

Research summary

What does the research say about co-educational versus single-sex schooling?

Preparing students to thrive in a rapidly changing world means looking at the skills and attributes they will need, now and into the future.

Guildford Grammar School's commitment to helping each student in our care achieve personal excellence, and contribute to a just, loving and peaceful society, is at the heart of our decision to extend co-education to our Senior School.

Extensive examination of local and international research has found no negative impact — and many positive impacts — associated with co-education, which helps prepare students for the complex and varied relationships of the real world.

We recognise this runs contrary to some popular misconceptions, however, so a selection of recent, relevant research is described below.

What difference does co-education make to academic performance?

The differences in academic performance at school are negligible or non-existent. Multiple studies have found that students perform equally well in both single-sex and co-educational settings once other factors are accounted for. Academic differences are negligible once initial attainment, socio economic status and family background have been considered.

In 2014, American researchers Erin Pahlke, Janet Hyde and Carlie Allison analysed 184 separate studies in this field, looking at 21 nations and the experience of 1.6 million students.

This meta-study found same-sex schooling produced no advantage in high school for either boys or girls.¹

Their finding that there was no significant difference between gender options supports findings from the Organisation for Economic Development (OECD), which conducts the Programme for International Student Assessment. Known as PISA, this is considered the world's best measure of educational performance across different systems.

While the OECD analysis of results across systems found improved performance in raw marks in single-sex schools, this advantage disappeared entirely once the school and student socio-economic background was taken into account.²

¹ Pahlke, E., Hyde, J. S., & Allison, C. M. (2014), The effects of single-sex compared with co-educational schooling on students' performance and attitudes: A meta-analysis. *Psychological Bulletin*, 140(4), 10 42. www.apa.org/pubs/journals/releases/bul-a0035740.pdf

² Organisation for Economic Co-operation and Development, (2009), Equally prepared for life? How 15-year-old boys and girls perform in school. www.oecd.org/pisa/pisaproducts/42843625.pdf

Numerous Australian studies have also found that socio-economic status is a greater determination of results than gender.

As Australian researcher Susan Bennett put it in 2015:

“Despite widespread public concern over gender differences in achievement, research indicated that greater disparities were related to class and ethnicity. Students from high SES backgrounds and white Anglo backgrounds, whether girls or boys, significantly outperformed other students.”³

What else might be driving academic performance?

Researchers agree that for students to achieve their best, teacher quality, positive school culture, strong leadership and excellent school and classroom resourcing continue to be fundamental.

Australian research has largely concluded that the gender make-up of a classroom does not matter as much as the quality of teachers and teaching, the latter representing as much of 30 per cent of the variance in student performance.⁴

In the UK, single-sex education was the norm until the 1960s but the number of boys-only and girls-only schools has been declining rapidly.

In the 1990s, more than 460 of the UK’s independent schools (about one in three) were single-sex schools. As of 2014, there were just 250 that only took boys or girls (one in four). The fastest decline has been among boys’ schools, which have fallen from 230 to fewer than 100 in number.

Professors Pamela Robinson and Alan Smithers, from the Centre for Education and Employment Research, in looking at the results of single-sex and co-educational schools have concluded:

“While there are some very good girls’ schools and boys’ schools, it does not look as though they are good because they are single-sex.”⁵

What is the impact of co-education on social performance?

The former president of the American Psychological Association, recently in Australia to discuss the same 1.6 million students considered by the Pahlke et al. meta study referred to above, concluded

³ Bennett, S. (2015). *Gender relations in elite co-educational schools* (PhD). Deakin University, p19 <http://dro.deakin.edu.au/eserv/DU:30081641/bennett-genderrelations-2016A.pdf>

⁴ Hattie, J. (2003) Teachers Make a Difference. What is the research evidence? ACER conference. www.det.nsw.edu.au/proflearn/docs/pdf/qt_hattie.pdf

⁵ Robinson, P., & Smithers, A. (2006), The paradox of single-sex and co-educational schooling, Centre for Education and Employment Research: University of Buckingham. www.buckingham.ac.uk/wp-content/uploads/2010/10/hmcscsd.pdf

there were no significant social differences between students educated in different schooling formats.⁶

What has been found is a tendency for single-sex schools to reinforce gender stereotypes, underscored by the idea that girls and boys are so different that they needed to be segregated for work or learning.⁷

Robinson and Smithers believe the problem with much of the pro-single-sex research is that it tries to focus on 'typical' boys and girls, describing:

"the 'typical boy' as being anti-school, unable to concentrate, hating to read, disruptive to classmates, and obsessed by video-games; and of the 'typical girl' as lacking in confidence, easily put off the sciences and maths, distracted by boys and concerned about people not things.

