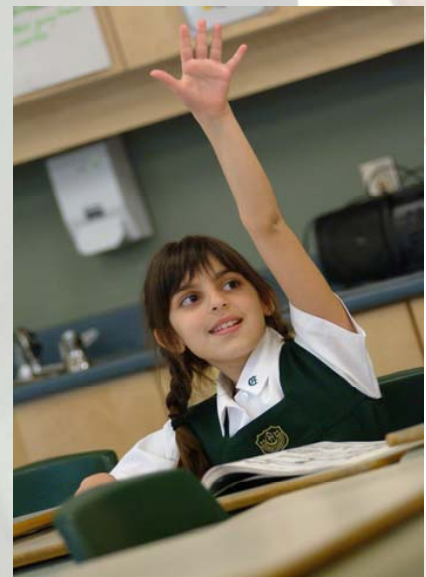


**WHY CHOOSE
AN ALL-GIRL
SCHOOL?**

*A sampling
of research
findings*



An International Baccalaureate School

WHY CHOOSE AN ALL-GIRL SCHOOL?

A sampling of research findings

GENDER MATTERS:

- Gender and the Brain 1
Recent neurological research is refueling the nature/nurture debate and is providing the opportunity to re-evaluate teaching methods and learning environments.
- Some Surprising Facts 2
Some social and educational points to ponder on the results of research.

GENDER-FRIENDLY EDUCATION:

- What the Research Shows 3
Disparities in female achievement, especially in Math and Science, can be ameliorated by providing female-friendly learning environments, which include among many things the use of appropriate teaching methods, challenges to social stereotypes, and the creation of leadership opportunities.
- The Benefits of Attending a Girls' School 6
List of the top ten unique attributes of an all-girl school
- What are the advantages of single-sex education for girls? 7
International findings fall into three categories: expanded educational opportunity, custom-tailored learning and instruction, and greater autonomy.
- The Gender Gap in the Computing Field 11
Stanford University's Computer Science Education reports on the obstacles facing women in this male-dominated field and the importance of eliminating this gap.

Gender and the Brain: The Difference is in the Details

"Girls and boys are as different from the neck up as the neck down," according to psychologist **JoAnn Deak**, author of *Girls Will Be Girls: Raising Confident and Courageous Daughters*. Dr. Deak says research has shown that our brains are differentiated along gender lines when it comes to our learning styles. There are exceptions and shades of gray, of course but in general according to Dr. Deak:

- Female brains are predisposed to excel in language, auditory skills, fine motor skills and attention to detail
- The female brain is more decentralized, using a variety of parts or locations for a single task
- The female brain is more integrated, allowing both brain hemispheres to work together via a more developed *corpus callosum*, the bridge between the right and left brain hemispheres
- In the female brain, thoughts and emotions are much more complex, integrated and intertwined than in the male brain.

Scientists have long known that hormones play a major role in how the brain grows as a child matures. Different levels of female or male hormones determine the size or structure of some areas of the brain, such as the *corpus callosum*, as noted above. In recent years, the advent of *Magnetic Resonance Imaging* (MRI) has allowed researchers to witness these differences in action by scanning the brains of living subjects. Among their findings:

- Yale University researcher **Dr. Sally Shaywitz** showed that, while listening to someone speaking, men used the left sides of their brains. Women, on the other hand, used both sides of their brains to process the same information in a different way.
Nature, Feb 1995
- **Drs. Ruben and Raquel Gur** of the University of Pennsylvania found that women's brains have fewer neurons than men's brains on average, but are "wired together" more efficiently; visible structural differences help explain why women tend to be more skilled in verbal tasks, while men tend to be more adept at spatial tasks
- Among the Gurs' other findings: Women have more tissue linking the brain's left and right hemispheres and therefore tend to employ "whole-brain" thinking, while men tend to employ one hemisphere or the other preferentially, depending on the task before them.
May 1999, Journal of Neuroscience
- **Dr. R.J. Miller** of Washington State University examined the widely-held belief that boys have better spatial skills than girls. Dr. Miller writes: "It is possible, however, that a key difference between males and females may not be actual differences in spatial skills per se, but rather differences in the extent to which certain spatial skills are relied upon.... There is some indication that these strategic differences may be traced to sex differences in specific brain areas used in performing such tasks."
Sex Roles: A Journal of Research, Feb, 2001

So, to paraphrase an oft-heard question, is brain structure destiny? Not at all. The task of educators is to engage girls in what Dr. Deak calls "against-the-grain" learning. We must make sure girls spend time in activities that they may not be "hardwired" to choose of their own accord. These include areas involving motor tasks such as climbing; spatial tasks such as puzzles or building; strategy tasks such as checkers and chess; and appropriate risk-taking -- any task, game or exercise that requires a girl to muster her courage and expand her horizons.

