

# Girls Will Be Girls and Boys Will Be Boys



## Teaching to Gender Differences

**Bill McBride**  
Author of “Entertaining an Elephant”

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## **Brain-based Gender Differences**

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*Author of **Entertaining an Elephant***

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### **The Trouble with Boys**

- **Get 70% of D's and F's.**
- **Make up 80% of discipline problems**
- **Make up 70% of learning disabilities**
- **Make up 80% of those on Ritalin**
- **Are 1 to 1 ½ years behind girls in reading and writing**
- **Make up 80% of HS dropouts**

**“The percentage of male undergraduates dropped 24 percent from 1970 to 2000... [In America] Thirty years ago men represented 58% of the undergraduate student body. Now they're a minority of 44%....This widening gap, says Margaret Spellings, U.S. Sec. of Educ., ‘has profound implications for the economy, society, families and democracy.’” Source--*Newsweek*, Jan. 30, 2006**

**The Minds of Girls -- Source: Gurian, M. & Stevens, K. “With Boys and Girls in Mind,” *Educational Leadership*, Nov. 2004.**

- **By adolescence, a girl's *corpus callosum* is 25 percent larger than a boy's. The *corpus callosum* is the bundle of nerves that sends signals across the two parts of the brain. This enables more “cross talk” between hemispheres. Because of the greater cross talk, girls are able to multitask better than boys.**
- **Girls have fewer attention span problems and can make faster transitions between lessons.**
- **Stronger neural connectors create better listening skills, more detailed memory storage, and better discrimination among the tones of voice.**
- **A girl's stronger neural connectors and a larger hippocampus provide greater use of sensory memory details in speaking and writing.**
- **Girls' prefrontal cortex develops earlier and is larger than boys'.**
- **Girls have more serotonin and make fewer impulsive decisions than boys. Teenagers don't think of the consequences of their actions. They act on impulse. It is the serotonin and oxytocin that tell a teenager to slow down and think about what could happen if they did something. “Our jobs as adults is to serve as external frontal lobes.”**
- **A girl's brain also experiences approximately 15% more blood flow, which is located in more centers of the brain than a boy's.**
- **With more cortical areas devoted to verbal functioning, girls are better at: sensory memory, sitting still, listening, tonality, mental cross talk, and the complexities of reading and writing, i.e. the very skills and behaviors often rewarded in schools.**

**“Very well-meaning people have created a biologically dis-respectful model of education.” Dr. Bruce Perry, Houston neurologist**

**“Girl behavior becomes the gold standard. Boys are treated like defective girls.”  
Dr. Michael Thompson, PBS Series Author of “Raising Cain”**

## The Minds of Boys

- Boys have more cortical area devoted to spatial-mechanical functioning and half as much to verbal-emotive functioning.
- “For many tasks, brain imaging studies show that women use the most advanced areas of the brain, the cerebral cortex, whereas men doing the same task use the more primitive areas ...In adolescence, a larger fraction of the brain activity [in girls] associated with negative emotion moves up to the cerebral cortex. So, the 17 year old girl is able to explain why she is feeling sad in great detail...In boys the locus of brain activity associated with negative emotion remains stuck in the amygdala. Asking a 17 year old boy to explain why he’s feeling glum may be as productive as asking a 6 year old boy the same question.” Source: Sax, Leonard (2005) *Why Gender Matters*. New York: Broadway Books.
- Spatial-mechanical functioning makes boys want to move objects through the air, such as balls, airplanes, their little sisters, or just their arms and legs.
- “Boys are significantly more likely [than girls] to do something dangerous. Risky and dangerous activities trigger a ‘fight or flight’ response that gives a tingle, a charge, an excitement that many boys find irresistible. Boys systematically *overestimate* their own ability, while girls are more likely to *underestimate* their abilities.” Source: Sax, Leonard (2005) *Why Gender Matters*. New York: Broadway Books.
- Boys have less serotonin and less oxytocin, which makes them more impulsive and less likely to sit still to talk to someone.
- Boys have less blood flow to the brain and tend to structure or compartmentalize learning.
- The male brain is designed to go into *rest states* in which it renews, recharges, and reorients itself. Girls do this without going to sleep.
- The more words a teacher uses, the greater chance a boy will quit listening.
- Boys’ brains are better suited to symbols, abstractions, and pictures. Consequently, boys generally learn higher math and physics better than girls. Boys prefer video games for the physical movement and destruction. And boys get into more trouble for not listening, moving around, sleeping in class, and incomplete assignments. Source: Gurian, M. & Stevens, K. “With Boys and Girls in Mind,” *Educational Leadership*, Nov. 2004.

“Scientists caution that brain research doesn’t tell the whole story: temperament, family background and environment play key roles, too.” Source--*Newsweek*, Jan. 30, 2006

### Two-Part Goal for Teachers and Parents

1. Promote the expression and development of a child’s natural ability.
2. Help students compensate for areas of inherent disadvantage or fragility.

“There are NO differences in what girls and boys CAN learn. But there are BIG differences in the best ways to teach them.” Source: Sax, Leonard (2005) *Why Gender Matters*. New York: Broadway Books.

