Creating Environments to Meet the Needs of Both Genders

Presented by Amy E. Weaver

Brain Facts:

- The brain uses 20% or the body's energy, but it makes up only 2% of the body's weight
- The brain pumps 33 quarts of blood per hour
- 99% of all learning is non-conscious
- The brain changes its own properties as a result of experience
- How a person "feels" about a learning situation determines the amount of attention devoted to it.
- There are about 100 billion neurons in the adult human brain about the number of stars in the Milky Way Brain cells consume oxygen and glucose for fuel. The more challenging the brain's task, the more fuel it consumes
- Water is essential for healthy brain activity. It is required to move neuron signals through the brain

(Sousa, 2006)



Male	Female
Size and Structure	Size and Structure
 10% to 15% Larger overall Higher proportion of white matter Hippocampus and amygdala larger Right Brain Parietal cortex larger 	 Higher proportion of grey matter in most parts of the cerebral cortex Cerebral cortex thicker and more convoluted Corpus collosum is up to 20% larger Left Brain Parts of Frontal Lobe larger
Chemical and Hormonal	Chemical and Hormonal
 Serotonin – less Impulsive/fidgety Oxytocin Requires more extensive stimulation to release Testosterone 	 Serotonin – more=Calming effect Oxytocin-release more easily resulting in quicker empathic response Estrogen and progesterone
Functioning and Processing	Functioning and Processing
 Right Downward Resting More centralized activity Organized information Vision – Bright light Deductive Emotional processing requires additional time 	 Left Upward Active All over the place Random information Vision – Darkened room Inductive Quick processing of emotional input

Quote:

"The sensory register and temporary memory systems use past experiences as the guide for determining the importance of incoming stimuli to the individual. Thus, if an individual is in a new learning situation and past experience signals the sensory register that prior encounters with this information were successful, then the information is very likely to pass along to working memory. The learner now consciously recognizes that there were successes with this information and focuses on it for further processing. But if past experiences produced failure, then the sensory register is likely to block the incoming data. The learner resists being part of the unwanted learning experience and resorts to some other cerebral activity, internal or external, to avoid the situation (Sousa, 2006, p. 53)

Predictors of School Success:

Children are more likely to achieve school success if:

- They can accurately identify emotions in self and others
- They can relate to teachers and peers in positive ways
- They can manage anger, frustration, frustration and distress
- They can enjoy learning and approach it with enthusiasm

Predictors of School Failure:

Children are less likely to succeed in school if:

- They in engage in frequent aggressive behavior
- They are unable to control impulsive behavior
- They engage in oppositional behavior
- They are unable to cooperate with others
- They constantly seek attention
- They ignore peers or teachers

Statistics:

• "By almost every benchmark, boys across the nation and in every demographic group are falling behind." Newsweek

The Trouble With Boys

• "According to the census bureau, fully one-third of young men ages 23-34 are living at home with their parents. -roughly a 100% increase in the past 20 years. No such increase has occurred with regard to young women."

Leonard Sax "What's Happening to Boys"

Washington Post

- The United States uses 80% of the world's supply of Ritilan. 80% of the children using this drug are boys.
- 73.7% of the children diagnosed with learning disabilities are boys
- Boys are 4 times more likely to get kicked out of preschool
- 89.3% of adolescents aged 15-17 in correctional facilities are boys
- 80% of the children ages 10-19 that contemplate suicide are girls
- 80.6% of the children ages 10-19 that commit suicide are boys
- "When educational quarantines on girls got lifted...girls started to bloom in school...boys did not become dumb. Competition revealed, however, that language and literacy platforms on which schooling is and has always been built, actually favors girls."

Dr. Norman Johnson

Literacy and the Male Brain

Just For Thought-

75% of a child's day should be spent in child initiated activities25% of a child's day can be spent in Teacher Directed/Teacher initiated activities

Open Ended Activities:

Seeing materials and activities not for the objectives they teach, but for the possibilities they provide frees us to interact and to watch the moments of brilliance unfold. When children create play and play strategies instead of simply complete the task, they are using far more complex processing strategies. This takes more time and focus building a solid foundation for later school success. It's only that you know the answers- it's that you know how to get the answers.

Tips for the Environment:

- Remove 1/3 of the things you have on your walls and 1/3 of the things you have on you shelves- too much stimulation is not a good thing
- Open ended materials provide more ability to stay at task then store bought or catalog materials
- Child initiated activities provide more sophisticated language opportunities and will help boys engage in language based activities
- Create science and math opportunities that include more than one child at a time so that girls can use their language strengths while engaging in abstract concept learning
- When looking at the centers in your room, try to break out of the "because it's what we've always done," mold. Think of Dramatic play as a place to develop roles so that you can break away from the "house" theme. For blocks think about it as construction so that you can think beyond blocks.
- Try not to think about how a child will use a material, it might close your eyes to possibilities
- Worry less about the objectives you assign to activities before you implement them but be willing to reflect back on all of the learning that occurred while the children were engaged with the materials

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