Article taken from the National Coalition of Girls Website www.ncgs.org

Article taken from www.academic.org : Some Surprising Facts

- Developmentally, girls take the lead. They talk earlier, read earlier, count earlier. In preschool, they score higher on IQ tests than their male peers. They usually receive better grades in elementary school than boys, yet in public schools, far more gifted boys than gifted girls are identified by fifth grade.
- Girls begin to go underground with their talents and abilities sometime between fifth and ninth grades.
- Traditional teacher training has focused on teaching to boys' interests and behaviors. This strategy is thought to help keep order in classrooms. Boys predominately express their frustrations by *acting out*, disrupting the classroom in a variety of ways. Girls predominantly express their frustrations by *acting in*, becoming silent, withdrawn and non-participative. One way to control boys was to be sure that they were contributing - therefore, teachers have traditionally called on boys more often than girls.
- Boys and girls come to very different conclusions about themselves, even when the data on which they base their decisions are the same. Research shows that boys are more willing to accept success and take credit for their accomplishments than girls are.
- Women who choose non-traditional careers can expect to have lifetime earnings that are 150% of women who choose traditional careers.
- If present trends continue and girls are not encouraged into math and science and computer programming, they will be trained only for the data and information-retrieval capabilities of the computer. These are still secretarial/clerical skills, and females will remain at the low end of the service-oriented pay scale.

Article taken from the National Coalition of Girls' Schools Website

What the Research Shows: The Benefits of Attending a Girls' School

"The students I met are learning to be their best selves, competent and comfortable with who they are. Isn't that what all children deserve?" - **Karen Stabiner**, author, "All Girls: Single-Sex Education and Why It Matters"

In 1982, Harvard University researcher **Carol Gilligan** authored a book that would go on to trigger a revolution in education. With *In a Different Voice: Psychological Theory and Women's Development*, Dr. Gilligan established that girls think, interact, display leadership and make decisions in a way that is unique both psychologically and developmentally. The male-based model, she found, simply did not fit the way girls learn.

Dr. Gilligan's conclusions, as well as a growing awareness of disparities in academic performance between girls and boys, led to a closer examination of what actually goes on in a co-ed classroom. In *Shortchanging Girls, Shortchanging America*, the **American Association of University Women (AAUW)** found that girls routinely were called upon less often. Professors **Myra and David Sadker** echoed those findings in *Failing at Fairness: How Schools Shortchange Girls*, a compendium of 10 years of their research at American University.

Since then, single-sex education has been the subject of increasing interest among researchers, and several major reports have detailed the ways in which all-girl learning environments can be beneficial. A 2000 study of 4,274 girls' school alumnae, conducted for NCGS by the **Goodman Research Group** of Cambridge, Massachusetts, examined outcomes at single-sex schools for girls. The girls' school alumnae were overwhelmingly positive in their responses:

- 91% cited preparation for college and academic challenge as very good or excellent
- 88% would repeat their girls' school experience
- 83% perceived themselves to be better prepared for college than female counterparts from co-educational high schools
- 93% agreed that girls' schools provide greater leadership opportunities than coed schools; additionally, 80% had held leadership positions since graduating from high school
- 13% intended to major in math or science -- significantly more than females and males nationally (2% and 10% respectively)

Many participants in the Goodman study volunteered commentary in support of the survey questions; for example:

- *"At the girls' school I attended, academics and being smart were the focus of most students."*
- *"I was constantly challenged, stimulated, exposed to new ideas, encouraged and supported."*
- *"Because of my girls' school experience, I developed a strong sense of myself and the confidence to make important choices in my life."*

Researcher **Cornelius Riordan**, author of *Girls and Boys in School: Together or Separate?*, has spent years examining educational outcomes based on various school settings. Recently he summed up his findings in a Boston Globe editorial:

"Having conducted research on single-sex and co-educational schools for the past two decades, I have concluded that single-sex schools help to improve student achievement. My conclusions are based on high quality national data gathered by the National Center for Education Statistics, as well as on studies conducted around the globe."