*"But while there are some boys and some girls like this, the influences of gender are far outweighed by ability, social background and race (where there are few advocates for educational separation)."*⁸

American researchers Richard Fabes, Carol Martin, Laura Hanish, Kathrine Galligan and Erin Pahlke argue single-sex schooling perpetuates gender stereotypes, which can persist even after students leave school.⁹

In contrast, co-educational settings can break down assumptions about the other gender.

In her examination of three 'elite' co-educational Melbourne schools, Bennett found girls and boys worked together as friends and colleagues, developed equitable relationships and regularly challenged gender stereotypes.

Further, students she interviewed reported it was quite normal for girls and boys to be close or best friends, without the assumption that there had to be a romantic link between them.¹⁰

⁶ Bagshaw, 2016, No benefit to single-sex education, Australian Psychological Society Congress to be told <http://www.smh.com.au/national/education/no-benefit-to-singlesex-education-australian-psychological-society-congress-to-be-told-20160913-greйдj.html>

⁷ Keener, Mehta & Strough (2013). Should educators and parents encourage other-gender interactions? Gender segregation and sexism, *Journal of Gender And Education* Vol. 25 , Iss. 7, <http://www.tandfonline.com/doi/abs/10.1080/09540253.2013.845648>

⁸ Robinson, P., & Smithers, A. (2006), *The paradox of single-sex and co-educational schooling*, Centre for Education and Employment Research: University of Buckingham. <http://www.buckingham.ac.uk/wp-content/uploads/2010/10/hmcscsd.pdf>

⁹ Fabes, R., Martin, C., Hanish, L., Galligan, K., & Pahlke, E. (2015). Gender-Segregated Schooling: A Problem Disguised as a Solution. *Educational Policy*, 29(3), 431-447. <http://epx.sagepub.com/content/29/3/431.abstract>

¹⁰ Bennett, S. (2015). *Gender relations in elite co-educational schools* (PhD). Deakin University <http://dro.deakin.edu.au/eserv/DU:30081641/bennett-genderrelations-2016A.pdf>

In July last year, Judith Gill PhD, an Adjunct A/ Professor in the School of Education at the University of South Australia and teacher-education veteran of 25 years, wrote in an article for the Association for Research in Education:

“... [co-educational] classrooms tend to display greater diversity of outlook and opinions, friendship groups are less stratified and more fluid and students move relatively easily into mixed contexts such as university, work and social life generally.”¹¹

Isolating the sexes in schools was once a strategy to reduce contact for social reasons, but that is also increasingly irrelevant. The explosion of digital communication and the instantaneous nature of social media mean that boys and girls have constant social access to their peers, regardless of their gender or location.

What is the impact on life after school?

Beyond the school there are powerful reasons that support the idea of students to be educated together. The 2015 study by Fabes et.al. found single-sex schooling could have negative effects on communication, increase stereotyping of the other gender, decrease efficacy of gender relationships and increase negative attitudes about the opposite gender.

Studies have repeatedly found that students who graduate from single-sex schools do not achieve the same higher educational outcomes as those from co-educational schools when SES is taken into account.¹²¹³¹⁴ The same researchers also indicate the graduates from co-educational schools are more likely to choose areas of study not traditionally associated with their gender.

In an investigation of the impact of schooling system on a student’s marks at the end of the first year of university, Curtin University researchers concluded:

“Students who attended a boy’s or girl’s school scored about two percentage points lower in their first year studies, as compared to students who attended a co-educational school.”¹⁵

¹¹ Gill, J. (2015) Changing from single-sex to co-ed can be good if based on educational, not economic, reasons <http://www.aare.edu.au/blog/?tag=judith-gill>

¹² Billger, S. M. (2009). On reconstructing school segregation: The efficacy and equity of single-sex schooling. *Economics of Education Review*, 28(3), 393-402.

¹³ Pahlke, E., Hyde, J. S., & Allison, C. M. (2014). The effects of single-sex compared with co-educational schooling on students’ performance and attitudes: A meta-analysis. *Psychological Bulletin*, 140(4), 10 42.

¹⁴ Robinson, P., & Smithers, A. (2006), The paradox of single-sex and co-educational schooling, Centre for Education and Employment Research: University of Buckingham.

<http://www.buckingham.ac.uk/wp-content/uploads/2010/10/hmcscsd.pdf>

¹⁵ Li, I. W., & Dockery, A. M. (2014). Socio-economic status of schools and university academic performance: implications for Australia’s higher education expansion. *Curtin University, Perth:*

The Guildford Grammar School Experience

In our experience at Guildford Grammar School, the gender of our students matters less than their willingness to strive, engage, learn and reflect our school ethos, and we see enormous benefits in bringing a diversity of opinion, experience and perspective to our senior classes as we prepare all of our students to collaborate and succeed together in life after school.

Focusing on the needs of each child provides the best educational outcomes.

