Academic performance of learners at co- and single sex schools: A case of selected Secondary Schools in Kasama District of Northern Province, Zambia

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Abstract

Single-sex education, also known as single-gender education is the practice of conducting education with male and female students attending separate classes, perhaps in separate buildings or schools. The study on single sex and learner’s academic performance in secondary schools in Kasama sought to determine the extent to which coeducation schools affect male and female students’ academic performance and to establish students’ and teachers’ attitude on effects of sex on the academic performance of learners. To achieve this, the study employed documentary search and analysis on results from 2013 to 2018. The study was guided by the following research objectives; (a) To establish the effects of co- and single sex education on the academic performance of learners in selected secondary schools of Kasama district, (b) To compare learner’s academic performance at co- and single-sex schools in selected secondary schools of Kasama district and (c) To offer recommendations on how to improve the single sex education system in selected secondary schools of Kasama district. The study employed both the qualitative and quantitative methods and a descriptive survey design that sampled head teachers, teachers and pupils. Data was obtained from the respondents by means of interviews and questionnaires. Frequency tables, graphs, figures and pie-charts were used to analyze the qualitative data. Quantitative data were analyzed by the use of the Statistical Package for Social Sciences (version 26) and Microsoft Excel (version 16). The findings reviewed that coeducation context does affect students’ academic performance compared to single-sex schools in the sense that learners in single-sex schools seem to perform better academically. Further, most of the learners and teachers prefer single-sex schools to coeducation schools and the reasons for the dislike of coeducation context include, high level of indiscipline, boys’ offensive behavior towards girls, encouragement of boy-girl relationships that interfere with learning, the fear of girls to participate freely within classroom as well as teachers’ differential treatment of boys and girls in favor of girls. The study therefore recommended that the ministry of education should establish more single-sex schools and convert underperforming co-education schools into single-sex schools.

Keywords: Academic Performance; Analysis; Co-School; Effect; Learner; Single-Sex School.

1. Introduction

Single-sex schools have existed from the very beginning in not only Zambia but throughout the world. Mannion (2013) asserts that, only men could be educated and depending on the area and the time period, sometimes only rich men could have an education, sometimes all men and other times, only men of a certain race or colour. On the other hand, Biggs (2012) believes that, women were kept out of the schools in many places throughout the world and within the last couple of hundred years. However, it is important note that, schools around the world have begun opening their doors to women and some schools put women and men in the same classroom, others put them in the same school but different classrooms while other schools still put men and women in separate schools altogether. With time, all schools
who had men and women in the same building eventually allowed the two genders to share a classroom and so it became a choice between single-sex or co-education.

In addition, during the twentieth century in Zambia, women began integrating into the all-male colleges. At the same time, the all-female schools remained segregated. Relatively recently, co-education schools have begun to take charge and the number of single-sex schools has dropped dramatically. In the same vain, most of the public schools in Zambia have become co-education as women have continued to integrate into them. To shade more light, opines that the Catholic sector contains a large number of single-sex schools, whereas the public sector does not. Following this up, Myers (2017) is of the view that, this is true due to the fact that almost all Catholic schools tend to be private and since these schools are private, they can get away with being single-sex as long as they remain private. Similarly, Ham (2009) holds that, public schools are victims to the whims of the government and therefore, must accept girls or in some cases boys or risk losing their funding and accreditation. With this upbringing, people have started to evaluate whether single-sex education schools are better after all and while, it has been found that, single-sex education does not offer much of a benefit over co-education schools; it does offer a sense of family that is spoken of and remembered fondly by alumnae. This sense of family has helped countless alumnae and current students not only get better deals in the store but also to get jobs and without a doubt, in this case, single-sex education does offer a benefit over co-education schools.

Furthermore, despite this sense of family that comes with single-sex education, students who attended co-education schools have reported that their cultural awareness was broadened along with their ability to interact with the opposite sex. Additionally, Anderson (2014) notes that, the lack of the opposite sex in single-sex schools is often deemed as a down side, while others view it as an advantage and those who view it as an advantage claim that without the opposite sex in the room, it’s easier to concentrate on work. Adding on, those who view it as a disadvantage claim they would have no one to look at during class and this is a simple case of a disadvantage to some, while being viewed as an advantage to others. For example, in secondary school or in the developmental years of grade school, many people believe that single-sex education is not the right choice because they believe that kids need experience with the opposite sex at a young age so the children will know how to act around them later on in life. Besides this, Barry (2010) agrees that, in secondary school, the issue is a little more split because some believe that, single-sex education does not offer a benefit over co-education schools; it does offer a sense of family that is spoken of and remembered fondly by alumnae. This sense of family has helped countless alumnae and current students not only get better deals in the store but also to get jobs and without a doubt, in this case, single-sex education does offer a benefit over co-education schools.

