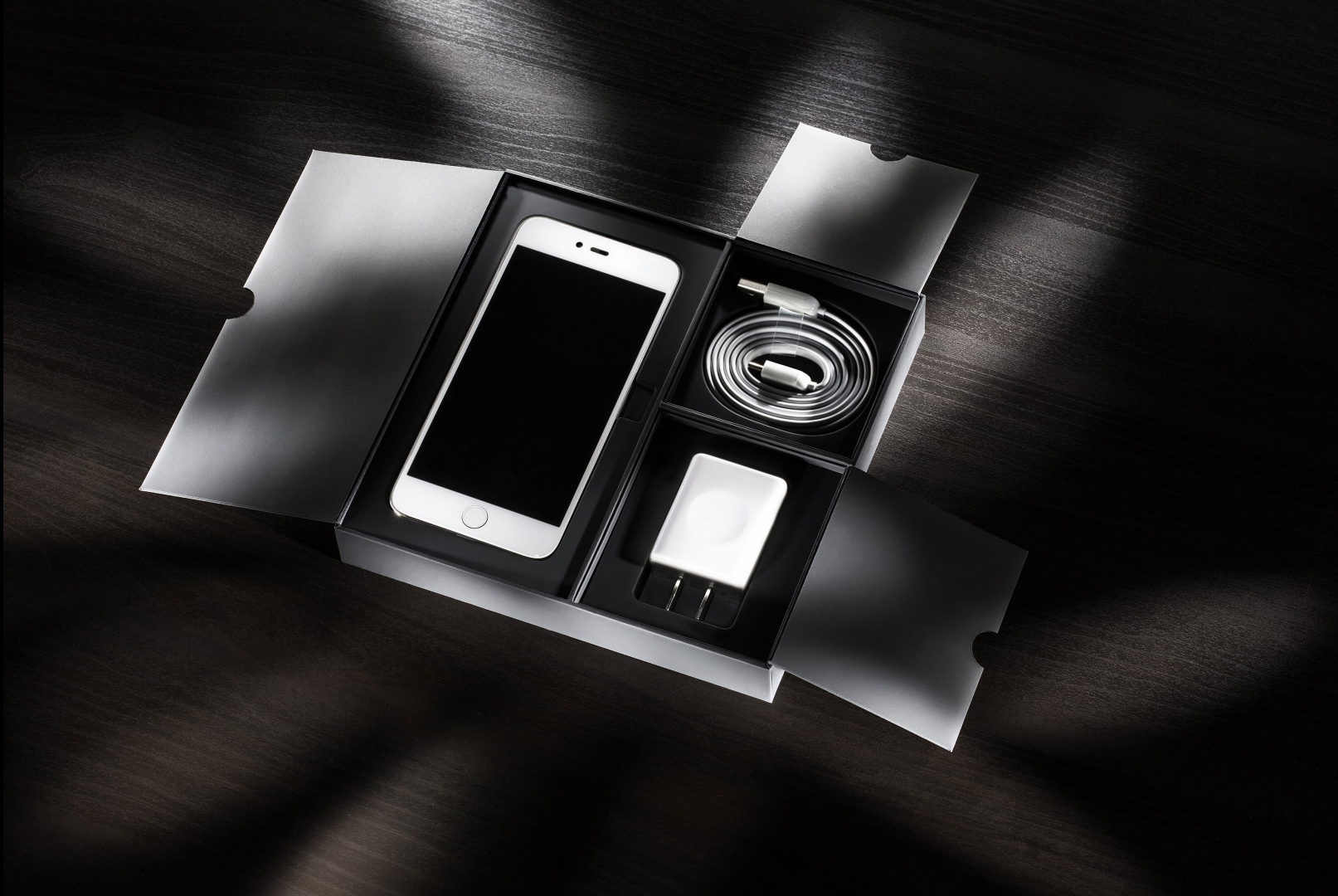
Remember the Phrase that
Appears in **Yellow** or **Red**



What is the phrase?

The ability to focus is the key to accomplishing
great things.

Not Trying to Put Technology Back in the Box



A young man with dark hair is shown in profile, looking intently at a computer monitor. He is holding a small piece of popcorn in his right hand and a bag of popcorn in his left. The bag has the word 'ACQUA' and some other text on it. The background is dark, and the light from the screen illuminates his face and the popcorn. The overall mood is focused and somewhat somber.

Teach Teens About Their Brains

- One hour unplugged every day
- Do focus drills
- Do important tasks as a single task activity

Neuroscience Research

- To gain competencies, individuals require focus.
- Greatest things are accomplished when we focus.
- Gaining competencies retrains to subconscious brain into believing that you can accomplish other things.



Step 3: Build Competencies

Every competency improves brain function
increasing the capacity to make better
decisions.