Many countries overseas have significant student populations enrolled in single-sex schools, and collect detailed statistics for comparison purposes. In Great Britain, the **National Foundation for Educational Research** examined student performance data from 979 primary and 2,954 secondary schools. Among its objectives was to test assertions that single-sex education can be beneficial for girls and boys alike. The study concluded that:

- Girls' schools help counter gender-stereotyping in subject choices
- Girls in single-sex schools perform better than girls in co-ed schools, regardless of socio-economic and ability levels
- Boys with low prior academic achievement score slightly better on the GCSE (a standardized test required for graduation) in boys' schools than in co-ed schools
- Boys in single-sex grammar schools perform better than those in co-ed grammar schools

A similar conclusion comes out of Australia, where **Dr. Ken Rowe**, Principal Research Fellow at the Australian Council for Educational Research, summarized the findings of several studies involving more than 270,000 students. Dr. Rowe presented the results of his research to The Second National Conference on Co-Education, held in Australia in April of 2000, telling the audience:

"Co-educational settings are limited in their capacity to accommodate the large differences in cognitive, social and developmental growth rates of girls and boys between the ages of 12 and 16. In contrast... evidence suggests that during these key adolescent years, single-sex settings better accommodate the specific developmental needs of students."

Dr. Rosemary C. Salomone, a professor at St. John's University School of Law, has conducted a similar survey of the available research. In her book *Same, Different, Equal: Rethinking Single-Sex Schooling*, Dr. Salomone writes:

"All-girls settings seem to provide girls a certain comfort level that helps them develop greater self-confidence and broader interests, especially as they approach adolescence. Research has found that single-sex schools and classes promote less-gender-polarized attitudes toward certain subjects – math and science in the case of girls and language arts and foreign languages in the case of boys."

For generations, girls' schools have served students of many abilities, interests, talents and backgrounds. What unites these schools is a long-standing commitment to learning environments that place girls first and foremost. What sets them apart from other educational settings is an in-depth understanding of how girls learn and succeed.

According to **Burch Ford**, Head of Miss Porter's School and former President of the NCGS Board of Trustees:

"It is important that girls, while they are still growing physically, emotionally, socially, intellectually, and spiritually, be served in a context that encourages and supports their expression, however tentative and nascent. They need to have the opportunity, easily available not just hard-won, to risk self-expression as scholars, athletes, artists, and leaders, until their competence leads to the confidence not only to express themselves but also to comfortably sustain their perspectives when they are challenged by boys and men. That competence and confidence does not follow from insight or understanding alone, but can only develop from example of adult models, along with personal practice and experience."

At NCGS member schools, girls enjoy not just equal opportunity, but every opportunity. All the speakers, players, writers, singers, athletes, doers, and leaders are girls. Mentors and role models are not hard to find. There are no chilly classroom climates to endure, no subtle signs of second-class citizenship.

Professors **Myra and David Sadker**, the American University researchers quoted earlier, put it this way:

"When girls go to single-sex schools, they stop being the audience and become the players."

It is a frame of mind that puts girls' school alumnae at a competitive advantage when entering college. **Robin Robertson**, a former girls' school principal who later taught at the university level, says girls' school alumnae stand out in a crowd:

"As a college professor I could identify students from girls' schools with a 90 percent accuracy rate on the first day of class. They were the young women whose hands shot up in the air, who were not afraid to defend their positions, and who assumed that I would be interested in their perspective."

Single-sex education is gaining new prominence in the United States. According to Harvard University researcher **Dr. David Riesman**,

"Girls' schools provide an environment that not only is good in and of itself, but that in its redefinition of competitiveness and collaboration, of autonomy and connectedness, presents a model that other schools do well to emulate."