For an excellent review of the research on single-sex schools and classes, see: Peterek, Emily (2007). “Sex in the Middle School.” *Florida League of Middle Schools Journal*, Vol. 9, (pp. 3-9).

## Brain-based Genetic Differences in Girls and Boys

**Note: “Sex differences in childhood are larger and more important than sex differences in adulthood.” Leonard Sax**

<b>Girls Tend To</b>	<b>Boys Tend To</b>
Have better hearing than boys and may find “loud” or repetitive noises distracting.	Have worse hearing than girls and may lose attention simply because they can’t hear.
Are better at object discrimination, i.e. “What is it?”	Are better at object location, i.e. “Where is it?”
Will focus on faces and things. “Girls draw nouns using warm colors.”	Will focus on movement. “Boys draw verbs using cold colors.”
Use more of the advanced part of their brains, such as the cerebral cortex.	Use more of the primitive parts of their brains, e.g. the hippocampus and amygdala.
Can explain and describe their feelings.	Find it difficult to talk about feelings.
Are more verbal emotive.	Are more spatial mechanical.
Develop language and fine motor skills about 6 years earlier than boys.	Develop targeting and spatial memory about 4 years earlier than girls.
Multitask well and make easy transitions.	Focus on a task and transition more slowly.
Friendships are focused on other girls.	Friendships are focused on a shared activity.
Conversation is central to a friendship.	Conversation is often unnecessary.
Social hierarchies will destroy a friendship.	Social hierarchies build camaraderie and organize relationships.
Self-revelation and sharing are precious part of a friendship.	Self-revelation is to be avoided if possible.
Often ask a teacher for help and enjoy a close relationship with a teacher.	May not ask for help to avoid being perceived as “sucking up” to a teacher.
Like to be faced, looked in the eye and smiled at.	Avoid eye contact and prefer you sit beside them.
Retain sensory memory details well and make good distinctions between colors.	Don’t retain sensory details or make color distinctions as well.
Deal with moderate stress, such as timed tests, less successfully.	Deal with moderate stress well and may actually do better because of it.
Want to be with friends when under stress.	Want to be alone when under stress.
Feel “yucky” when faced with threat and confrontation.	Feel excited when faced with threat and confrontation.
Rarely employ aggression playfully.	Often employ aggression playfully.
Connect sex to other outcomes.	Focus on the sexual activity itself.
Use landmarks to give directions.	Use compass points to give directions.
Prefer to read fiction—short stories and novels.	Prefer nonfiction—descriptions of real events, action, and how things work.
Have many friends if they bully and likely bully someone they know.	Have few friends if they bully and more likely don’t know the person they attack.
Need encouragement to build them up.	Need reality checks to make them reassess and to be challenged.

Sources:

Gurian, M. & Stevens, K. “With Boys and Girls in Mind,” *Educational Leadership*, Nov. 2004.

Sax, Leanoard (2005). *Why Gender Matters*. New York: Broadway Books

## Enhancing Teaching and Parenting for Girls

- Use puzzles to foster perceptual and symbolic learning.
- Promote leadership by creating working groups and teams.
- Verbally encourage girls who exhibit low self-esteem or who underestimate their abilities.
- Promote physical activities that foster gross motor skills.
- Use manipulatives, especially in Science and Math.
- Provide role models of girls succeeding at activities or school subjects normally associated with male success.
- Provide opportunities for girls to study together.
- Expect girls to ask for help and want to affiliate with a teacher.
- If a girl is the “odd one out” of her social group, don’t dismiss it. Ask about her problems and her possible enemies.
- Don’t shield girls from “skinning their knees”, which might foster a learned helplessness.
- Promote girls to actively explore their world even at the risk of failure or minor injury.
- Let girls create their own challenges in which they can take safe risks.
- Be aware that loud or repetitive noises may distract girls since their hearing is more acute than most boys.
- Provide role playing activities for girls.
- Provide an abundance of fiction at a variety of reading levels so that girls have materials they enjoy reading rather than just school content to study.
- Connect Science and Math to the real world so that girls can understand the relationships between and impact upon people.
- Be aware of how much stress a girl is feeling as it may degrade her performance.
- Use a supportive, non-confrontational approach to change a girl’s behavior rather than a confrontational in-your-face style. Smile and look a girl in the eye.
- Don’t assume an adolescent girl is not having sex. Remember that “oral sex” is considered “hooking up” and not seen as a “sexual activity” by many teens.
- Kids don’t date anymore. Girls will “hook up” without having a relationship in order to feel socially powerful in their peer group. The most common time and place for teen sex is after school in someone’s house.
- Allowing a girl to participate in girls-only activities, such as soccer, volleyball, etc. makes them less likely to be sexually active.
- Know *everything* about a party your daughter is attending.
- The number one risk factor for girls using drugs is low self-esteem. They also tend to use drugs to relieve stress or because their friends are doing it. Be aware of their feelings and learn as much as possible about their friends.
- Academic stress is a common pathway to drug abuse among girls.
- Provide alternative ways for girls to relax, such as hiking, sports, meditation, concerts, etc.
- Eat supper together so that you know where your daughter is everyday and can learn with whom she associates and what they may be doing.
- Don’t transfer your authority to a child. Establish the prohibitive rule. Stick to it. Then offer an alternative activity.

