

EDMONTON PUBLIC SCHOOLS

June 19, 2001

TO: Board of Trustees

FROM: E. Dosdall, Superintendent of Schools

SUBJECT: Feasibility of an All Boys Program

ORIGINATOR: M. de Man, Department Head Designate

RESOURCE

STAFF: Karen Bardy, Jim Buzzeo, Gloria Chalmers, Denis Huculak,
Anne Mulgrew, Linda Wiens

INFORMATION

Background: As a result of a trustee initiative, the administration conducted a preliminary review of research related to male single gender programs and schools. District achievement data, special needs programs and programs of choice were reviewed from a gender perspective. Additionally, input was received from parents through Key Communicators and from students through the Student Advisory Team. This report provides a review of the findings and makes some initial recommendations.

Overview of Research Findings: Because much of the research relies on anecdotal information and has focused overwhelmingly on females and female concerns, support for male single gender programs and schools is inconclusive (Appendix I). However, the qualitative and quantitative information in the research and the review of district data raises some cause for concern.

Statistics indicate a higher proportion of males in comparison to females engage in high-risk behaviours, are born with genetic problems, are incarcerated and commit suicide. National and American data indicates that more boys than girls are underachieving and are alienated from school. For example, more boys are not reading at grade level and this continues throughout school. More boys are in special needs programs and drop out of school. The margin by which girls are outperforming boys is increasing most among students living in low-income families. The difference in achievement is so pervasive that a structural bias in favour of girls in the design and practice of school-based assessment is possible. However, there are some paradoxes in the research. For instance, in a study in Scotland, it was found that girls tend to do better in public examinations, while boys gain most of the higher education awards.

Possible reasons cited in the research for boys' underachievement include:

- genetic differences between boys and girls
- a culture amongst boys of appearing not to want to succeed in school
- a lack of male role models in some families
- curriculum that does not respond to the interests of boys
- classroom management practices that promote behaviour problems in boys

Overview of District Information by Gender: District information that could be retrieved by gender was reviewed. District data regarding special needs programs is consistent with research: there are more than twice the number of boys than girls in special needs programs in the district; however, with regard to achievement information, the differences between boys and girls are not significant (Appendix II).

Summary of Parent and Student Input: Feedback regarding the feasibility of an all-boys program and school was obtained from the Key Communicators Advisory Committee and fifteen surveys returned by attendees at a Key Communicators meeting. Essentially, some parents indicated support for such a program and some did not support such a choice. Feedback was also obtained from students on the Student Advisory Committee. Although students felt that such a choice should be offered in the district, they indicated that they would not be interested in attending such a program. Additional information regarding feedback received is provided in Appendix III.

Recommendations: Prior to supporting or discounting the feasibility or the efficacy of an all-boys program, the approach recommended involves taking some actions beginning immediately and continuing to monitor district data and the research. Specifically, it is recommended that the district begin with the following actions and report to board in a year's time regarding progress in these areas.

- make available information to schools regarding the research findings about gender, district data regarding the achievement of boys and girls, and research-based strategies; for example:
 - review school achievement data on the performance of boys compared to girls
 - broaden and recognize reading sources of interest to boys at all grade levels
 - provide acceptable forms of leadership and extracurricular activities for boys at all grade levels, and especially at the elementary level when they first begin school
 - encourage boys' participation in cultural activities and in the humanities and promote this as being highly valued for both boys and girls
 - involve all parents, including fathers, as active participants in their child's education
 - work with other organizations (Big Sisters and Big Brothers, Scouts) and programs (Study Buddy) to access male mentors and role models for elementary aged students at-risk
- make information available to parents regarding the research findings on gender
- explore personnel practices that encourage more male teachers at the elementary level
- incorporate gender education into inservice programs and encourage universities to incorporate it in teacher pre-service education
- investigate further, with the view of implementing district programming, the work of Jean Tremblay in Quebec which focuses on the early identification of boys who are at-risk at the kindergarten and grade one level of developing learning difficulties and behaviour problems and intervening with focused programming
- continue to monitor the achievement by gender, with particular emphasis at grades three and eight as critical turning points for boys' achievement
- investigate further junior-high aged programs with an emphasis on physical activities

KB/GC:dh

APPENDIX I: Summary of Research

APPENDIX II: District Information

APPENDIX III: Parent and Student Input

SUMMARY OF RESEARCH

Aiken, Lewis. *Human Differences*. Lawrence Erlbaum Associates. 1999.