Girls' schools know that students who are held to the highest expectations, given access to the best resources, and who are led to understand that serious schooling is theirs for the taking -- these are students who do not turn back. This is exactly the culture of a girls' school, and time spent within one transforms girls. It is a sound investment for life.

www.ncgs.org

The Benefits of Attending an All Girls' School:

10 Things That Make Girls' Schools Unique

1. Girls' schools create opportunities for appropriate, educational risk-taking.
2. The curriculum counters mass-media influences, giving girls room to decide for themselves who they are.
3. A girls' school environment reinforces a 'can do' philosophy.
4. In a girls' school, learning takes center stage, with social life reserved for time outside the classroom.
5. Girls' schools teach collaborative as well as competitive skills.
6. Girls' schools promote excellence in math, science and technology.
7. Girls' schools promote athletic participation to encourage both leadership and team play
8. Teaching strategies maximize girls' verbal/writing skills in learning
9. The girls' school culture offers strong female role models
10. The curriculum emphasizes 'real life' skills such as financial literacy, leadership, and service to community

This Article has been adapted from the National Coalition of Girls' Schools Website

www.ncgs.org

Article Taken from the National Association for Single Sex Education: What are the advantages of single-sex education for girls?

The advantages of single-sex education for girls fall into three categories:

- ✓ expanded educational opportunity
- ✓ custom-tailored learning and instruction
- ✓ greater autonomy, especially in heterosexual relationships

Expanded educational opportunity

The single greatest benefit of girls-only education is the greater educational opportunity girls enjoy in the all-girls classroom. At every age, girls in girls-only classroom are more likely to explore "non-traditional" subjects such as computer science, math, physics, woodworking, etc. This finding is extraordinarily robust, having been replicated in every age group from kindergarten through college, and in every country where researchers have examined this question, including the United States, the United Kingdom, Australia, New Zealand, Thailand, Jamaica, Iceland, and Kenya.

OK. Girls are more likely to explore non-traditional subjects in girls-only classrooms. How come? One intuitive way to understand this is to consider our experience on a recent site visit to a prestigious private school. For many years, this private school was coed. Then, in the fall of 2003, the school's leadership decided to reinvent the school as a single-sex dual academy: girls in one wing, boys in another. For all the years that the school was coed, all the students who played the trumpet were boys. After the school adopted the single-gender format, there were two bands: one for girls, and one for boys. The band director told the girls that some of them would have to learn to play the trumpet. Several girls volunteered -- and they're very good! None of those girls might ever have picked up a trumpet if the school had remained coed. That's why we say single-sex classrooms broaden education opportunities, while coed classrooms tend to reinforce gender stereotypes.

Margrét Pála Ólafsdóttir is an Icelandic educator who introduced single-sex kindergarten to Iceland in 1989. She makes this common-sense observation:

"Both sexes seek tasks they know. They select behavior they know and consider appropriate for their sex. In mixed [i.e. coed] schools, each sex monopolizes its sex-stereotyped tasks and behavior so the sex that really needs to practice new things never gets the opportunity. Thus, mixed-sex schools support and increase the old traditional roles."

Ólafsdóttir has developed a technique in the girls section of her single-sex kindergarten which she calls "dare training", i.e. training girls to take risks. She puts mattresses on the floor, and "dares" the girls to jump from a table on to the mattress. She also encourages the girls to yell as loud as they can as they do their jump. That's certainly one way to help girls "find their voice," à la Carol Gilligan. (Margrét Pála Ólafsdóttir, "Kids are both girls and boys in Iceland," *Women's Studies International Forum*, volume 19, number 4, pages 357-369, 1996). One explanation for the fact that girls at single-sex schools are more likely to explore non-traditional subjects, then, might be that the single-sex classroom encourages girls to be daring, to try things that they might otherwise not try. Another explanation is that girls in the girls-only setting have more freedom to explore non-traditional subjects. Imagine that you're an 8th-grade girl, trying to decide what courses to sign up for in 9th grade. You're choosing between an advanced Spanish class and a computer programming class. You visit both classes. The Spanish class is very familiar: basically the same thing you've been doing for that past several years. The computer programming class at the coed high school, you notice, has 18 boys and one girl. The boys are loudly boasting about how much they know and how proficient they are at computer programming. Which class will you choose?

Most teenagers, female and male alike, will choose something they know they're good at rather than risking embarrassment -- and a bad grade on their transcript -- in a subject with which they have little experience. And, few girls want to be the only girl in a class of 20 boys. It's just not a real comfortable situation. So, you sign up for Spanish class.

But, if you have the opportunity to sit in on an all-girls computer programming class, you might come away with a very different attitude. In such a class, you'd see other girls whose background is similar to yours, and who are doing very well in the class. Isn't it more likely that you'd be willing to give it a try?

