

## Teaching the Male Brain II: Advanced strategies for the classroom teacher

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### Boys' academic attitudes

- Ability is more important than effort, image is the most important
  - Motivation suffers as a result – “too cool for school”
- Boys overestimate their academic competence
  - Even in the face of failure
  - Probably due to drive for competition
- Math, science, and sports are male domains
  - In spite of gains for women in STEM areas
- Influence of home environment
  - Parents support boys in education – way too much support

### Academic effect of attitudes

- Boys are clueless as to their standing in a class
  - Belief of success is centered on ability
  - Failure is teacher's fault
- Boys have few skills in self motivation
  - If it doesn't work they way they do it, they have no resources to change
- Boys become defensive when they can't compete
  - Result is that boys belittle importance of school success
- Boys exaggerate the importance of success in sport
  - In spite of evidence that success in sports is rare

### What characteristics of boys should make school easy?

- Natural inquisitiveness
  - Need to know how things work
- Emphasis on details/facts
  - Boys know lots about subjects they like
  - Geography bee winners
- Competitive nature
  - Need to focus on indirect and cooperative and not on direct competition
- Ability to work in groups
  - Boys very peer oriented, what one does, his mates will do

### What does a boy do when asked to study?

- Glances at the book
- Underlines the material (usually examples or supporting statements)
- Answers questions (under duress)

#### What is the problem with this?

- Reading all the assigned material takes too long
- Inactive method of studying – impulsive student does not pay attention
- Does not provide any organization for review
  - Has no plan
  - Cannot see the big picture – does not promote concept development

### What should a boy do to study?

- Use energy bursts
  - Impulsivity can be a plus if student studies in short segments
- Use visual cues
  - Focus on pictures in text to provide retrieval cues for information
  - Visual display of information to enhance memory
- Develop memory skills early
  - Lyrics are easily acquired, so use music
  - Link information to area of interest

## Strategies for Hearing Deficits

- Train the ear
  - Phonemic awareness techniques
  - Phonic Phun – esp. blends and split syllables
    - Transformers/ Earobics
- Dictation
  - Early, write what is said
  - Later, give synopsis of what is said – preparation to take notes
- Use rhythm and music
  - Memorize poetry
  - Academic songs
    - [www.kidsknowit.com](http://www.kidsknowit.com), [www.singtolearn.com](http://www.singtolearn.com)
- Do you agree with his answer?

## Strategies for Visual Deficits

- Patterning
  - Physical training both hands and feet
  - Tessellations and fractals
  - Building with blocks or other building pieces
- Vision training
  - Problem is saccades
  - Mix up where they focus
  - EMDR – used with ADHD (Eye Movement Desensitization and Reprocessing)

## Strategies for Language Deficits (reading)

- Develop language fluency
  - Read to them
  - Get students to read out loud
  - Work in cooperative groups
- Use strengths to compensate for weaknesses
  - Graphic novels, magazines, and web sites
  - Book Bingo, Bookmarks
  - Books that are exciting, realistic, gory, scary, and plot driven

## Strategies for Language Deficits (writing)

- Make sure dysgraphia/dyspraxia is not present – provide scribes or computers if it is
- Grammar games
  - Grammar poker
  - Vivid verbs or abundant adjectives
  - Personal paragraphs, punctuation passages
  - Taking sentences/paragraphs apart
- Short writing
  - Headlines, epitaphs
  - First/last lines
  - Serial story

## Writing Poetry

- Use Haiku, Cinquains, Limericks, or Sonnets
  - Advantage for boys is the mathematical format
- Let them find the format
  - Give them several of the same variety
  - Have the students find out what the poems have in common
  - Use color on white/smart board to make rhyme scheme obvious
- Use poems with topics of interest to boys
  - she being brand by e. e. cummings and Paradise by the Dashboard Light by Jim Steinman are both about cars
  - [www.poemhunter.com](http://www.poemhunter.com), [www.poemsabout.com](http://www.poemsabout.com)