This book reviews differences between boys and girls including the incidence of births, onset of puberty, sex differences in mathematical and spatial skills, and differences in language development and space perception, etc.

Basile, Kathleen C. *Gender Differences in K-12 Education: What Indicators Are Important?* Georgia Council for School Performance.

The focus of this report is the underachievement of females in mathematics and science. It recommends that the state of Georgia report by gender the mathematics and science results at grades 5 and 8 and 11. While it acknowledges that females consistently have slightly higher scores than males in reading and writing, it states that male performance in language arts has not been found to exhibit a pattern of bias and thus does not recommend reporting of indicators in this area.

Brockes, Emma. *In No Man's Land*, **Guardian Weekly**, August 31-September 6, 2000, p. 1.

The article reports that girls had performed better on this year's A-levels than boys, which follows 8 years of girls gaining more overall passes than boys. As well, it reports that males between 15 and 24 are three times more likely to commit suicide than women of the same age. It concludes that this is not evidence that boys are new victims but rather that boys appear to be failing badly because they have stayed still while girls have made great progress.

Burdick, Tracey A. *Success and Diversity in Information Seeking: Gender and the Information Search Styles Model*, **School Library Media Quarterly**, Vol. 25, No. 1, Fall 1996.

"This exploratory study of the impact of gender on information seeking addresses the importance of investigating gender issues; presents a conceptual framework; reviews research questions, methodology, and study sites; presents a brief summary of findings; and outlines implications. Analysis of the qualitative and quantitative data collected illuminated commonalities and differences in experience by gender.

Burnham, Margaret A. *Twice Victimized: A Response to "When Rights are Wrong" by Tracey Meares and Dan Kahan*, **Boston Review**, Harvard University Press, bostonreview.mit.edu/BR24.2/burnham.html

The focus of this article is not education but rather constitutional issues related to police searches. However, it does reference the fact that many American cities have sought to establish all-black, all-male schools in order to better address the unique challenges these youths must contend with.

Canadian Education Association. "Improving Boys' and Girls' Academic Achievement." **Canadian Education Newsletter**. April, 2000. No. 493.

This report found that at the elementary level, boys' academic difficulties, as compared to girls' manifest themselves mainly in 3 ways: in difficulties learning the language of instruction (reading and writing), in academic delay, in greater numbers of identified learning or adjustment difficulties. The gap between boys and girls with respect to academic achievement is not a matter of intellectual potential. All of the studies

conducted over the last 40 years have shown that there is no significant difference between the sexes in this respect. However, these studies are also unanimous on the fact that, overall, boys and girls, particularly at the elementary level, do not have the same attitudes toward academic learning and the more general demands of their role as students.

Chapman, Anne. *The Difference It Makes: A Resource Book on Gender for Educators*. National Association of Independent Schools. 1988.

Most of book focuses on gender stereotyping and the need for better education for females. Much of what people once assumed to be innate gender difference are in fact produced by adults' different behaviour toward boys and girls, of which adults may themselves be unaware. This book suggests that to increase students' confidence in their abilities and reduce anxiety that inhibits performance, teachers should utilize strategies that are more responsive to boys.

Clare, John. *Schools Told to Root Out Lad Culture*. **The Telegraph – UK News Summary**. August 18, 2000.

Amid growing concern over the under-achievement of boys at A-level, the government in the United Kingdom has requested action to stamp out signs of a macho anti-school culture which prevents boys from achieving success in school. The government has urged co-educational schools to create a climate in which it is cool to succeed and has commissioned Homerton College, Cambridge, to carry out an immediate study of how to raise boys' standards without disadvantaging girls.

Disability Statistics Center. *What are the Estimates of the Number of Children and Adolescents Attending Special Schools or Classes?* 128.218.183.95/UCSF/pub.taf.

The material states that boys are more likely to attend special schools or classes (3.9 percent of boys and 2.4 percent of girls). There are also gender differences within racial/ethnic groups (e.g., blacks = 4.3 versus 2.9 per cent and whites = 4.2 versus 2.6). As well, poor children and adolescents are significantly more likely to attend special schools or classes than those in families above the poverty line (5.2 versus 2.8). The centre provides statistics on limiting chronic conditions. For instance, they report that 3.9 percent of males and 2.4 per cent of females attends special schools or classes and that 0.6 males and 0.5 females are unable to attend school.