We have seen the considerable value our girls in the Preparatory School add every day to our school through their friendship, creativity and leadership. The social benefits of co-education in the Preparatory School could not be more clear, and we are confident that these benefits will extend to our senior students.

Suggested reading list

Useful newspaper articles:

Single-sex schools — anachronistic or a haven offering the freedom to thrive?

<http://www.smh.com.au/national/education/singlesex-schools-anachronistic-or-a-haven-offering-freedom-to-thrive-20150727-gilcy2.html>

No benefit to single-sex education, Australian Psychological Society Congress to be told

<http://www.smh.com.au/national/education/no-benefit-to-singlesex-education-australian-psychological-society-congress-to-be-told-20160913-greйдj.html>

Single-sex schools offer no advantages and feed stereotypes

<https://www.theguardian.com/australia-news/2016/sep/14/single-sex-schools-offer-no-advantages-and-feed-stereotypes-psychologists-told>

Single-Sex Education Is Assailed in Report

<http://www.nytimes.com/2011/09/23/education/23single.html>

Why single-sex education is not the route to better results

<https://www.theguardian.com/uk/2006/jun/25/schools.gender2>

Scholarly articles

Bennett, S. (2015). Gender relations in elite co-educational schools (PhD). Deakin University.

<http://dro.deakin.edu.au/eserv/DU:30081641/bennett-genderrelations-2016A.pdf>

Billger, S. M. (2009). On reconstructing school segregation: The efficacy and equity of single-sex schooling. *Economics of Education Review*, 28(3), 393-402.

www.iza.org/en/papers/2342_29112005.pdf

Cherney, I. D., & Campbell, K. L. (2011). A league of their own: Do single-sex schools increase girls' participation in the physical sciences? *Sex roles*, 65 (9-10), 712-724.

https://www.researchgate.net/publication/225402661_A_League_of_Their_Own_Do_Single-Sex_Schools_Increase_Girls'_Participation_in_the_Physical_Sciences

Fabes, R., Martin, C., Hanish, L., Galligan, K., & Pahlke, E. (2015). Gender-Segregated Schooling: A Problem Disguised as a Solution. *Educational Policy*, 29(3), 431-447.

<http://epx.sagepub.com/content/29/3/431.abstract>

Gill, J., (2004), *Beyond the Great Divide*, UNSW Press, Sydney.

<http://trove.nla.gov.au/work/153084054?q&versionId=217748731>

Gill, J. (2015) Changing from single-sex to co-ed can be good if based on educational, not economic, reasons <http://www.aare.edu.au/blog/?tag=judith-gill>

Halpern, D., Eliot, L., Bigler, R. S., Fabes, R. A., Hanish, L. D., Hyde, J., & Martin, C. L. The pseudoscience of single-sex schooling. 2011; 333 (6050): 1706-1707. *Science*.

<http://science.sciencemag.org/content/333/6050/1706>

Hattie, J. (2003) Teachers Make a Difference. What is the research evidence? ACER conference. https://www.det.nsw.edu.au/proflearn/docs/pdf/qt_hattie.pdf

Keener, Mehta & Strough (2013). Should educators and parents encourage other-gender interactions? Gender segregation and sexism, *Journal of Gender And Education* Vol. 25 , Iss. 7, <http://www.tandfonline.com/doi/abs/10.1080/09540253.2013.845648>

Li, I. W., & Dockery, A. M. (2014). Socio-economic status of schools and university academic performance: implications for Australia's higher education expansion. *Curtin University, Perth: National Centre for Student Equity in Higher Education*. <https://www.ncsehe.edu.au/wp-content/uploads/2014/12/Li-and-Dockery-Schools-SES-Final.pdf>

Mansfeld, K. C. (2013), The growth of single-sex schools: Federal policy meets local needs and interests, *Education policy analysis archives*, 21, 87. <http://epaa.asu.edu/ojs/article/view/1181>

Organisation for Economic Co-operation and Development, (2009), Equally prepared for life? How 15-year-old boys and girls perform in school. <https://www.oecd.org/pisa/pisaproducts/42843625.pdf>

Pahlke, E., Hyde, J. S., & Allison, C. M. (2014), The effects of single-sex compared with co-educational schooling on students' performance and attitudes: A meta-analysis. *Psychological Bulletin*, 140(4), 1042. <https://www.apa.org/pubs/journals/releases/bul-a0035740.pdf>

Robinson, P., & Smithers, A. (2006), The paradox of single-sex and co-educational schooling, Centre for Education and Employment Research: University of Buckingham. <http://www.buckingham.ac.uk/wp-content/uploads/2010/10/hmcscsd.pdf>

Woodward, L. J., Fergusson, D. M., & Horwood, L. J. (1999), Effects of single-sex and co-educational secondary schooling on children's academic achievement. *Australian Journal of Education*, 43(2), 142-156. <http://aed.sagepub.com/content/52/3/301.abstract>