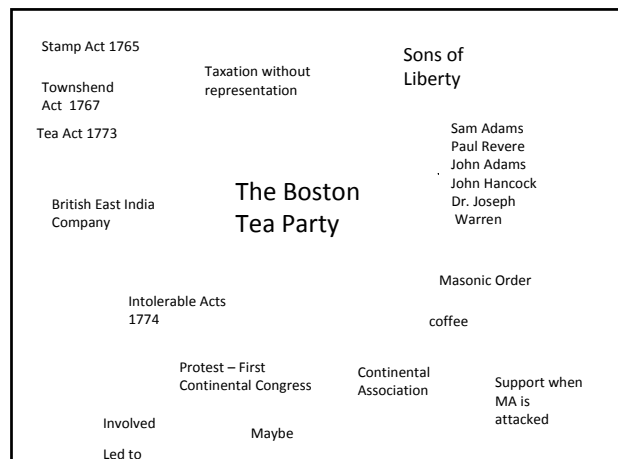
## Using Visual Skills

- Help turn the lesson into some form of graphical representation
- Weaving a story
  - Connecting characters with plot
- Comic strip
- Time lines – swap for review
- Family trees
- Story web or concept web
- Good underlining techniques – find the concept
  - Box the operator

## Find the concept, not the support

- On a cold December night in 1773, a group of rebellious American colonists some 5,000 strong marched from the Old South Meeting House to Griffin's Wharf on Boston Harbor in protest of the British tax on imported tea. As the crowd watched, men dressed loosely as Mohawk Indians boarded ships, chopped into crates with their hatchets, and dumped thousands of pounds of tea into the bay. This celebrated uprising, long hailed as the Boston Tea Party, was the spark that ignited the Revolutionary War, unifying Patriots across America.

*Boston Tea Party Ships<sup>SM</sup> & Museum*



## Disembedding in Algebra – when the words get in the way

If 3 times a number is increased by 7, the result is the same as when 72 is decreased by twice the number.

## Using Physical Skills

- Standing to answer/ask questions
  - Controls blurting out
  - develops attention skills
- Cuisenaire Rods – use with base 10 block sets
- Standing at the board to do math
  - Improves concentration
- Writing vocabulary to learn both spelling and meaning
- Battle of Gettysburg

## Use Their Interests

- Word origins - WOD
  - Latin & Greek basis, like taking apart a word
- Boy themes in literature
  - For reluctant reader, point out what he does read
- Action first
  - Do not select book because of the action only
- Boy writing prompts
  - Funny, scary, specific and open ended
  - The autobiography of Humpty Dumpty. The King's men were out to get me! Every sports story seems to end with the hero making the big play that saves the day. This story isn't like that at all.

## Use Their Curiosity

- Problem Solving
  - Logic puzzles, chess, bridge, jigsaw puzzles, scavenger hunts (literary references), 24
- PEMDAS
  - 8 3 11
  - 8 3 10 6 5
- Reality Projects
  - Work in groups, present to class
  - Investment club, building contractors, sports tournaments

## Use Competitive Spirit

- Debate
- Academic Basketball
- Help boys develop indirect competition – personal best
  - Keep track of all grades
  - Periodically (but regularly) review grades to determine what is easy and what needs work
- Mythbusters Approach

## Mythbusters Approach

- Identify a science-based belief which may be questionable
- Research what is known
- Develop methods to test the belief – the wilder the better
- Select several methods to actually test
- Assign different groups to different methods
- Run the tests
- Compare the results
- Busted or Confirmed?
- Engineering – the natural connection between math and science  
<http://disc.discovery.com/fansites/mythbusters/mythbusters.html>

## Review and Extra Help

- The problem with reviewing material
  - They know just enough to not hear what they don't know – make them teach a section to the class
- The problem with asking for help
  - They don't know what it is they don't know
  - “Coach” instead of teach
    - Focus on skill development
    - Use Pregrading – hand out the grading rubric for projects and papers
    - Peer review works only if you don't put BFs together

## Proofreading and Checking Work

- Boys won't check or proofread because they can't find their errors – poor perceptual speed
- Proofreading
  - Read a paper out loud to self or other
  - Time will help – put paper away for a week
- Checking Work
  - Do problems over again, compare answers
  - Casting out 9's
  - Work problems backwards

## Dealing with Boredom

- Boredom involved with schooling, not with learning
- Learning self-directed, facilitated by caring teachers
- Need learning experiences that offer
  - Control
  - Choice
  - Challenge
  - Complexity
  - Caring

## Boys will learn

- Get them engaged – whatever it takes
- Teach them the skills, many boys don't study well because they don't know how
- Use cooperative groups (well supervised) for long term projects
- Structure your course so that it provides room for movement and action
- Teach older students how to translate teacher instructions into actions that work well for them
- Boys will do the work, if they are successful