Education Review Office. "Promoting Boys' Achievement" **Te Tari Arotake Matauranga**. March, 2000.

This 200 report is based on an analysis of 416 school reviews completed in 1999 in which the achievement of boys was investigated by the Education Review Office in Australia. Most schools showed an awareness of gender differences in learning. The study found that schools that were effective in meeting the learning needs of boys undertook a number of strategies including reviewing curriculum plans to ensure that the strengths of boys and girls are being sufficiently channeled and developed, and employing a range of teaching styles and strategies to tackle gender issues, which may include grouping boys and girls differently for different activities.

Erskine, Sheena and Wilson, Maggie (Ed.) *The Question of Sex Differences: Psychological, Cultural, and Biological Issues*. Little, Brown, and Company. 1979.

Australian programs to address students at risk usually are defined as disadvantaged, but more recently have been seen to be primarily disadvantaged boys who subscribe to traditional versions of masculinity. Boys are more likely to underachieve and have more motivational and behavioural problems; they commit more crimes, and have more road accidents, and commit suicide at a greater rate than girls.

Farrell, Warren. *Our Sons, Our Schools*, users.erols.com/acfc/essay/farrell2.htm

The essay states that feminism has freed women from stereotyped sex roles but that no one has done this for males. It does not criticize feminism but rather calls for a concern with both genders. It reports that women are now almost 60% of full-time graduate students, 54% of full time undergraduates and 70% of part-time undergraduates. It indicates that the suicide rate of nine year old males and females is identical but by the early 20's the rate for males is six times as high.

Fine, Sean. *Are the Schools Failing Boys?*, **Globe & Mail**, September 5, 2000, page A1 & 7.

The article makes the case that boys are falling behind and that some are giving up. It indicates that a literacy gap in the early years is not new but the fact that the gap stays the same or gets wider as the children grow up is new. The 1998 nation-wide reading tests of 13 year olds revealed a gap of 16 % between girls and boys who had achieved a basic level or better. Among 16 year old, the gap was 22 %. Among those who could read at a sophisticated level, the gap of 18 % in 1994 grew to 22 in 1998. The gaps show up in every province but are wider in some provinces than others. A professor in Massachusetts has found that boys in that state are now further behind in reading and writing than girls were behind in math and science 20 years ago.

It notes that the need for role models, long an issue for girls, should now also be seen as a boys issue. Male teachers in elementary schools are rare and over all there are more female teachers than male in k to 12 – 63% in 1996-97, up from 57% a decade earlier.

Fraser Institute. *Boys, Girls and Grades: Is There Gender Inequality in BC's Schools? Boys, Girls and Grades: Significant Findings, Boys, Girls and Grades: How Do Girls and Boys Compare across the Province? Boys, Girls and grades: How the Schools are Measured, Boys, Girls and Grades: Vancouver*. fraserinstitute.ca/publications

The various reports provide information in support of two conclusions: (1) that there is no evidence that a concerted effort exists in secondary schools to ensure that the special education needs of both male and female students are routinely being met, and (2) that where an assessment is made at the school, girls, on average, do better than boys. With regard to the latter, the report states that the difference is so pervasive that it suggests a structural bias in favour of girls in the design and practice of school-based assessment.

The articles raise a number of questions and suggest a rating on a single parameter called "academic gender balance". The article ranks Vancouver secondary schools on this overall rating.

Gilbert, Rob and Gilbert, Pam. *Masculinity Goes to School*. New York: Routledge, 1998.
This book provides information regarding the unique characteristics of boys' experiences in schools and strategies for promoting success for boys, such as integrating school policies on behaviour with those on gender, race, etc.; teaching an understanding of the construction of gender and how it operates as a system which shapes behaviours; and providing opportunities for boys to discuss issues related to gender.

Government of Alberta. *Lost Promise and Potential: Alberta's Statistics on Youth Suicides Programs and Challenges*, October 2000.

Of 55 suicides of youths ages 10 to 14 between 1990 and 1998, 78 % were male. Of 299 suicides of youths ages 15 to 19 between 1990-1998, 80 % were male.

Hawley, Richard. *Boys' Schools reconsidered: Good News in troubled Times*, **USA Today**, Vol. 124, No. 2608, pp. 77-79, January 1996.

The article is supportive of all boys' schools not because being of one gender in itself makes it good but because they can be an answer to some educational problems. It notes that gender is a real factor and that variations in patterns of learning can be identified from pre-k through high school. It argues that neither gender has a "moral or intellectual edge" over the others but that the desirability of instructing to the developmental and gender realities of the students should be further studied.