This example leads to another explanation for the fact that girls at single-sex schools are more likely to explore non-traditional courses. Girls at single-sex schools have more diverse role models of their own sex. In an all-girls school, the most amazing "computer geek" is a girl, the student council president is a girl, the top scorer on the math exam is always a girl, the best athletes are all girls, etc. That experience tells younger girls, it's OK to excel in math, sports, and girls can be really smart with computers, too.

Custom-tailored learning and instruction

Jean and Geoffrey Underwood have published a series of scholarly papers over the past 12 years, demonstrating the extraordinary advantages of single-sex classrooms for girls. In one of their studies, published in 1997, the Underwoods gave 31 pairs of 8-year-olds a computer-based language task. Children were randomly assigned either to girl-girl, girl-boy, or boy-boy pairs. Each child within a pair was matched with the other for reading ability. The Underwoods found a dramatic difference in story recall, depending on the gender composition of the pair. Boys in boy-boy pairs performed least well, while girls assigned to girl-girl pairs obtained the highest scores. The most striking finding, however, was that girls in girl-boy pairs performed almost as badly as the boys did. Just putting a girl with a boy degraded her performance by roughly 50% on this computer-based task. This effect was highly significant ($p < 0.001$). In other words: paring girls with boys does NOT help the boys, but it does HURT the girls.

Teaching Literature

Recall again what you learned on our [brain page: emotional activity is processed in completely different areas of the brain in older girls compared to older boys](#). In older girls, brain activity associated with emotion is localized primarily in the cerebral cortex, the same part of the brain involved in reasoning, language, and higher cognitive skills. So, the older girl is typically able to articulate her emotions fairly well, to explain what she is feeling and why. In boys, on the other hand, the locus of emotional control remains stuck in the amygdala, a phylogenetically "ancient" nucleus with no direct connections to the cerebral cortex. Older girls are usually comfortable sharing their feelings or imagining how others might feel in a particular situation. It's easy for them to link emotions with ideas, because those areas are linked in a girl's brain. Girls usually prefer books which focus on dyadic or triadic relationships (relationships among two or three individuals). "Girls tend to prefer books where they can be analytical about a character's motives and behaviors. Boys tend to prefer action," says Victoria Ehrhardt, an English teacher in Louis County, New York. "Boys and girls have different reading interests," agrees Judy Hayn, professor of education at Loyola University in Chicago. She adds that "Girls like stories about experiences that might happen over one summer and the emotional agonies that a character endures. Boys want stories with male protagonists that are exciting."

Role-playing exercises work well for girls. Consider having the girls create little skits, in which girls act out scenes from the book. Or, assign each girl to be one of the characters in the book, and have them discuss an issue "in character." For example, if you're teaching *Are You There, God? It's Me, Margaret*, one girl could be Margaret, another could be Margaret's mother, another girl could be Margaret's father, another could be Margaret's grandmother from Manhattan. They could then discuss the pros and cons of moving from Manhattan to New Jersey -- or the pros and cons of raising a girl in a particular religious faith vs. no religion at all. Each girl talks in the voice of the assigned character.

Inductive exercises are a variation on role-playing exercises. In an inductive exercise, you ask the girl to imagine herself in the role of a character in the story. For instance, if you're teaching Tolstoy's *War and Peace*, you might ask your student, "How would you feel if you were 17 years old and engaged to be married, and then your sweetheart announces

that he's going away for a year -- just because his father told him to?" (the situation Natasha faces after accepting Andrey's proposal). Girls like a challenge in this exercise, so don't hesitate to do cross-gender inductive exercises. For example, from Steinbeck's *East of Eden*, you might ask: "How would you feel if you were Cal, and you discovered that your mother wasn't dead, but had abandoned you as a child? Would you want to go see her?"

Teaching Mathematics

Best practices for teaching math differ fundamentally for girls and boys. Recall what you learned on the navigation section of our [brain](#) page: navigational tasks are handled by completely different areas of the brain in girls and boys. In girls, navigational tasks are assigned to the cerebral cortex, the same general section of the brain which is responsible for language. In boys, the same tasks are handled by the hippocampus, an ancient nucleus buried deep in the brain, devoid of any direct connections to the cortex.

