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# EXPLORING ACADEMIC AND NON-ACADEMIC IMPACTS OF SINGLE-GENDER VERSUS COEDUCATIONAL SCHOOLING

**Abstract.** School education is the foundation for a person's lifelong education. Consequently, providing students with a comfortable learning environment has significant importance. A vast amount of education research is focusing on the type of schooling. However, the question of which type of schooling leads to higher academic achievement remains unclear. This article is an exploratory literature focusing on the academic and non-academic advantages and disadvantages of single-gender versus coeducational schooling. The review showed that research on single-gender versus coeducational schools covered both academic and non-academic issues. It appears that in some contexts, both types of schooling show better academic outcomes. Further research is needed to understand how contextual or organizational factors may influence these differences.

**Keywords**: academic outcomes, non-academic outcomes, single-gender schools, coeducational schools

*Introduction*

Gender gaps have been the focus of vast amounts of research in both education and social sciences more broadly [1] [2] [3]. Yet differences between single-gender and coeducational schooling have not been studied as extensively. Furthermore, the impacts of such schooling on educational and longer-term outcomes are studied even to a lesser extent. This article aims to review the core literature on the academic and non-academic advantages and disadvantages of single-gender versus coeducational schooling.

Co-education refers to integrating both genders in the same educational environment, whereas single-sex education refers to educating boys or girls in a separate school setting [4]. The issue of single-gender and coeducational schooling emerged over a period of time with different specific problems such as gender inequality, feminism, etc.. At the end of the 20th century, there was

parison between them in the term of which type of schooling leads to higher academic achievement. It is still a debatable topic around the world.

*2. The impact of the social environment on learners.*

According to Vygotsky's sociocultural theory, social interaction plays a crucial role in cognitive development. Based on his theory, children are born with primitive mental abilities, such as memory and perception, and through social interaction they acquire higher mental functions [5]. Also, Lindblom and Ziemke [6] note that Lev Vygotsky identified that biological and sociohistorical factors influence cognitive development. Crawford-Ferre and Wiest et al. [7] insists that the structure of the human brain differs by gender. Laster [8] state that girls' brain are three to four years ahead of boys from age 7 to 22. Due to this, men don't catch up with women until around age 29[8]. Crawford-Ferre and Wiest et al. [7] asserted that putting same-aged boy and girl in one class together is the same as putting together two students who are at quite different stages of development. Nevertheless, more studies are needed to determine the academic and non-academic benefits and harms of teaching male and female students of the same age.

*3. Academic and non-academic impacts of single-gender and coeducational schooling.*

*3.1. A comparison of the advantages of coeducational schools with single-gender schools.*

There have been numerous comparisons performed to determine whether single-gender contexts are better than mixed ones, but the results are still questionable.

According to Datnow and Hubbard [9], single-sex schooling has numerous advantages for both females and males because it provides a learning atmosphere that is free of distractions. One more study states that "In single-sex classrooms or single-sex schools student achievement will be positively impacted" [10]. The author claims that student behavior will improve in single-sex classes or schools, students in poverty or minorities will benefit, and students' learning style differences will be better fulfilled. As known, male and female students have various learning styles and strategies because of their psychological and physiological differences.

Moreover, Randolph Sh. K. [11] examined the impact of single-gender instruction on the academic success and self-esteem of minority students. In this study, students in the 10th and 11th grades in single-gender schools were contrasted with those in mixed-gender schools. Data from student assessments, surveys, interviews, and classroom observations were evaluated. There was a substantial difference between single-gender and mixed-gender kids in the

examination of progress in academic success between groups based on TNReady scores, PSAT scores, and Grade Point Averages. Additionally, the author states that in some contexts, single-sex education has a good effect on some students, especially females. The findings of this study may very helpful to develop the academic achievement of students in minority. Also, Feniger

[12] has done comparison of advanced math and science course attendance in gender-separate schools with coeducational schools. According to the results, girls and boys alike showed no difference in course-taking between single-sex versus coeducational environments. Nevertheless, there is a need for social science research to better understand this.