Hoyenga, K. B. and Hoyenga, K. T. *The Question of Sex Differences: Psychological, Cultural, and Biological Issues*. Little, Brown, and Company. 1979.

This book suggests that it is almost impossible to separate the effects of biology from the effects of environment in gender differences. Males may be more susceptible to traumatic environmental effects during infancy, and more susceptible to social stress; girls do better in disadvantaged populations. Sex differences in behaviour are increased after puberty. Boys have a greater incidence of speech defects, including stuttering. More boys than girls have difficulty in learning to read. Females more often show a verbal superiority in almost all areas and especially on measures of verbal fluency. Males show a mathematical superiority.

Leo, John. *On Society*, "Gender Wars Redux", dadi.org/jleo_boy.htm

This report focuses on the political nature of, and apparent inaccuracies appearing in, the 1992 report by the American Association of University Women which had a strong influence in getting money for equity programs for girls. For instance, the comment that boys are called on more than girls they maintain has been discredited but not until it was reported far and wide. They note that by 1992 women surpassed men in college attendance (55 % female and 45 % male) and that, by 1994, almost half of professional degrees were attained by women from almost none in 1961. The report references a study that states that males account for 70 % of all alienated students. The implication is that the male gender not the female gender needs help now.

Lingard, Bob. "Contextualizing and Utilising the What About the Boys' Backlash for Gender Equity Goals". Paper, University of Queensland. 1999.

Boys' issues in schooling need to be incorporated within system and school gender equity policies and programs. All teachers have a responsibility in relation to these matters of

making schools supportive environments for all students, both male and female, and especially those practicing marginalized masculinities and femininities.

Mael, Fred A. *Single-Sex and Co-educational Schooling: Relationships to Socioemotional and Academic Development*, **Review of Educational Research**, Vol. 68, No. 2, pp. 101-129, Summer 1998.

“The role of coeducation versus separate-sex schooling in the academic, socioemotional, interpersonal, and career development of adolescents is discussed. Arguments and research support for both types of schooling are reviewed. Separate-sex schooling seems to provide potential academic and attitudinal benefits for at least some students. The limitations of current research are discussed, and directions for further research are offered.” It is a scholarly article and provides a summary of arguments advanced in favour of coeducation (CE) and of single-sex (SS) education. It notes that comparisons are made difficult by the range of criteria used to evaluate such school, the issue of statistical confounds, focus on whole schools rather than separate classrooms, and the lack of attention to the possibility of individual differences at both the school and the student level. The article concludes that the “predominance of opinion and research seems to suggest possible benefits for SS schools, though effects appear more pronounced for females than for males (Moor, Piper, & Schaefer, 1003), partly because the overwhelming preponderance of research has focused on females and female concerns.” It also states that much additional research is needed to clarify which individuals or target populations would gain most from SS schooling.

Moore, Lin. *Does Gender Make a Difference? Attitudes Toward School, Academic Achievement, and Social Skills of Head Start Children from Kindergarten Through Third Grade*, presented at ACEI Annual International Conference – 2001 Education Odyssey, April 4, 2001.

The study followed Texas Head Start children from kindergarten through grade three in public schools. The study found that this cohort of children adjusted well to school. However, the school experiences for girls and boys appeared to vary. Boys demonstrated better math skills in kindergarten. Beginning in grade one, girls gained more reading skills. By grade 2, boys reported less positive attitudes towards school and demonstrated lower academic achievement scores. By grade 3, more problem behaviours were evidenced by boys.

National Center for Education Statistics. *Statistics on Dropouts*. nces.ed.gov/fastfacts

With the exception of data for 1970, the center reports a higher percentage of male students dropping out of school than female students. For 1998, 13.3 % of males and 10.3 % of females between 16 to 24 dropped out. They also provide dropout stats based on race/ethnicity but these are not broken down by gender (e.g., 7.7 % white, 13.8 % black and 29.5 % hispanic).

Noble, Colin and Bradford, Wendy. *Getting it Right for Boys... and Girls*. Routledge, 2000. Possible reasons that boys presently achieve less than girls include an “anti-swot” culture, genetics, changes in society, changes in families, curriculum reasons, school management, classroom management and practices. Schools should focus on the last three because these are things that schools and districts can influence.