These anatomical differences have major implications for teaching mathematical topics, especially geometry, algebra, and number theory. For girls, you want to keep it real and keep it relevant. Fibonacci numbers are a great way to introduce number theory to girls, for example. Recall that a Fibonacci series is formed by adding two numbers to yield a third number. The best-known Fibonacci series is: 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89 . . . Ask your girls to bring in any of the following: artichokes, sunflowers, pineapples, pinecones, delphiniums, black-eyed susans, field daisies, African daisies, and Michaelmas daisies. Start with the flowers. (We start with flowers not because flowers are "feminine" but because it's easier to count the number of petals on a daisy than it is to count the number of rows of bracts on a pinecone.) Count the number of petals. You'll find that the number of petals is almost always a number in the Fibonacci series: 8 petals for delphiniums, 13 for double delphiniums, 21 for black-eyed susans, 34 for field daisies, 55 for African daisies and Michaelmas daisies.

Then you can move on to the artichokes, sunflowers, pinecones, and pineapples. These are more complicated. In these, you're studying the number of rows rather than the number of petals (or seeds or bracts). The number of rows counted vertically or obliquely will, again, be a number in the Fibonacci series. Be sure to read *Fascinating Fibonacci* by Trudi Hammel Garland, from which these examples are taken.

Learning Style

Girls and boys differ fundamentally in the learning style they feel most comfortable with. Girls tend to look on the teacher as an ally. Given a little encouragement, they will welcome the teacher's help. A girl-friendly classroom is a safe, comfortable, welcoming place. Forget hard plastic chairs: put in a sofa and some comfortable bean bags. Let the girls address their teacher by her (or his) first name. The teacher should never yell or shout at a girl.

Girls will naturally break up in groups of three and four to work on problems. Let them. Minimize assignments which require working alone. If you're assigning class presentations, let two girls give a joint presentation. The format of one student giving a presentation to an entire class doesn't work as well (for girls) as two students giving a joint presentation to a smaller group.

Some of the biggest difference in how girls and boys learn derives from the fact that girls mature differently than boys do. If you've read about the biologically-programmed differences in the [brains of girls and boys](#), then you already know about some of these differences in brain development. In single-sex schools, teachers are (or should be) free to choose materials that fit the interests of their students. In coed schools, the girls are often held back or held down to the abilities and interests of the boys.

Greater autonomy, especially in heterosexual relationships

Let's start with one of the most basic facts about single-sex education at the middle school and high school level: girls in single-sex schools are much less likely to experience unwanted pregnancies than are girls at coed schools. What's the explanation for that fact? The most common explanation put forward is that girls at single-sex schools are less likely to be involved in heterosexual relationships than are girls at coed schools. But is that a true statement?

Katherine Sanders and Neville Bruce tested the hypothesis that girls at single-sex schools have fewer heterosexual relationships than do girls at coed schools. To their surprise, they found no evidence to support this hypothesis. They acknowledged that they "had expected that single-sex schooling might inhibit incidence of romances, at least during the school years. But this view was supported by only two of eight possible comparisons and the trend in four of the comparisons was in the opposite direction" (i.e. students at single-sex schools were more likely to be involved in romantic relationships). "Thus, it would seem that students from single-sex schools are not noticeably thwarted by any lack of opportunity or experience in the single-sex school system from experiencing romantic episodes, either at school or later in their early university years."

Source: Neville Bruce and Katherine Sanders, "Incidence and duration of romantic attraction in students progressing from secondary to tertiary education," *Journal of Biosocial Sciences*, volume 33, pages 173-184, 2002.

All right. If girls at single-sex schools are involved in just as many heterosexual relationships as girls at coed schools, how come girls at single-sex schools are so much less likely to experience an unwanted pregnancy? Studies demonstrate that when 15- and 16-year-olds at coed schools form romantic relationships, they do so less on the basis of individual characteristics and more on the basis of where the teenager stands in the clique. The most popular boy in the group goes out with the most popular girl, the second most popular boy goes out with the second most popular girl, and on down the line, with the least popular boy paired with the least popular girl. Sexual relationships in this age group, far from involving intimate personal connection, instead appear to be more of an exercise in role-playing.

Sources: Anthony Pellegrini, "Bullying, victimization, and sexual harassment during the transition to middle school," *Educational Psychologist*, volume 37, number 3, pages 151-163, 2002; also Bukowski, Sipploa, & Newcomb, "Variations in patterns of attraction to same-and other-sex peers during early adolescence," *Developmental Psychology*, volume 36, pages 147-154, 2000.