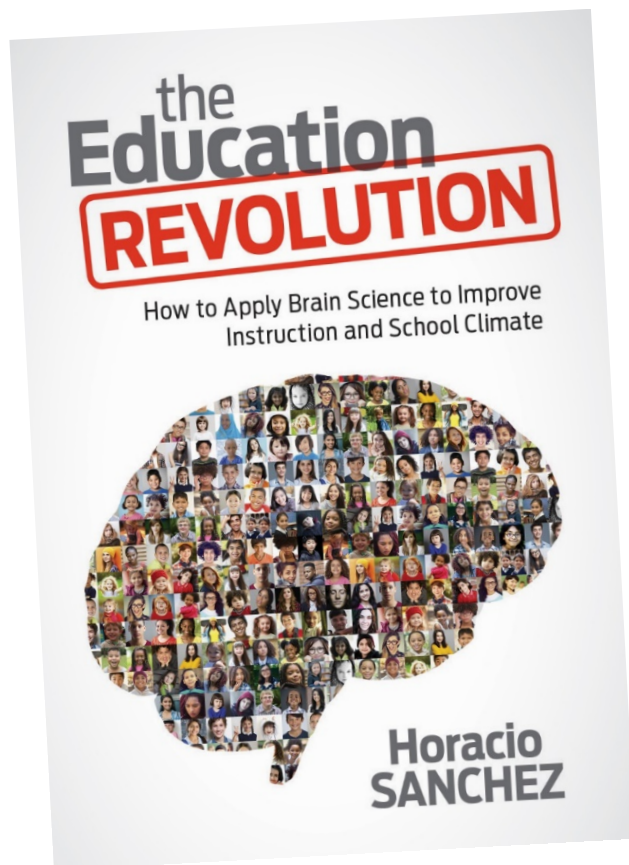
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Learn More About the Brain
in Horacio's New Book
The Education Revolution

Book Review

"Horacio Sanchez combines expertise in education, psychology, and neuroscience with extensive teaching experience and extraordinary insight into what makes us all behave the way we do. If we follow his expert advice in this book, a genuine Education Revolution is truly possible—one that reveals the greatest learner each of us can be. Our best hope for the future is having each youth learn and live up to his full potential. This is a revolution we all need."

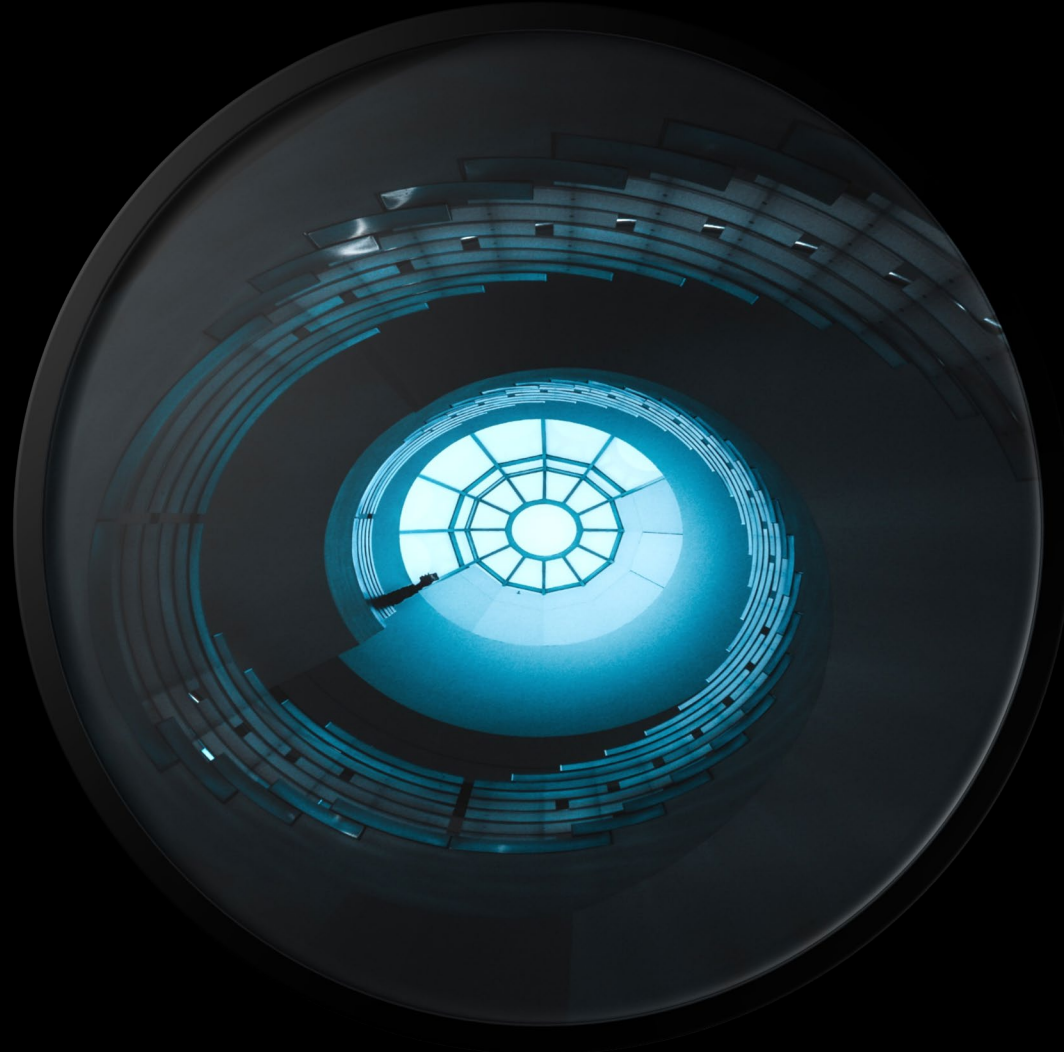
DAVID L. KATZ MD, MPH, FACPM, FACP, is the founding director (1998) of Yale University's Yale-Griffin Prevention Research Center, and current President of the American College of Lifestyle Medicine.



Now We've Come Full Circle



Resiliency Theory



Risk Factors



Resilient Population



Enough Protective Factors



Three Steps



Ritualize Anchor Points



Promote Social Comfort



Build Competencies



Shift the Subconscious to Believe We Will Succeed