### Sources:

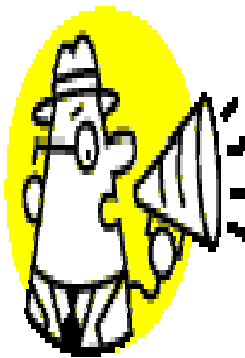
Gurian, M. & Stevens, K. (2005 ) *The Minds of Boys*. San Francisco: Josey Bass.  
Sax, Leanoard (2005). *Why Gender Matters*. New York: Broadway Books

## Enhancing Teaching and Parenting for Boys

- Use manipulatives that require boys to employ fine motor skills.
- Provide a larger learning space when possible.
- Make lessons kinesthetic and experiential. Structure activities for movement.
- Use technology as a learning and teaching tool. Balance study and screen time.
- Use graphic organizers that compartmentalize concepts into small sections.
- Keep verbal instructions short. Don't layer instructions. Write layered instructions as numbered steps on the board or worksheet.
- Surround boys with reading material they will enjoy, such as real life nonfiction, adventure, sports, or how-to books. Provide a variety of reading levels.
- Expose boys to a variety of male mentors from many walks of life that illustrate different ways to be successful.
- Many boys may not hear as well as girls and need to be moved closer to the front of a room.
- Provide differentiated writing assignments in which girls can write about description, sensory details, feelings and boys can describe events or action.
- Be aware that boys will continually test their manhood by doing risky actions and that they overestimate their abilities.
- Boys in groups do stupid things. Begin any new physical activity with lessons from a trained teacher.
- Supervise boys to lessen personal injuries.
- Boys learn the "rules of the game" through aggressive play. Aggression and competition builds camaraderie and organizes their peer relationships. Don't ban PE and other physical activities from the school day or boys' aggressive drive will show up elsewhere inappropriately.
- Be aware of the video games boys play. Don't buy any video game that promotes a "moral inversion" where bad is good and good is bad.
- Ask boys about their studies since they most likely study alone and don't ask for help from teachers.
- Ask boys about their lives when they want to be alone. Stress tends to cause boys to choose isolation.
- Avoid small group activities for boys unless each one has a different but equal goal to achieve yet all members together are held responsible for a team score.
- Provide a moderate level of stress through timing or some sort of challenge to engage a boy's interest.
- For many boys and some men, the sexual act is closely tied to aggression. Kids don't date anymore. Boys will "hook up" simply for the sexual activity and the prestige it may bring among peers. The most common time and place for teen sex is after school in someone's house.
- Eat supper together so that you know where your son is everyday and can learn with whom he associates and what they may be doing.
- Boys who abuse drugs are thrill-seeking or want to be cool. Provide healthy, alternative physical and intellectual "thrills" for young males.
- Give clear and consistent discipline to boys.
- Don't transfer your authority to a boy. Establish the prohibitive rule. Stick to it. Look him in the eye and tell him so. Then offer an alternative activity.

Sources:

Gurian, M. & Stevens, K. (2005 ) *The Minds of Boys*. San Francisco: Josey Bass.  
Sax, Leanoard (2005). *Why Gender Matters*. New York: Broadway Books



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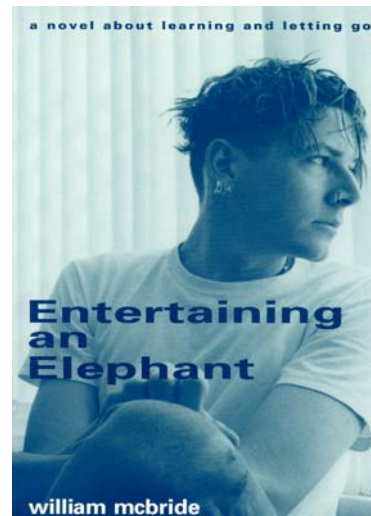
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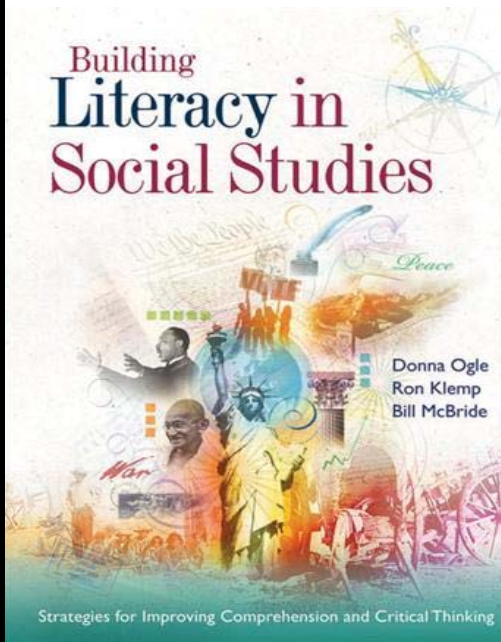
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