Su Nottingham – Central Michigan University
Al Craven – Adrian College

Developing Health Education Strategies with the Teenage Brain in Mind
Top Skills needed

In 2015
• Complex Problem Solving
• Coordinating with Others
• People Management
• Critical Thinking
• Negotiation
• Quality Control
• Service Orientation
• Judgement & Decision Making
• Active Listening
• Creativity

In 2020
• Complex Problem Solving
• Critical Thinking
• Creativity
• People Management
• Coordinating with Others
• Emotional Intelligence
• Judgement & Decision Making
• Service Orientation
• Negotiation
• Cognitive Flexibility

Source: Future of Jobs Report, World Economic Forum Alex Gray, Formative Content
Did anyone look up: Cognitive Flexibility?

Cognitive Flexibility is the ability to change what you are thinking about, how you are thinking about it and even what you think about it – in other words, the ability to change your mind.
Stand up if you work with adolescents and yell:

“Fun is all I’m having!”
Stand up if you teach HEALTH and yell:

Healthy Bodies and Minds…. THAT’S MY GOAL!!!
Stand up if you teach PE and yell:

✨ I maximize the human potential!
Stand up if you are an administrator and yell:

✨ My job is to make it all happen!
Stand up if you are a student and yell:

✦ Go:

“_________________”

(insert your team mascot)
Let’s learn about you!

✧ Stand up if this is your first time at this conference and yell:

✧ “Guess I’m a virgin!”
Stand up if you haven’t stood up yet and yell:

“Hey, What about ME!”
What will you get today:

• 50 minutes of health/sexuality strategies based on the developing adolescent brain
• Interactive, practical and movement based
“When people focus too much on technology, they lose sight of the true purpose of technology, which is to facilitate learning in the classroom.”

( Ben McNeely North Carolina State University)
Understanding the Brain.....
90% of what we now know about the brain we have learned in the last 10-15 years

But....

For the most part we have not changed how we teach
The Brain and Learning:

- People learn better with movement
  (breaks/within strategy)
Movement and the brain.....

- Enhances episodic learning and memory
- Increases **circulation** of blood
- **Differentiates** instruction
- Improves brain **function**
- Allows for **implicit learning (HUH?)**
- **Engages** the senses
- Provides a break from sitting = **refocused attention**
- **Stress**
- Improves the learning state
The CHAIR is the least effective environment for LEARNING!
Average composite of 20 students brains taking the same test

BRAIN AFTER SITTING QUIETLY

BRAIN AFTER 20 MINUTE WALK

Research/scan compliments of Dr. Chuck Hillman University of Illinois
The greater duration of time in a chair, the greater the depth of student despair.

Eric Jensen
Puberty Olympics

• Get into groups of three people
• Two cords...to “hold hands”
• Still attached...find:
  – Word
  – Definition
  – Pronunciation
• Bring it to check....
• THEN go get another set....
What do we know in particular about the teenage brain?
Teen’s Brain

Shift Happens:
rational, emotional & social
Difficulty in Self-Regulation

• Chemical changes = struggle to manage

• May cause behavioral and personality challenges

• Increased anxiety, depression, stress, eating disorders, sleep issues.....
Onset of Puberty

- desire for:
  - exciting,
  - rewarding &
  - emotionally charged experiences
Emotions

- Emotions are key in learning

- Teens learning to understand / manage their emotions
  - focused on their own feelings
  - poor at reading others emotions
    - Selecting friends
Developing Brain ≠ Inferior Brain

• Trouble anticipating consequences of their behaviors
• Weak at risk management
• Don’t predict the future very well
• Easily confused w/choice
• Don’t think about consequences
Underdeveloped Pre-frontal Cortex......

- Controls thoughts and actions

More interested in short term gratification
NOT delayed rewards
Today....we’ll talk about LEARNING.....
First....Let’s Talk about What the Brains SAVES!

- ARE WE MEMORABLE?
- DO WE HAVE ANY IMPACT ON BEHAVIOR?
- WHAT DO THEY TAKE AWAY???
Put on your “thinking caps” !!!

