

**Beyond the Critics:
The Design Features of Effective
Schools for Boys**

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**Pseudoscience of
Single-Sex Schooling**

- Little evidence of academic advantages
 - Problem is that students are not randomly assigned to mixed and single-sex schools
 - Many students enter either at bottom or at top
 - Students in inner city single-sex schools look much the same as those in comparable coed schools
- Problem is one of SES not SEX
- What is the real effect?
 - Novelty based enthusiasm
 - Sample bias
 - Anecdotes

What about the Brain?

- No relevant evidence from brain research
 - Only gender differences are the larger volume of boys' brains and earlier completion of girls' brain growth – neither relates to learning
 - State that opponents support differential teaching based on obscure and unrepeated research
 - However, their major sources are works published by several of the authors – self-referential
- Negative impact of focus on gender
 - Single-sex schools provide evidence to children that adults divide the world according to sex and that the groups differ in important ways

Is this similar to racial segregation?

- Data indicates that racially segregated schools promote racial prejudice and inequality
- If so, children in single-sex schools will become more stereotypical
 - Cite data of boys who spend more time with boys becoming more aggressive
 - Ignore studies that show that girls in single-sex schools more interested in STEM

Delusions of Gender

- Under close examination, gender differences disappear
 - Mental rotation, maths, stereotype threat
- In the workplace, behaviour that enhances *his* status, makes *hers* less popular
- Children divided by t-shirt colour believe they are different
- Brain scans
 - Differences multiply
 - Do the differences have meaning for pedagogy?

Where this approach fails

- Assumes that coed education results in equal treatment of students
- Not connected to reality
 - Does not include information from teachers just from educational experts
- Presumes that opponents link neuroscience to specific behaviours
- Discounts research from non-US sources that supports single-sex education

What is known about differences in brain development?

- Architectural differences
 - Right vs. Left
 - Amygdala and Hippocampus
 - Frontal lobe development
- Sensory differences
 - Hearing
 - Vision
 - Touch
- Pubertal differences
- Physical differences

Educational Effects of Neural Differences

- Verbal skills
 - Girls have verbal advantage at school entry
- Spatial Skills
 - Boys' skills not seen as advantage until late
- Learning difficulties
 - Is dyslexia due to fundamental learning problem or to late development?
 - How do attentional issues affect child's membership in class?

What are the *real* problems?

- High proportion of verbal/auditory teachers and curricula
- Lack of competitive activities in classroom
- High stakes testing
- Assumption that the academic track is the path to preparation for life
- Social forces that focus on money not knowledge as evidence of success

Focus on language concerns

- Reading
 - Developmental Laterality
 - Reading delay/dyslexias
 - Visual attention - saccades
- Writing
 - Dyspraxia/dysgraphia
- Social forces
 - Parents
 - Peers
 - Expectations

Problems with other School Skills

- Remembering
 - Hippocampus/amygdala
 - Source: auditory, visual, kinaesthetic
- Listening
 - Emphasis on verbal skills – boys are visual
- Looking
 - Focus on things, not people
 - Spatial Skills
- Moving
 - Attending, hearing
 - ADHD – evidence

Emotional quality of boys

- Motivation
 - Peer effect
 - Competition and risk not participation
 - Fear of failure
- Masculinity goes (or doesn't go) to school
 - Heritable traits
 - Aggression, achievement, independence
 - Positive agentic behaviours
 - Hegemonic Masculinity
 - Learned?

Behavioural Issues

- Decision making
 - Prefrontal lobes
 - Risk taking
- Intense responding
 - Amygdala processes and recognizes emotions
 - Extreme response: Fight-or-flight
- Understanding others' perspectives
 - Theory of mind/Mirror neurons
 - Autism
- Maturing
 - 2 year difference in onset of puberty (at least)

Social characteristics of boys

- Competing
 - Fair bargaining
 - Coalitional competition
 - Group oriented, not task or individual oriented
- Playing
 - Rough-and-tumble play
 - Development of social skills
- Confronting
 - Bullying
 - Complication of technology

What can schools do?

- Include boy-friendly teaching techniques
- Plan for movement within the classroom though active pedagogical approaches
- Provide social support in varied group activities
- Encourage schools to offer music and art at every level
- Develop a sense of humour!

Meeting physical needs

- Physical activity
 - Kinaesthetic approach
 - Activity in the classroom
- Gross and fine motor skills
 - Handwriting
 - Use of technology
- Sports
 - Group competition
 - Leadership and followership skills

Meeting social needs

- Discipline
 - Boys are the identified classroom problem
 - Positive discipline which is clear and consistent
 - Difference in concept of fairness
- Use of groups to build social skills
 - Houses
 - Sports teams
 - Co-curricular activities
 - Service learning projects
 - Leadership opportunities

Need for Exercise

- Boys need lots of exercise
- Never use recess as a bargaining chip
- Encourage school to increase number/extent of recess sessions
- Boys need to risk – be careful that sports is not the only place
 - Playgrounds are too safe
 - Risky play helps a child learn to deal with anxiety

Writing comes first

- Boys seem to be more motivated to read what they or their friends have written
- Writing is physically engaging
- Use computers or AlphaSmarts keyboards
- Develop stories using class input
- Deconstruction of writing – taking sentences and paragraphs apart
- Short writing, use of random prompts (dice, bookmarks)

Phonological awareness

- Read to them
- Insist on clear speech
- Rhythms and rhymes
- Onsets and rimes
- Use programs designed to increase phonemic awareness
 - Earobics®
 - Read Australia

Writing Poetry

- Use Haiku, Cinquains, Diamante, Fibs, Limericks, or Sonnets
 - Advantage for boys is the mathematical format
- Let them find the format
 - Give them several of the same variety and find out what the poems have in common
 - Use color on white/SMARTboard to make rhyme scheme obvious
- Use poems with topics of interest to boys
 - *At Shark Reef Sanctuary* by Counsell, *Haunted Seas* by Rice, and *In A Breath* by Sandberg
 - www.poemhunter.com, 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

Specific Strategies for Boys

- Teach attention management strategies
- Assist boys to develop ways to use visual strengths to learn
- Include some measure of risk
- Use stress to advantage in class, get boys on their feet
- Connect behaviour to consequences
- Remember that if a boy is moving he may be paying better attention than if he is sitting still

The case for schools for boys

- Increasing evidence for neurocognitive gender differences
- Problems that boys have in school and in life
- Mixed schools slanted for verbal learners
- Emotional and social needs of boys
- Schools for boys provide:
 - Exploration of opportunities without limitations
 - Learning environment tailored for their skills with program to develop wider range of skills
 - Positive masculinity
