

# The Foundations of Resiliency



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.
- At three risk factors, you begin to be at risk.
- 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 gaining more.



# The Resilient Population

- Researchers found a group of individuals with a high number of risk factors but having good life outcomes.
- 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.



- 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*



# Neuroscience Has Helped to Identify The Foundations of Building Resiliency



# Step 1: Ritualize Anchor Points







Temperament  
*“How you react”*



# 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 vagal tone does not decrease, it prevents the heart from appropriately responding to stress.
  - Variant of DRD2 dopamine receptors
  - 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 Major Transitions



## Step 2: Promote Social Comfort





## HIGH EMOTIONAL EXPERIENCES

*“What you do when stressed”*

# The Role of the Amygdala

## Action

- **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 **biggest cortex** – making him the **most rational**.
- Man also has the **biggest amygdala** – making him the **most emotional**.
- 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 own 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 own 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**

# 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 lowers the reaction of the amygdala.
- Familiar
  - Familiarity is predictive of agreement.

# Greeting Rituals

- 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



## **Commonality Activities**

- **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



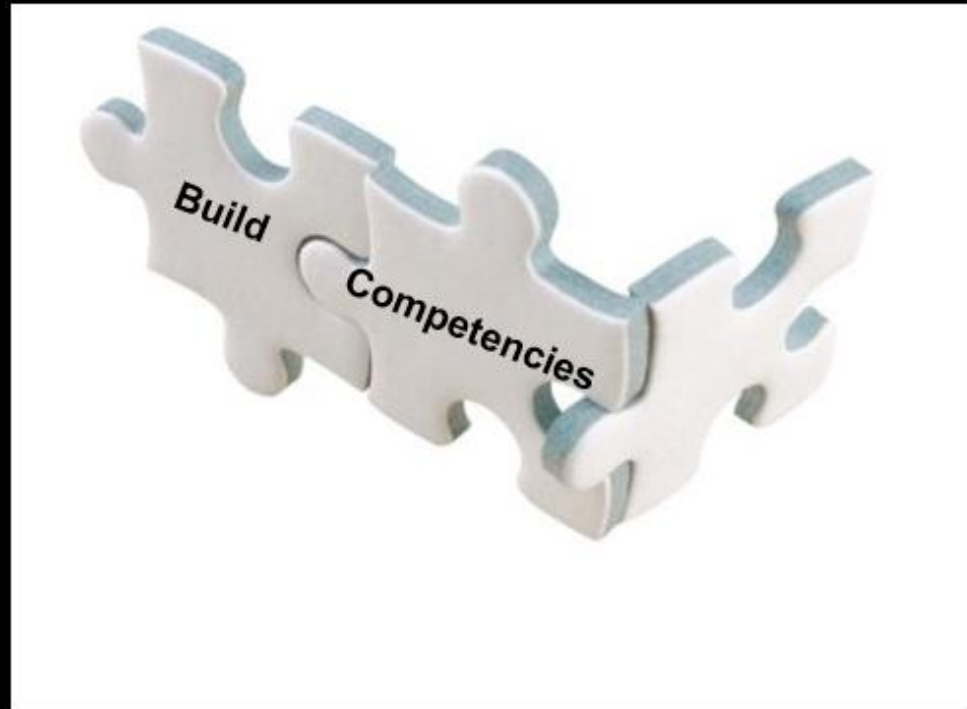
Not Just  
Ice Breakers

Must Focus  
on Commonalities

Not Just  
Social Activities

# Step 3: Build Competencies

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





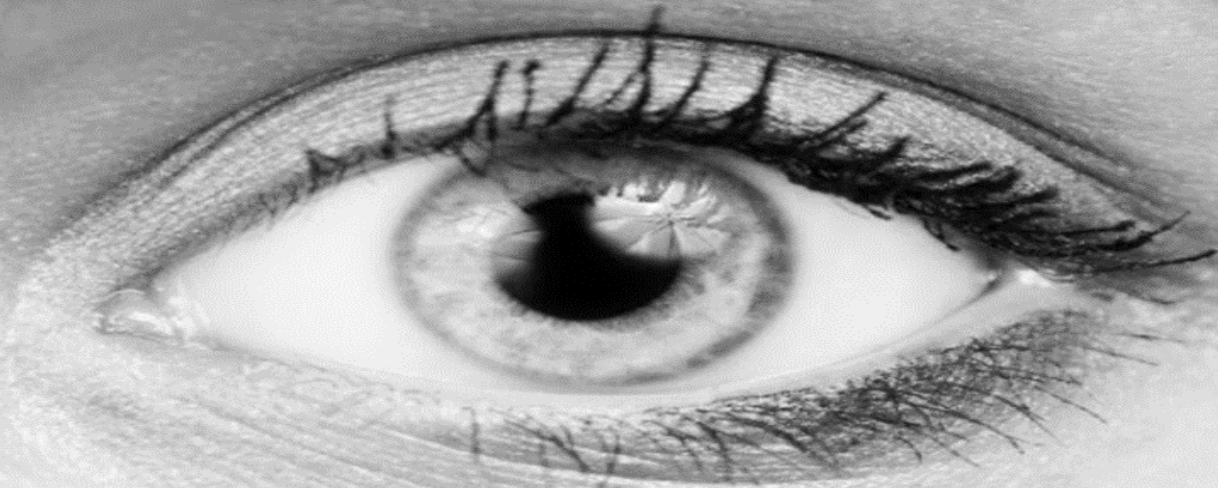
# First Resiliency Based Mental Health Program