NSW Government Advisory Committee. Report on Boys' Education 1994. *The Nature of the Problem*. www.shadoweducation.nsw.gov.au/boys/chap22.htm

The Ministry of Education and Youth Affairs in Australia has provided information by gender on a number of educational outcomes. They found that strong gender differences exist in subject choice, with boys less likely to be participating in the Humanities generally. Girls were found to be less likely to take technology and applied science subjects. However, it is encouraging to note that boys are increasingly taking some non-traditional subjects. In terms of educational outcomes, it was found that boys under-perform compared to girls in literacy tests at both year 3 and year 6 in government schools. Boys perform slightly better than girls in mathematics at all levels. Science results show no differences between genders. The margin by which girls are outperforming boys is increasing most among students from low socio-economic status.

Powney, Janet. *Trends in Gender and Attainment in Scotland, Spotlights: The Scottish Council for Research in Education*. 1990.

This report summarizes some of the findings of a review of research and statistics about student attainment during the period 1985-1995 in Scotland. It identifies some of the paradoxes in gender and attainment. For instance, girls tend to do better in public examinations while males gain most of the higher education top awards. Thus, it raises the question as to whether such outcomes reflect approaches to assessment, methods of teaching, and/or expectations of society.

The report provides some facts about attainment, identifies factors associated with these differences (e.g., bias, approaches to assessment, interactions with teachers, home and society, school effects, parents' level of education, interaction between class, ethnicity and gender Ethnic background, and take-up of higher education), and briefly discusses implications. It indicates that more research/data is required and that schools can contribute most by ensuring that the school ethos and approaches to teaching and learning supports the development of **all** children, i.e., takes into account differences in social class, ethnicity and gender. It advises that schools can take three actions now: (1) increase understanding and sensitivity to practices that may disadvantage males or females, (2) monitor ways of teaching and assessing students, and (3) use outcomes of 1 and 2 to increase equality of opportunity in learning and teaching.

Rothstein, Richard. *Single Sex School Experimentation*, January 17, 1996 (<http://epn.org/rothstei/ro960117.html>)

This article is in response to the California Department of Education single-gender academies pilot program (see summary of the pilot). It argues that the single-gender approach will be dangerous if hyped as a panacea for issues that are much deeper and broader than education. While it suggests that the experiments should continue, it cautions against exaggerated claims for these experiments. The article references the lack of rigorous research. It concludes that while education reform can't wait for economic change, reform is not likely to be effective without economic reform.

Sandoval-Lewis, Liz. *Gender often does matter in communications between parents and children*, **Currents**, University of California, Santa Cruz, May 11, 1998

www.ucsc.edu/oncampus/currents

The article is based on the work of Campbell Leaper and his team reported in *Moderators of Gender Effects on Parents' Talk to Their Children: A Meta-Analysis*, **Developmental Psychology**, January 1998. One conclusion drawn is that the activity being discussion and the setting in which the dialogue takes place are two critical factors influencing the extent of differences. Masculine topics such as sports or construction-oriented toys tend to emphasize directive, task-oriented communication which feminine topics such as playing house are more likely to emphasize collaborative communication. Leaper recommends that parents encourage daughters and sons to engage in a range of activities or topics to practice both types of communication.

Smith, Terry. *Anything Boys Can Do, Girls Can Do Better, Says School Study*. **Saint City News**. St. Albert, May 16, 2001.

The news article focuses on schools in the St. Albert school districts cited in a Fraser Institute study. The study evaluates differences in academic outcomes between the genders and generally finds that girls outperform boys. The pattern appears to apply in St. Albert.

Thorne, Barrie. *Boys and Girls Together...But Mostly Apart: Gender Arrangements in Elementary Schools*. **The Gender and Psychology Reader**. B.M. Clincy and J.K. Norem (Eds.) New York University Press. 1998.

Sex segregation among children, which starts in preschool and is well established by middle childhood, has been amply documented in studies of children's groups and friendships and is immediately visible in elementary school settings.

United States Committee on the Budget, House of Representatives. *Issues Involving Single-Gender Schools and Programs*, Report to the Chairman, Committee on the Budget, House of Representatives, United States General Accounting Office, May 1996.

