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THE ADVANTAGES AND DISADVANTAGES OF COEDUCATIONAL AND SINGLE-SEX SCHOOLING

Review by Ian Smith

INTRODUCTION

Based upon media reports, many parents, students and even teachers believe that coeducational schooling is good for boys and bad for girls. Articles appear regularly in the popular press as a result of surveys of parents and students on the topic. Some are of the opinion that coeducational schools benefit boys, because girls have a "civilising" effect on the otherwise unruly behaviour of boys, especially in the early years of secondary school. In contrast, another perspective in favour of single-sex schooling for girls involves the view of many parents that boys distract their daughters from concentrating on their studies, so they prefer them to attend an all-girls school where they are not faced with this issue.

In the past decade many single-sex schools in the United States, Australia and the United Kingdom have been forced to amalgamate or accept students of both sexes for economic reasons. Their enrolments were dropping to a level which threatened their existence. Concern was expressed by parents, alumni and teachers that this change would have a detrimental effect on student achievement and school atmosphere. One solution has been to establish single-sex classes within coeducational schools. There is an urgent need to evaluate such innovations to learn whether they are cost-effective.

This article examines the research evidence on the coeducational/single-sex schooling debate and will draw conclusions and implications for teaching and school organisation.

REVIEW OF RESEARCH

Coeducational/single-sex schooling comparisons are hampered by the problem of selecting equivalent schools of each type of gender-based student enrolment. In other words, because single-sex schools are more likely to be non-government, fee-paying schools, their students often come from higher socioeconomic backgrounds, with parents who are more directly involved in their education, than students attending coeducational government schools. Students in single-sex schools tend to be more high-achieving, perhaps in part because of their home background. Therefore, the students who attend these two types of schools are not equivalent when they enter them and so comparisons between them are problematic. Nevertheless, there has been a number of studies comparing schools within the same educational system (e.g., single-sex and coeducational schools in the Catholic school system). In addition, there are also studies where students have been randomly allocated to either single-sex or coeducational classes within the same school. On the basis of these comparisons,

there are some conclusions and implications that may be drawn.

It has been consistently found that boys typically attract more of the teacher's attention than girls do in coeducational classes (e.g., Gilligan, 1982; Spender, 1982). In her book *"Invisible Women"*, Spender claimed that girls, especially in the junior secondary grades, are reluctant to express their views in front of boys. Gill (1991) reported that increased interaction between teachers and male students occurred when the teacher was inexperienced. Experienced teachers were fairer in giving equal time to girls and boys. On the other hand, the reluctance of girls to speak up in class does not necessarily mean that girls are not learning in the classroom. In an extensive classroom observation study, Gill (1992) found that boys asked more trivial questions than girls in order to gain the teacher's attention, whereas the girls were more likely to seek clarification from their friends or their seating partner.

The pioneering research of R.R. Dale in English grammar schools in the 1960s concluded that "the progress of boys is probably improved by co-education while that of girls is not harmed" (1974, p. 269). Dale's research has been criticised on the grounds that its findings are dated and biased. Certainly, his conclusions were restricted to the type of school he examined: grammar schools which were academically elite schools. Nevertheless, the results of a more recent Committee of Inquiry into the teaching of mathematics in England and Wales concluded that "although it is possible to identify some girls' schools in which levels of

mathematical attainment are high, it is often the case that there are other factors, such as the fact that the school is selective, which may provide the explanation" (Cockcroft, 1982, p. 64). Research in England and Wales by Steedman (1985) and in Northern Ireland by Daley (1994) has confirmed that, when school and student background factors are controlled, single-sex schooling does not result in superior academic performance for girls in public examinations.

Australian research on the effects of coeducational and single-sex schooling also found few differences in achievement. For example, a longitudinal study was conducted in a secondary school which randomly allocated 7th and 8th grade students into coeducational or single-sex classes for instruction in mathematics. When the students were tested over a two-year period, Rowe (1988) found no gender differences in mathematics achievement based on the type of mathematics class, either coeducational or single-sex. He did report, however, that girls expressed increased confidence in being able to learn and use mathematics when they attended single-sex classes. A subsequent re-analysis of his data casts questions on this latter finding because no gender differences were found in either mathematics achievement or in attitudes towards mathematics (Marsh and Rowe, 1996).