*3.2. Academic impacts of single-gender and coeducational schooling.*

In their systematic review Mael, Alonso, Gibson, Rogers and Smith [13] claim that single-gender schooling is useful only for academic performance. This study presents a systematic review of quantitative research on single-gender versus coeducational schooling. Overall 6 major questions tried to be answered. The result of the research found that single-sex schooling can be beneficial, particularly for specific outcomes relating to academic achievement. There is frequently no proof of either benefit or harm for many outcomes. However, more research is needed to explore the advantages and disadvantages of single gender and coeducational schooling for other outcomes.

Gary [14] found that students in seventh grade single-gender classes performed better in mathematics than those in coeducational classes. There was no noticeable difference in the attendance rates, according to the findings of the descriptive and inferential analyses of attendance.

Chowdhury [15] says that the difference in classroom interaction between single-sex and co-educational settings is probably one crucial element in academic success and achievement. Boys and girls are easily distracted by one another in coeducational classes. They want to impress each other and often act out in ways that are detrimental to their individual learning [10].

Furthermore, Ahmad, Jelas and Ali [16] point out that learning strategies and styles of boys and girls have a significant relationship with academic achievement. This research study explores the relation of gender, academic achievement, the type of school, learning style and learning strategy on English, math and Science lessons in Malaysia. Structural Equation Modeling technique was adopted to look at the influence of those factors which mentioned above to students achievement on the same time from each subject. The result of study shows that the learning strategies had a bigger impact on

students' performance in single gender schools than they do in co-educational institutions. Therefore, boys and girls should be encouraged to choose preferred learning strategies. However, the research does not clearly define this case in co-educational schools. Therefore, the findings might assist the teacher who works in single segregated schools in developing more creative and innovative teaching methods.

*3.3. Non-academic impacts of single-gender and coeducational schooling*

Yasin, Azim, and Qayyum [4] claim that there is a considerable difference on self-esteem and confidence levels among students in single-gender or co-educational school systems. One of the key elements influencing a student's academic success is their self-esteem, and this is something that is increasingly being taken into account. Students who perform well academically will feel more self-assured than those who lack self-assurance and perform less well. This study conducted to students from both coeducational and single-gender educational universities in Pakistan. The findings of the research present the significant difference of the above-mentioned variables between single-gender and coeducational environments. The students who study in single-gender environment have a high self-esteem and a high level of confidence than the students who study in coeducational environment. The authors state that the development of confidence and self-esteem impact academic achievement. According to experts in single-gender education, boys' and girls' brains differ physically, which affects how male and female students learn. Studies on the brains of men and women have shown that different areas of the brain are used differently by men and women when practicing evidence. It's demonstrated by how well men and women can solve problems. However, it is important to point out that "Co-education may also lead to better emotional and cognitive circumstances" [4].

Furthermore, Chowdhury [15] investigates self-esteem in single-sex (SS) and co-educational (CE) schools by taking age and gender variations into account. The study was conducted with a large number of adolescent students in both single-sex and co-educational schools, gathering their opinions on self-esteem using focus groups and surveys. When analyzing self-esteem, it was discovered that gender played a significant role. Males generally rated themselves higher than girls in all skills with the exception of close friendships. According to research, there are some disparities between the self-esteem of students who attend single-sex schools and those who attend co-educational schools, even after accounting for other environmental and situational factors that may be at play, such as the influence of the family. What this study does

discover, however, is that single-sex schooling does enable better levels of self- worth across some of the subscales, particularly on scholastic competence, highlighting and placing value on their presence. It is also clear that students with high self-esteem may be found at co-educational schools, thus our emphasis should be directed on finding ways to encourage and recruit more of these students to these institutions while also bridging the gender gap. Whether this is accomplished via single-sex education within co-educational schools are still a topic under investigation. About these two types of schools, there are still many different viewpoints. Yet, there is frequently no consensus on whichtype of education is most beneficial to students in terms of the educational services it offers. Therefore, this research is useful for addressing the government in choosing the educational environment for schools and universities.