At a coed school, your boyfriend is part of your circle of friends, the people you hang out with. Your boyfriend is part of who you are. Your boyfriend's friends are likely to be your friends too. You all do stuff together, go places together. If your boyfriend dumps you, your whole social network is put at risk. So, if the other girls in your group are having sex with their boyfriends, it's hard for you to say no. Saying no to your boyfriend has the potential not only to jeopardize your relationship with your boyfriend, it jeopardizes your entire social standing at school.

It should come as no surprise, then, that teenage sex and unwanted teenage pregnancy are much more common at coed schools than at single-sex schools. The most obvious and undisputed advantage of single-sex education is the dramatically lower risk of getting pregnant in middle school or high school. To understand how important that single benefit is, you need to understand how common teenage pregnancy continues to be. Teenage pregnancy hasn't been in the news much in recent years, because the rate of teenage pregnancy is no longer rising. But the United States continues to have the highest rate of teenage pregnancy and the highest rate of teenage births in the industrialized world. And, the percentage of young girls having intercourse is rising. What's really happened over the past 20 years is that more young girls are having sex, but a smaller percentage of young girls are having babies as a result. According to the National Campaign to Prevent Teen Pregnancy, the number of girls under 15 who have had intercourse increased from 11 percent to 19 percent between 1991 and 2000. In other words, almost one out of every five 14-year-old girls nationwide now has had intercourse. Nearly four in 10 young women become pregnant at least once before they reach the age of 20, and 80% of those pregnancies are unintended.

At a single-sex school, though, even if you do have a boyfriend, your social network at school is likely to be separate from your boyfriend's group of friends. So, it's easier to say no. You have more autonomy over your sexual decision-making. It's easier to contemplate life without the boyfriend.

Bottom line: girls at single-sex schools have just as many heterosexual relationships as girls at coed schools. But girls in single-sex schools are more in control, have more autonomy in those relationships, and -- as one result -- are much less likely to experience an unwanted pregnancy.

Article taken from Stanford Education Review: The Gender Gap in the Computing Field

Currently, there are a far smaller number of women in the computing field than men. According to an MIT study, the women in the field are just as qualified as the men, yet their numbers remain small. After some research, the Association for Computing Machinery (ACM) has concluded that in general women stop their training in computer science earlier than men, thus accounting for the difference in proportion, especially at higher professional levels. While women receive about a third of the undergraduates computer science degrees, many fewer receive masters degrees, and fewer still stay to get their PhD's. This means that there are far more male computer science professors than female ones, which helps to perpetuate the male-dominated atmosphere of computer science.

Obstacles to women's participation in the field of computer science seem to stem from something inherent in the field. In modern society, the computer is introduced early in life and accompanies the development of many children who may later work with it for a living. Unfortunately, software for those young children is designed almost expressly for boys. As children grow, the computer industry which holds their attention consists of male-targeted computer games. Clearly, the male-dominated computer science field is deeply rooted and perpetuated throughout a potential computer scientist's life. This cultural basis for the gender gap leads to difficulty for those women interested in computer science. The nature of the work itself also seems to conform to stereotypical gender roles. According to Eric Roberts, programming is such an intense field that it almost promotes obsessiveness, a character trait more common and more accepted in men than in women.

The existence of stereotypes in the context of computer science results in a general atmosphere where discrimination, whether deliberate or not, prevails. Fellow employees often doubt a female employee's dedication to the job and also underestimate her skill level. Studies done by the ACM and MIT have concluded that people hold different expectations for women, different even from men with similar jobs. Unfortunately, women's self esteem has been found to be naturally lower and more easily crushed, making any of these obstacles a serious threat to the presence of women in the computing field. The negative environment created by subtle unchecked discrimination not only injures a woman's self esteem on a personal level, but it has also been proven to decrease the ability to work effectively and productively, thus inadvertently perpetuating the stereotypes.

The gender gap in computer science must be eliminated for two reasons. (1) The more obvious reason raises ethical issues regarding the fairness of a male-dominated field, especially for the women entering or already in the field. (2) The less considered danger of the gender gap concerns the advancement of the field as a whole. By hindering half of the population of potential contributors, the field of computer science decreases its chance of further development. Demographically, there is also a trend that predicts a serious shortage in the computing industry.

On a more tangible note, the gender gap can be slowly decreased by improving equality at its base. Equal access to computers should be encouraged at an early age, and more educational software can be developed to increase girls' interest in computers.

<http://www-cse.stanford.edu/classes/cs201/projects-97-98/gender-gap-in-education/page6.htm>