



**BODY
ACTIVATED**
LEARNING


Level 1 Certification Course



1

Goals for Today

- Understand the power of the senses to influence self-regulation and adaptability to the world around you
- Be able to categorize movements and activities according to the Body Activated Learning framework to improve you ability to choose activities that get you outcomes you are looking for.
- Learn exercises, activities, and strategies that can fit your family, classroom, or community needs
- Understand the sensory similarities and differences of children with ADHD, LD, Down Syndrome, and Autism
- Know your why - Decide, Commit, Act



2

Our New Reality in a Digital World

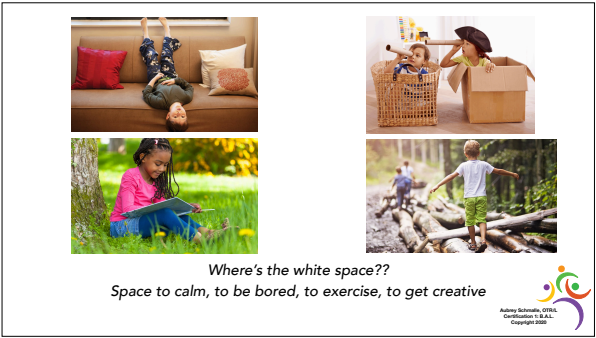


3



Kids growing up in a Digital World
Trade Movement for Technology

4



5

Where's the white space??
Space to calm, to be bored, to exercise, to get creative





6

Where's the opportunity to connect with people **INSTEAD**
OF devices to build relationships and collaboration??



Development is disrupted:
Children are getting wired for Distraction and
Disorganization



Sensory
and Information Overload

VS



Focus and Filtering to accomplish goals



7



For learning, who is watching out for the
hidden impact of engaging with technology?



8

Piaget's 4 Cognitive Stages

0-2 Years	Sensorimotor stage: sensory experiences and physical action
2-7 Years	Preoperational stage: words, images, symbolic thinking
7-11 Years	Concrete operational stage: logical reasoning and classification of object/
11-15 Years	Formal operational stage: abstract reason, idealism, complex logic



9

This is NOT new: 2007

Instant Messaging/
Social Sites

Cell Phones

World Wide Web

LCD Screens

Lithium Batteries

Palm Pilots/
Digital Organizers

10

Marketers know how to tap into emotions to gain attention

Texts, Email

Slot machine Effect

YouTube

Need to be seen

Social Media, Notifications

Need to Reciprocate

Fear of Missing out

Impulse to compare self with others

11

Human Needs

Certainty	• assurance you can avoid pain and gain pleasure, safety, security
Uncertainty/Variety	• the need for the unknown, change, new stimuli, adventure
Significance	• feeling unique, of value, important, special or needed, independence
Connection/Love	• a strong feeling of closeness or union with someone or something
Growth	• an expansion of capacity, capability or understanding
Contribution	• a sense of service and focus on helping, giving to and supporting others

12

Technology Taps into Lower Needs

Certainty	• assurance you can avoid pain and gain pleasure, safety, security
Uncertainty/Variety	• the need for the unknown, change, new stimuli, adventure
Significance	• feeling unique, of value, important, special or needed, independence



13

BUT meeting higher needs when you feel safe and connected to the world around you is what builds lasting happiness and success

Connection/Love	• a strong feeling of closeness or union with someone or something
Growth	• an expansion of capacity, capability or understanding
Contribution	• a sense of service and focus on helping, giving to and supporting others



14

Physiological Changes from Screen Use Affect How Kids Feel and How They Sleep



15

Blue Light From Screens

Boosts energy and mood but exposure at night can disrupt melatonin production and sleep

16

Blue Light

Pros	Cons
Helps regulate circadian rhythm	Passes through the lens and cornea more easily than UV rays, causing damage over time
Boosts energy and mood	Blue light is scattered and harder to focus on, contributing to digital eye strain
Boosts alertness and cognitive function	If exposure is high at night, can disrupt the circadian rhythm and block melatonin production

Retrieved from: www.allaboutvision.com

17

Impact of Technology and Blue Light on Vision

Nearsightedness

Poor functional vision

Retinal Damage

Computer Vision Syndrome

Affected an average of 19.7% of kids in 2015

Dry Eyes

18

Amblyopia

- Affects 1.3% to 3.6% of children
- Symptoms: Mismatch in visual information from each eye causes one eye to drift away rather than both eyes working together

Birch E. E., 2013.