However, the results of some researchers show issues stemming from gender segregated education. Corneille [17] reveals that single-gender education causes socialization issues that have an impact on a group and collective performances. The purpose of this article is to demonstrate how gender-segregated education affects EFL Advanced students' academic progress and the challenges they have in integrating into a coeducational environment, particularly at the university level. It compares the achievement of 20 A-level graduate students from Lyceum de Jeunes FillesToffa, a girls-only grammar school, with their peers from coeducational schools in Adjarra's university center during their first year of English study. The investigation analyses the scores of both categories of students in individual, group, and collaborative work. A mixed methodology design and different instruments such as questionnaires, classroom observations, and a survey of student productions are used. The study suggests that instead of closing the remaining single-sex schools, the school administrations should organize activities with coeducational schools to help their students become more accustomed to a non-gender-segregated environment. These findings clearly define the problem of single gender school graduates.

*Conclusion*

This brief literature review suggests that research on single-gender versus coeducational schools covered both academic and non-academic issues. It appears that in some contexts both types of schooling show better academic outcomes. Further research is needed to understand how contextual or organizational factors may influence these differences. An important

contextual factor to be worth studying further may be the language of instruction as we know that it affects academic outcomes [18] and given that a lot of single-gender schools in some countries use English as a medium of instruction [18]. Next, non-academic aspects such as self-esteem and socialization have also been studied and the effects of both types of schools appear to be more pronounced on these non-academic outcomes. It is also possible that the school effects on academic outcomes may be mediated through their effects on non-academic outcomes.

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## БІР ЖЫНЫСТЫ ЖӘНЕ БІРЛЕСКЕН БІЛІМ БЕРУДІҢ АКАДЕМИЯЛЫҚ ЖӘНЕ АКАДЕМИЯЛЫҚ ЕМЕС ӘСЕРІН ТЕКСЕРУ.

**Аңдатпа.** Мектеп қабырғасындағы оқу – адам өміріндегі білім алудың негізі іргетасы. Демек, оқушыларды білім алуда қолайлы жағдайлармен қамтамасыз етудің маңызы зор. Білім беру саласындағы

зерттеулердің көп бөлігі мектептегі оқыту түріне бағытталған. Алайда, мектептегі оқытудың қай түрі жоғары академиялық жетістіктеріге жеткізетіні әлі де белгісіз. Бұл ғылыми мақалада орта білім беру жүйесіндегі зерттелген бірге және жынысы бойынша бөліп оқытудың академиялық сапасымен қоса, әлеуметтік дағдыларының артықшылықтары мен кемшіліктері туралы сөз қозғалады. Кейбір контексттерде оқытудың екі түрі де жақсы академиялық нәтижелер көрсететінін пайымдайды. Контекстік немесе ұйымдық факторлардың оқыту түріне қалай әсер ететінін түсіну үшін қосымша зерттеулер қажет.
**Түйін сөздер:** академиялық нәтижелер, академиялық емес нәтижелер, жынысы бойынша бөліп оқытытын мектептер, бірлескен мектептер

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## ИССЛЕДОВАНИЕ АКАДЕМИЧЕСКИХ И НЕАКАДЕМИЧЕСКИХ ВЛИЯНИЙ ОДНОПОЛНОГО ОБУЧЕНИЯ ПО СРАВНЕНИЮ С СОВМЕСТНЫМ ОБУЧЕНИЕМ.

**Аннотация.** Школьное образование – это основа образования человека на протяжении всей жизни. Следовательно, большое значение имеет создание комфортных условий для обучения студентов. Огромное количество исследований в области образования сосредоточено на типе школьного образования. Однако остается неясным вопрос о том, какой тип обучения ведет к более высоким академическим достижениям.В данной научной работе ведётся исследование преимуществ и недостатков однополого обучения наряду с совместным обучением. Исследование показало, что однополое обучение охватывает, как академические, так и неакадемические аспекты и выявило,что в некоторых контекстах оба типа обучения показывают лучшие академические результаты. Необходимо дальнейшее исследование, чтобы определить влияние контекстуальных или организационных факторов на вышеуказанные типы обучения.

**Ключевые слова:** академические и неакадемические результаты, школы с раздельным обучением, школы с совместным обучением.

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