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



Gaining competencies requires

FOCUS



# 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 potential for impaired attention.



# How Multitasking Is Affecting the Way You Think

[How Multitasking Is Affecting the Way You Think with Clifford Nass](#)



# 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

- 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 also been found to alleviate
  - Anxiety
  - Panic disorders
  - Phobias

# Help Individuals Improve Their Focus





# Two Keys to Improving Focus

## 1. Increase speed

- Allows the brain to reduce energy

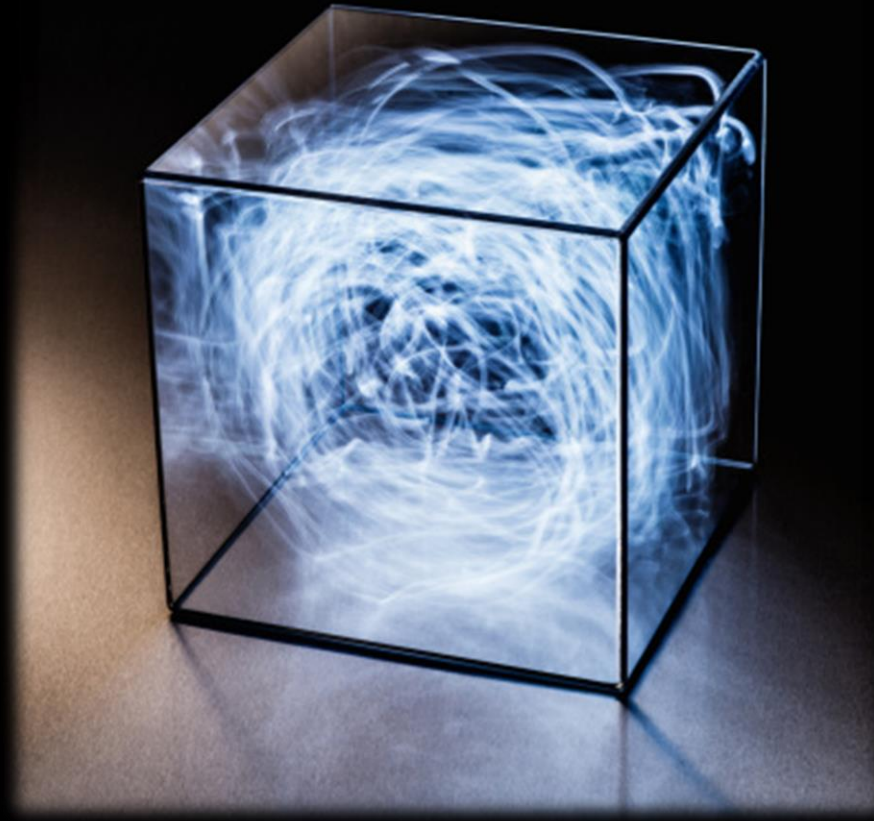
## 2. Increase duration

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

# Example of Increased Speed



# Not Trying to Put Technology Back in the Box



# Teach Students About Their Brain

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



# Neuroscience Research

- In order 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.



# Social Media

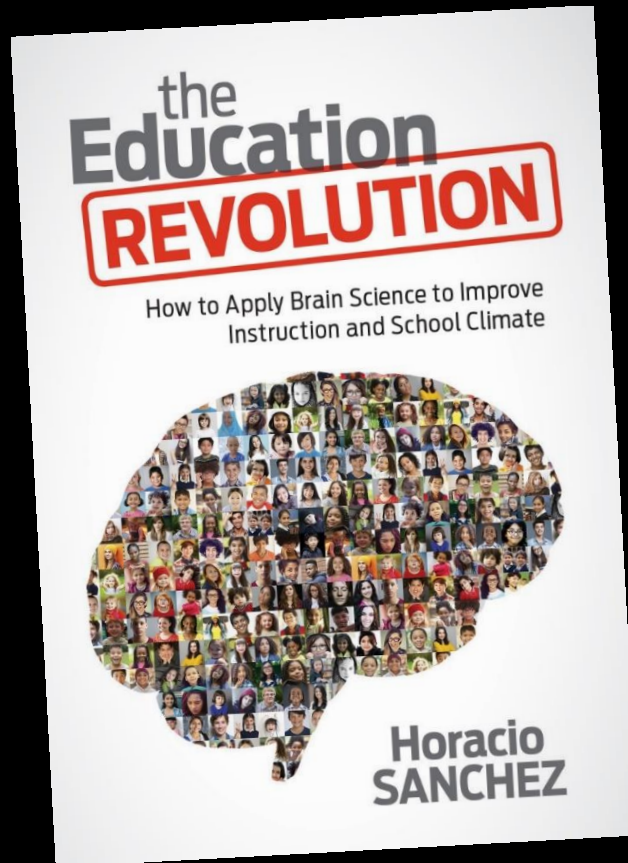
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<https://www.facebook.com/Resiliency-Inc-122261404853500>

Horacio provides brain facts at: <https://twitter.com/ResiliencyInc>

<https://www.linkedin.com/in/hsanchezceo>

# 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