This report was commissioned to identify the major educational and legal issues involved with public single-gender education. The three issues identified were: legality of such programming, effectiveness of such programming to promote desired educational outcomes, and desirability of single-gender as a strategy. They found that single-gender programs are seen as a strategy to address high dropouts, low academic achievement and other problems faced by many urban males and girls' low academic achievement in advanced mathematics and science. They found a lack of rigorous research on single-gender programs but conviction on the part of many that such programs improve test scores, attendance, behaviour. A study, conducted in 4 countries, concluded that effects are not uniform or consistent and that best results are found in atypical single-gender schools. The report also notes that some educational experts question the single-gender strategy and point to the lack of conclusive research to support their position. It provides information about legal questions regarding single-gender schools, programs, classrooms and clubs and cites a number of cases where such programming has been challenged. Finally, it describes examples of single-gender programs and concludes that the providers of these programs state that there are observable qualitative differences in the behavior of students in these environments but conclusive, quantitative research on the effectiveness of such programs is not available.

West, Peter. "Boys' Underachievement in School: Some Persistent Problems and Some Current Research." **Issues in Educational Research** 9(1), 1999. Pages 33-54.

The academic debate is muted because the debate about boys is linked to questions of feminism, and any questioning of girls' success or boys' perceived difficulties has been linked with a reaction against feminism. There has long been research which has pointed to a long-term decline in boys' performance, relative to girls; some research indicates a widening gap in boys' and girls' school leaving scores; another body of research argues that girls have had only apparent success, for their success in school leaving results does not carry through to later life.

Zengerie, Jason. *Back to Boys' School*, **The American Prospect** (on line), Issue 33, July-August 1997.

This article describes arguments put forward in support of all boys' schools. They include: providing the requisite lessons for passage into manhood, opportunities to take up the arts and community service and great opportunity for poor, minority males residing in single-mother homes in inner cities. It notes that there is limited hard evidence to show benefits of boys' schools and thus a reliance on anecdotal evidence. The anecdotal evidence often fails to tell both sides of the story.

Zinsmeister, Karl. *Bird's Eye: Let Boys be Boys*, theamericanenterprise.org/tacune00a.htm

The argument put forward in this article is summarized by a statement attributed to Christina Hoff Sommers. The statement is that "progressive" reforms and exaggerated feminist attitudes have rooted so deeply in schools and other parts of American society as to sometimes make boys feel like strangers in a land where no one speaks their language. The author illustrates this by referencing feedback his son received on an essay. He reports that his son was excited about his response to James Fenimore Cooper's *The Last of the Mohicans* but was disappointed when the feedback focused heavily on feelings and emotions.

The article also highlights the issue of role models. It states that with increases in single parenthood, fewer males have role models at home and few are provided in elementary schools. The author's view is that young boys are often ill-matched with the schools and other institutions that receive them.

Web Sites

Boys and achievement, www.literacytrust.org.uk/Database/boys.html

This site provides short articles based on studies in England and Wales. All articles focus on the underachievement of boys, especially in reading and writing. One article notes that two thirds of the children in reading recovery are boys. A more troubling finding reported is that according to Birmingham figures, African-Caribbean children scores 20% above the Local Education Authority (LEA) average at entry level but by GCSE age are 21% below average and Indian children move from 5% below to 14% above average with white children losing ground falling from 10% above to 6% above.

Literacy and Gender - The Boys: A Problem of Engagement?

www.sofweb.vic.edu.au/litfocus/gender.htm

This report suggests that to successfully engage students a comprehensive approach, including discussions on the notion of gender, is required. How do schools guide or reinforce notions of gender? This is suggested because national and international research confirms that boys as a group are not achieving as well as girls in literacy and are more likely to feel alienated in the environment of literacy teaching and learning.

1994 Gender Equity: What It Means for Boys

www.cyfc.umn.edu/Documents/A/B/AB1021.html

This article reports statistics highlighting that a higher proportion of males are born with genetic problems, that the suicide rate of boys between 10 and 14 is twice that of girls, that more teenage boys than girls end up in emergency rooms due to cocaine overdoses, and that the USA federal Bureau of Justice reports that about 94% of the 883,593 incarcerated are males.

SCHOOLS: Ravenswood seeks to create single-sex schools

www.com/PAW/morgue/news/1997_Jul_23.Gender.html, July 23, 1997.

This article advises of a middle school for at-risk students in the Ravenswood School District in California that by default is an all boys' school. The school was developed for at-risk students but only boys signed up. Teachers reported that there were fewer discipline problems and that the boys themselves preferred the single gender school. Because state funding is only available to school districts if they create a school for each gender, the plan is to develop a girls school that will focus on math and science, subjects that some girls struggle with.