Convergence Insufficiency and Reduced Accommodation

"About 80% of children with learning disability are shown to be affected with accommodation and vergence anomalies"

Hussaindeen, J. R., Shah, P.,
Ramani, K. K., & Ramanujan,
L., 2018



19

Asthenopia in Children Digital Eye Strain/Computer Vision Syndrome 19.7% (12.4–26.4%).

Vilela, M. A., Pellanda, L. C.,
Faria, A. G., & Castagno, V. D.,
2015.

- Symptoms: Itching, Redness, tearing, vi headache, light sensitivity, neck strain (S Wolffsohn, J. S. (2018)
- Behaviors: Eye rubbing, excessive blinki sustaining visual focus, fatigue
- Impact: Blurred vision, difficulty focusing, pain/discomfort



20

Postural deficits leave kids uncomfortable and irritable



21

Postural Development: Environmental and Activity Shifts

- In a study of 207 children and adolescents, 180 with non-specific neck pain reported flawed extension in their neck and back while studying and using smartphones and tablets. (Fares, Fares, &Fares, 2017)
- 21% also had eye symptoms (binocular vision deficits, digital eye strain, light sensitivity)
- 82% reported a change in psychological and social behavior



22

Screen Use also Impacts Learning



23

Learning impact



Adolescent Brain Cognitive Development (ABCDstudy.org)

11,874 youth, ages 9-10, participating in the study, including 2,100 young people who are twins or triplets. All will be followed through young adulthood.

Year One Findings:

MBI's found significant differences in the brains of some kids who use smartphones, tablets, and video games MORE THAN 7 HOURS PER DAY.

Premature thinning of the cortex. That's the wrinkly outermost layer of the brain that processes information from the five senses.

Kids who spend MORE THAN TWO HOURS PER DAY on screens got lower scores on thinking and language tests.



<https://www.abcdstudy.org/newsroom/brain-study-reveals-effects-of-screen-time-on-kids-brain>




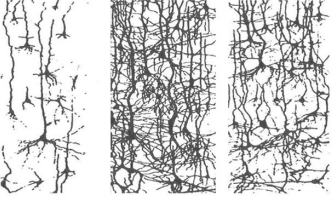
24

Pruning Process

AT BIRTH

6 YEARS OLD

14 YEARS OLD





25

Digital Dementia: We just can't retain it all

Volume of Information

Computer storage Capacity



26

Social/Emotional Impact



27

Social/Emotional Impact

- **Self Worth/Resilience:** Loneliness and depression, Anxiety, Feelings of failure and inadequacy as children struggle with learning and academic success. The real world does not reward you as much as a video game does. It takes effort and persistence
- Comparison to others and chasing "significance" over contribution. How do you stand out in a world where different is normal?
- **Interpersonal/Empathy:** Desensitization to the impact of your words/actions on social media or in gaming chat rooms. There is no reset button in real life.
- **Interpersonal/Empathy:** Potential negative outside influences teaching and engaging with children in gaming chats and on social media



28

Neurodiversity collides with information overload



29

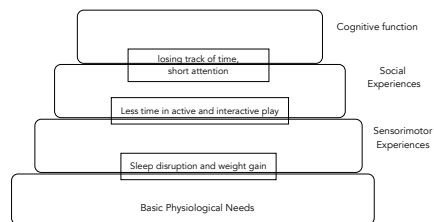
"School screen time couples with at-home smart device usage can on an average expose a student age 8-18 to media for more than 10 hours/day"

- Dr. Rahul Bhola, Pediatric ophthalmologist at CHOC Children's Hospital



30

Behavior Changes



31

*We are left with Kids who are Distracted,
Disorganized, and Dysregulated*



32



*No wonder both adults and
kids are Distracted and
Disorganized*

33
