



The Case for Creating Gender Advantaged Learning Environments

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The Research

The evidence is mounting. Not only are boys' and girls' brains wired differently, but girls are often more advantaged for learning than boys. Current brain-based research, including the newer technologies (PET & MRI*) indicates that although there are similarities between boys' and girls' brains and how they grow, develop, and work there are also significant differences (Sylwester, 1995). As well, years of documented observations (Gurian, 2001) give us rich examples of these differences and recent assessments from local early years initiatives (EDI, 2006) and a local school board (DSBN, 2005) profile specific learning and behavioural issues. What is particularly troublesome for us is that the information and evidence point to the fact that our young boys are very possibly 'at risk' for learning and therefore success in later life. As parents and caregivers do we understand young boys and girls well enough to advantage both boys and girls for learning and success?

Over the last few years the Early Development Instrument (EDI) has been completed on senior kindergarten (SK) children in Niagara Falls and three times now across the Niagara Region. It is a teacher-completed checklist of behaviour and development indicators that reports on populations of children, aged 5-6, at the community level. The checklist is usually completed well into the school year of senior kindergarten. Many of the results are troubling as they indicate the struggles of boys in SK in both Niagara Falls and the Niagara Region overall:

Table 1. Niagara Region 2006: Comparison of Mean Scores for Boys and Girls with the National Average

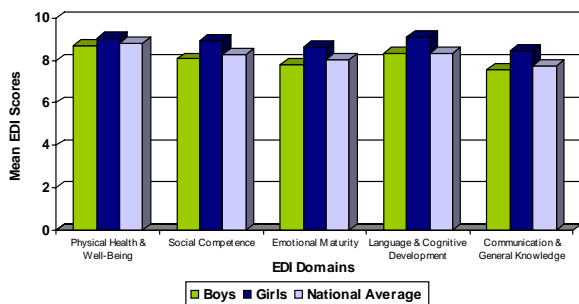


Table 1 provides an illustration of boys' EDI mean scores in the Niagara Region that were significantly lower than girls and below the national averages on all five of the domains for school readiness.

The preliminary results of gender differences across the Niagara Region provide insight into a developmental trend. Closer examination of a municipality within the Region provides clarification on the particular challenges boys face in that community. This level of data is likely to vary by municipality.

Table 2. Niagara Falls 2005: Comparison of Mean Scores for Boys and Girls with the National Average

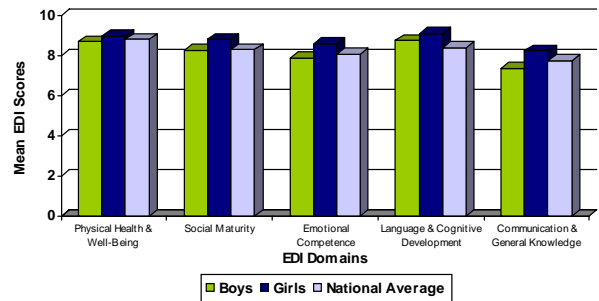


Table 2 provides an illustration of boys' EDI means scores in Niagara Falls that were significantly below the national averages. These include: Physical Health and Well-Being, Social Competence, Emotional Maturity, and Communication and General Knowledge.

Many of the results are troubling as they indicate the struggles of Niagara Falls' boys in SK:

- They scored significantly lower than females in all five domains of the school readiness to learn and these developmental differences were consistent across all sites where the EDI was implemented in Canada. Data collected across the Niagara Region in 2006 also shows this pattern;

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- Those who attended JK scored significantly higher than those who did not in all five domains of school readiness;
- Those who attended part-time preschool had significantly higher scores than those who did not in Physical Health and Well-Being and Communication Skills and General Knowledge domains of school readiness;
- Those who scored low more frequently on the developmental domains measured by the EDI were identified more often as 'vulnerable' than females.

The following were some of the particular challenges boys had across the nine sub-domains:

- Over one-third (37%) were found to never or almost never show most of the helping behaviours - they did not help someone who was hurt, sick or upset and did not invite bystanders to join in;
- Twenty percent (20%) were observed showing most of the aggressive behaviours - physical fights, kicking or biting others, taking other people's things, being disobedient or having temper tantrums; and
- Almost half (44.2%) had difficulties in participating in games involving the use of language - being understood by others or understanding others and had trouble with the native language.

Gender differences that have been found between boys and girls using the EDI across the Niagara Region and Niagara Falls have produced similar results as those found by the District School Board of Niagara. In 2005, the DSBN** undertook a massive study to examine the success of both boys and girls. Some of their results and conclusions are:

- Boys and girls do not differ greatly in cognitive ability as shown in testing. Boys show a slight advantage in their ability to use numbers and girls in 'verbal' and 'memory' abilities.
- Girls show stronger reading achievement than boys as early as Grade 1 and this trend continues into secondary school.
- Boys and girls score similarly well in mathematics in the primary and later grades.
- Although more boys are identified as 'gifted' there are a significantly larger number of boys identified with behavioural and learning disabilities through the Special Education processes.
- Boys' attitudes about activities in the school learning environment are much less positive than girls. Although

they like math more than girls they do not like reading, writing nor the books and materials as much as girls. They are less likely to complete work or follow rules. Boys do not like school as much as girls.