Gender Differences in Visual-Spatial Abilities, science.wayne.edu/

The information references Halpern, 1992; Linn & Petersen, 1985 in stating that males out-perform females in tests of spatial ability including mental rotation. Possible reasons suggested include: specialization within ancestral culture (boys as hunters and girls as gatherers), biological factors (cerebral cortex in the right side of the brain where spatial information is processed is larger in males), social factors (parents estimation of ability and encouragement by predominantly male instructors), testing conditions favour males, and alternative strategies may be used in solving the task (females more cautious).

DISTRICT INFORMATION

- **Course completion:**
 - There is a higher rate of completion for girls in comparison to boys for all high schools in the district.
 - The average completion rate is 81.6% for girls and 77.4% for boys.
- **Expulsions:**
 - There is a significantly higher percentage of boys who are expelled from schools in the district in comparison to girls.
 - The percentage of boys expelled was 83% last year and for girls it was 17%. These percentages have been approximately the same for the last three years in the district.
- **Special Needs:**
 - There is a significantly higher percentage of boys than girls in all special needs programs in the district, with the exception of the Outreach program. For example:
 - ♦ Twice the number of boys compared to girls is found in the district's Learning Disabilities programs.
 - ♦ The large majority of students in the district's Behavior Disorders Programs is boys.
 - ♦ One and a half times more boys than girls are found in the district's Adaptation programs.
 - ♦ Twice the percentage of boys compared to girls is found in the district's Literacy programs.
 - ♦ Twice the percentage of boys compared to girls is found in the district's Academic Assistance programs.
- **Programs of choice:**
 - There is a higher percentage of girls than boys in all second language programs in the district.
 - There is a significantly higher percentage of boys than girls in the Sports Alternative programs.
 - There is a higher percentage of girls than boys in the International Baccalaureate (I.B.) Certificate and Diploma program, as well as the I.B. Middle Years program.
- **Provincial Achievement Tests (Grades 3, 6 and 9):**
 - For the past three years, boys have achieved a lower mean than girls in language arts at grades 3, 6 and 9 and boys have achieved a higher mean in mathematics at grades 3, 6 and 9. The difference between the means has remained approximately the same at each grade level for the past 3 years.
 - For the past three years, boys consistently achieve a higher mean than girls in science at grade 3, 6 and 9.
 - There is no significant pattern evident in the comparison of school authority marks and provincial achievement test marks for boys.
- **Diploma Examinations:**
 - In the June diploma examinations
 - ♦ In eight out of ten diploma examinations, there was a smaller percentage of boys achieving the acceptable standard, based on teacher-awarded marks in comparison to provincial examination marks.

- ♦ In seven out of ten diploma examinations, there was a higher percentage of boys achieving the standard of excellence, based on teacher-awarded marks in comparison to provincial exam marks.
- In the January diploma examinations
 - ♦ In nine out of ten diploma examinations, there was a smaller percentage of boys achieving the acceptable standard, based on teacher-awarded marks in comparison to provincial examination marks.
 - ♦ In seven out of ten diploma examinations, there was a smaller percentage of boys achieving the standard of excellence, based on teacher-awarded marks in comparison to provincial examination marks.

PARENT AND STUDENT INPUT

Parent Feedback:

- Those in support suggested that such a program would focus more specifically on the needs of boys and that there should be such as a program as there is one for girls.
- Those who did not support the concept suggested that a mixed setting improves socialization skills and that such a program would reduce these opportunities and result in more behaviour problems.
- Those who indicated support, thought that the junior high level would be the most appropriate level for such a program.
- Other comments made were
 - find out what educational research has to say
 - beware of increased fragmentation in the district
 - need to pilot before committing indefinitely
 - consider the issue of re-integration
 - to perhaps focus on math and science

Student Feedback:

- Offering a choice of an all-boys program to students in the district would be fair to boys in the district, since there is a program for girls.
- However, none of the students indicated that they would be interested in registering for such a program.
- The strengths of such a program are:
 - respond to boys' learning styles
 - remove distractions
 - raises self-esteem
- The concerns regarding such a program are:
 - it would not provide sufficient opportunities to develop skills in relating to girls
 - it may attract boys who have learning or behaviour problems
 - when boys leave the program they have to go back to a boy and girl environment
 - may not appeal to boys to have a program with a special emphasis
- Junior high would seem to be the most appropriate age-level for such a program.