Smith and his colleagues (Marsh, Smith, Marsh and Owens, 1988; Smith, 1994, 1996) studied two secondary schools which became coeducational after being either an all-boys' school or an all-girls' school. They found that the transition to

coeducation produced no changes in grade 10 performance in either mathematics or English over a five-year period. It did produce significant increases in both boys' and girls' self-concepts of their abilities, a phenomenon which was evident ten years later, despite other changes in both schools.

A recent U.S. comparison of single-sex and coeducational Catholic secondary schooling found that single-sex Catholic schools were not favorable settings as far as girls' achievement was concerned (LePore and Warren, 1997). Rather, any advantages in academic achievement from attending single-sex schools were gained by boys. The gender differences were explained in terms of pre-existing differences in prior achievement and social class background between the boys and girls before they enrolled in their particular school.

In Singapore this issue has not attracted systematic research. There appears to be an acceptance of the status quo, which is that the majority of schools are coeducational, with a small number of single-sex schools which are mainly non-government girls' or boys' schools. While the prestigious Raffles Girls' School produced more students in the top 10 in the 1997 "O" level examinations than its friendly rival, The Raffles Institution, the outcome appears to vary from year to year (*Straits Times*, 3 March 1998). Again, pre-existing differences in student achievement and quality of teaching may be better predictors of academic achievement in these two schools than whether it is a girls' or a boys' school.

CONCLUSION

Most reviews of the academic advantages of single-sex over coeducational schooling conclude that there are no clear winners in this race. A causal relationship between type of schooling and academic achievement has not been established. There may be social advantages in students attending a coeducational secondary school in that it reflects the coeducational society into which the students will graduate. There is research evidence that student self-concept is increased by attending a coeducational school. One researcher (Harris, 1986) found that students who had attended single-sex schools took longer to adjust to the coeducational atmosphere of a university. Nevertheless, even if coeducational schools have some social advantages over single-sex schools, this does not mean that all students should necessarily attend such a school. There are many reasons why parents choose a particular school for their sons and daughters. Excellent schools may be coeducational or single sex. At the present state of our knowledge, the best evidence suggests that, as far as academic benefits of coeducational and single-sex schools are concerned, the result is a draw. There are no clear advantages of one type of school over another. Most educators would recommend, then, that schools try innovative strategies to produce excellent results so that their graduates are happy with the total experience of their secondary education. Educating the "whole child" is a worthwhile goal of any school, irrespective of whether it is coeducational or single-sex.

IMPLICATIONS

1. ***Coeducational or single-sex school type is a broad category which may not indicate whether a particular school is excellent.***

Other factors, such as the leadership of the principal, quality of the teachers, a goal-oriented curriculum, and a friendly, supportive atmosphere have been found to be stronger indicators of school excellence.

2. ***When choosing a school for their children parents should consider the “total package” offered by each school being considered.***

Whether it is a coeducational or a single-sex school is just one of many factors which parents need to take into account when choosing a school for each of their children. The main question to be answered is which school provides the best match between its qualities and the goals and values that are considered essential for the child to achieve in its education. Drawing up a priority list of essential and desirable features may serve to clarify the parents' thoughts about school choice.

3. ***There may be social benefits to be gained from attending a coeducational school, especially if the child comes from a family where all the children are of one sex, either all girls or all boys.***

Studies have shown that in a good coeducational school the students treat each other as friends, rather than as members of the opposite sex. There is a lack of gender stereotyping. This practice may lead to a smoother transition from secondary school to university or to the world of work.

4. ***There may be some academic benefits for a girl or a boy to attend a single-sex school if they are at risk of having their studies disrupted by the presence of the opposite sex in the same school.***

Some students may be distracted by members of the opposite sex and may form relationships which interfere with their concentration on their studies. In such cases there is a need for counselling to encourage such students to adopt a balanced approach to their academic work and their social life. A single-sex school environment may reduce the risks of distraction in the first place.

5. ***In both single-sex and coeducational schools teachers need to reinforce a spirit of gender tolerance.***

Such tolerance respects the rights of both girls and boys to be free from harassment or gender stereotyped comments, school policies and actions which limit the opportunities of both sexes to reach their potential.

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