- In general, the way we teach boys may not match the way boys' brains develop. Although there is clearly a gender gap related to literacy there are many more factors which have contributed to the educational disenfranchisement of boys: societal, parental, instructional and developmental influences, among others.

Evidence from the EDI and Niagara District School Board studies provide parents and caregivers with a better understanding about differences in learning between the genders and the disadvantages boys may be facing in Niagara. This evidence can also assist in creating gender advantaged environments.

Creating Gender Advantaged Environments

The following tips are in response to the evidence and can be used to create advantageous environments for both genders.

Bonding

Because boys and girls are wired differently it is very important that parents and extended families, care givers, and teachers create environments that reflect the needs of both and nurture individual growth and development. Specific attention to bonding techniques, the ways empathy and aggression, such as rough and tumble play and the recognition of other people's feelings, are used, and the establishment of differentiated learning environments are of paramount importance. It is critical for the well-being of a young child to experience safety and stability through bonding, attachment, and supervision. These interventions establish a sense of well-being in the brain and allow it to more fully focus on learning.

Some suggestions include:

- Small ratio of children to caregivers/teachers;
- Bonding activities are better than hugs for boys e.g., 'high five' game***;
- Ordered, daily and consistent practices and schedules; and
- Showing a genuine interest in the child through using his/her name, making eye contact, smiling, touching when appropriate, giving choices, allowing for mistakes when learning, and listening - then listening some more.

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Use of Physical and Verbal Aggression for Nurturing

Boys tend to practice more physical aggressive nurturance than girls, and girls more verbal aggressive nurturance than boys. One is not 'more right or wrong' than another. These trends simply indicate a normal gender difference. Boys relate and bond by bumping, prodding and pushing. This sometimes gets them into difficulty with girls and boys who are 'less physical' in nature. Girls will use words to make connections with others and sometimes these words can be aggressively nasty e.g., "You're stupid and an idiot." Both boys and girls need to learn life lessons through aggression that is natural to them but when the actions are cruel re-direction is needed. Some suggestions:

- redirect bumping, hitting, etc., to inanimate objects - Nerf bat, cushions;
- if an injury occurs direct the child to the bruise or hurt; and
- redirect cruel words to ones that explain feelings rather than name calling. For boys re-direct them to using words rather than actions as well.

Facilitating Learning in Both Boys and Girls

For Girls

- Use lots of manipulatives to increase math and science learning;
- Play active ball games e.g., kick ball to increase girls' gross motor skills;
- Use lots of praise, even more than you think, for activities that are well done;
- Identify girls who have high energy but may be intimidated by loud boys and help them to become leaders;
- Use a water/sand table to make scientific things experiential;
- Encourage playing with puzzles to help perceptual learning; and

- Have areas where girls can safely climb to help increase their experience with three-dimensional space.

For Boys

- Use the high energy of boys to assist in cleaning up activity centres and moving things around the play area and then use lots of praise;
- Encourage boys to use concrete, emotion-laden words to express what they feel;
- Give boys a place to shadow box and work with their natural aggressive nurturance to show them what is acceptable and what is not;
- Teach sewing/beadwork to increase boys' fine motor skills;
- Create a book rich environment on topics that they find interesting;
- Make learning experiential with lots of concrete activities and manipulatives;
- Increase boys sense of attachment and identity through labelling of 'cubby' spaces etc.; and
- Talk less when giving instructions to boys.

A few last words ...

You may have already noticed differences in how boys and girls play, learn, and interact. They have been confirmed in 'brain-based' research. Girls and boys are wired differently and therefore learn or develop in different ways. This in no way contradicts the fact that there is immense overlap between the genders nor that each child is an individual who should not be limited by gender stereotyping. It is clear that our children need us to know their minds and to create gender advantaged environments for their success.

For further information on the research or to obtain additional support in creating gender advantaged learning environments, contact the ECCDC at 905-646-7311 or eccdc@eccdc.org. Watch for our upcoming "Designing Gender Advantaged Programming" training opportunity in February, 2007!

* PET - positronic emission tomography; MRI - magnetic resonance imaging

** DSBN - District School Board of Niagara

***High Five Game - Give me five, up high, down low, and pulling your hand away so the child misses but tries to make contact. The competition for the boys to be quicker creates a connection with the caregiver. Boys enjoy the nurturance through physical contact.

References

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