At your table....in groups
What a Brain Remembers..... ANY brain!

• Place the % cards in order...lowest to highest..

• Underneath each % card place the learning/teaching activity given that % brain retention.... After 24 hours.....
• The **TALLEST** person at the table please pick up the % poster at your table and line up ...in order standing behind each chair
• The **SHORTEST** person at the table please pick up the “**word poster**” ...sit in the chair
• Arrange yourself in **order** of what a Brain remembers...**lowest to highest**...in front of %
Here are the answers.............

• but there a code...there's always a code.....

• Colors are diagonal from the correct answer....
ANSWERS

With a LECTURE ....a brain saves........5%

It will delete 95% in the first 24 hours
The Brain and Learning:

• The brain needs novelty or interest... (can’t be bored)
Brain Rule # 4

Attention

We don’t pay attention to boring things

John Medina, Brain Rules
10:2 Theory

Every 10 minutes or so of new meaningful chunks of information, learners should be provided at least 2 minutes to process the information.
Talking Balls....‘til the ribbon ends

• Topic 1: The BEST THING about your school?
• Topic 2: What you’d like to CHANGE about your school.
• Audiences (including students) check out after 10 minutes (often LESS)

• Give core concept or general idea first

• Change what they are doing, even if just briefly.
The Brain and Learning:

• Best when applied to their lives
• Connected with real world
• Have MEANING!
Condom Costume

- Selecting and Using a Condom
The Human Uterus!

A meaning maker!
The Brain and Learning:

Needs to trigger emotion

• Fear,
• humor,
• happiness,
• nostalgia,
• Empathy.....
One way to do this is to.....

• TELL a STORY to create meaning.

Alligator River Story
Your Group’s Task (DISCUSS)

• Determine the ranking...
• slimiest ...........to least slimy...
• Be prepared to place the name cards in order when asked
Discussion......

• Character Name Cards – Place after all groups have decided........
Storytelling helps the Brain Retain...
5 Things need to happen for learning to occur:

1. State – (movement – not bored)
2. Meaning (apply /meaning-maker)
3. Attention (engaging)
4. Retention (novel)
5. Transfer (apply to their lives)

GOAL: HAVE AS MANY AS POSSIBLE!
“They will pay attention better, and they will remember what you have taught better.”

Blaine Ray, Fluency Through TPR Storytelling
You have 2 minutes.....

- Get up.....move around the room
- Examine EACH of the thumb-print voting continuums
- Then take your seat
Choose a partner....

• Share:
  – Something interesting
  – Something surprising / not surprising
  – Something you observed
Switch partners and tell partner

“What strategies are more effective than lecturing?”
To teach health education we need to establish a .......... 

Brain Compatible & Friendly Classroom Environment
References

1. Turnaround Tools for the Teenage Brain

2. Brain Rules, 12 principles for surviving and thriving at work, home and school
   John Medina, Pear Press, 2008

3. The Kinesthetic Classroom, Teaching and Learning through movement
   Traci Lengel, Mike Kuczala, Corwin & Regional Training Center, 2010

5. Teaching with Poverty in Mind
   Eric Jenson, ASCD, 2009

6. SPARK, The Revolutionary New Science of Exercise and the Brain

7. Thinking on your feet, 200 activities that move kids to learn
   Jean Blades, Action Based Learning, 2000
THE FEMALE BRAIN

- Logic Area
- Chocolate Area
- Curtain Cortex
- Ability to Judge TV Show within 1.5 seconds
- Mostly Unable to Keep to Oneself
- Parallel Parking Cell
- Need for Commitment Hemisphere
- Telephone Skills
- Opinions
- Listening
- Shopping
- Jealousy
- Professional Sports Particle
- Sense of Direction Neuron
- Sex (see note)

Note: Sex is not a function of the female brain.
CONTACT US?

• Su Nottingham – su.nottingham@cmich.edu
  or sunottingham@gmail.com

Website for materials:
www.nottinghamandcraven.org