1.1. Statement of the Problem

The academic performances in most secondary schools in Zambia have drastically gone down in recent years. A lot of factors have been attributed to this, the Ministry of Education has taken it upon itself to address this situation in order to enhance good academic performance in these schools and this has resulted the ongoing debate about the advantages and disadvantages of co-education and single sex education for learner's social emotional and educational development. The origin of this debate lies with the main vocational training organization in Zambia which received that, co-educational schools were better placed to meet the social and educational needs of young people and the question of whether single sex or co-educational schools provide the best environment for students has been researched extensively across the English-speaking world. The abundant academic research has considered the question in terms of academic achievement, a raft of social outcomes whilst at and after school and the experience of schools that make the transition from single sex to co-education, whilst the research provides important lessons for schools, particularly in making the transition to co-education, it cannot be reasonably concluded that either structure is superior on any significant criteria. The combined impact of these forces has been so significant that it tempts the conclusion that society has decided that co-education is somehow an inherently better school model (Egonmwan, 2012). The reasons behind the prevailing state of affairs could only be discovered through research of such magnitude. Therefore, this study aims at discovering the effect of single sex schools on academic performance of learners in secondary schools.

1.2. The Purpose of the Study

The purpose of this study was to analyze the academic performance of learners at co- and single sex schools at some selected secondary schools in Kasama district of Northern Province in Zambia.

1.3. Research Objectives

The objectives of the study were to:
• Establish the effects of co- and single sex education on the academic performance of learners in selected secondary schools of Kasama district, Zambia.
• Compare learner’s academic performance at co- and single-sex schools in selected secondary schools of Kasama district, Zambia.
• Offer recommendations on how to improve the single-sex education system in selected secondary schools of Kasama district, Zambia.

1.4. Theoretical Framework

The study was guided by Social Constructivism Theory which suggests that knowledge is first constructed in a social context and is then taken up by individuals. The continual interplay, between the individual and others, called a zone of proximal development and defined as the intellectual potential of an individual when provided with assistance from a knowledgeable adult or a more advanced child is able to move through a series of steps that eventually lead to “self-regulation” and intellectual growth. The emphasis is on the role of others or the social context in learning and that the process of sharing each person’s point of view, results in learners building understanding together that wouldn’t be possible alone. Dye (2008) argues that the path between objects and thought is mediated by other people through the use of signs or the symbols of language. Ibid, (2008) says learning is best understood in light of others within an individual’s world and that all higher mental functions are social in origin and embedded in the context of social cultural setting. It is argued that from the first day of the child’s development, his activities acquire a meaning of their own in a system of social behavior and, being directed towards a definite purpose and are frequently refracted through the prism of the child's environment. The path from object to child and from child to object passes through another person and this complex human structure is the product of the developmental process deeply rooted in the links between individual and social history (Cruickshank, 2011).

1.5. Significance of the Study

The findings of the study provided more understanding of the impact of co- and single sex schools on the academic performance of learners in secondary schools. Besides that, the study findings established in detail the benefits and disadvantages of single sex education as well as contribute some knowledge gap in academic literature on co- and single sex schools. Lastly, the researcher hoped that the outcomes of the study would clearly show the possible solutions that can help improve the single sex education system in secondary schools of Kasama district of Northern Province in Zambia.

2. Literature review

2.1. Single Sex Education

Single-sex education, also known as single-gender education and gender-isolated education, was the practice of conducting education with male and female students attending separate classes, perhaps in separate buildings or schools. Jerkins (2011) further alludes that, single sex education refers mostly generally to education at elementary, secondary or post-secondary level in which males or females attend schools exclusively with members of the same sex. The mission of single sex schools is to provide learning environment that would bring out the best in each student and provided opportunities for success that may not be available in co-education settings. Single-sex schools come in residential or boarding as well as day school versions which includes single-sex religious schools, single-sex military schools, single-sex special needs schools and so on (Mannion, 2013).

2.2. Effects of Co-School on the Academic Performance of Learners

Co-school/education was the term applied to the instruction and training of boys and girls, or of young people of both sexes, in the same school or institution, in the same classes and through the same courses of study. Examples of the thoroughgoing application of this principle can be found in every grade of education from the elementary school to the university. Co-education is sometimes used in a wider sense, in order to include cases in which boys and girls, or young men and young women of university age, are admitted to membership of the same school or college but receive instruction wholly or in part in separate classes and in different subjects. Other variable factors in co-educational systems are the extent to which men and women are mixed on the teaching staff, and the freedom of intercourse permitted between pupils of the two sexes in class, in games and in other activities of school life (Ham, 2009).

2.3. Effects of Single Sex Education on the Academic Performance of Learners

Egonmwan (2012) believes that, single sex school are beneficial to pupil academic performance as they bring more confidence to every individual. For instance, Socially, single sex school makes for more mature people earlier. Young
people learn more from experience of diversity. Educationally, single sex schools seem to be better for girls to do well at "traditionally male" subjects like chemistry and physics. Emotionally it encourages sexual relationships which some say it's a distraction from education or is to be objected to morally especially for girls which is why Islam forbids co-education. If a boy isn’t “male stereotype” in personality, he is more likely to be lonely in a single-sex school because with co-education he may find girls to hang out with. Generally single-sex schools tend to have better academic grades and better discipline, but this may be because most of the hard-working Hindu and Muslim children go there or for other reason that allow them to select against disruptive and disaffected kids, rather than because they are single-sex.

Furthermore, Ibid (2009) holds that, single sex schools are more enlightening than co-education school because boys are less attracted by girls and girls are also less obsessed with the boys. Therefore, students may pay more attention on classes while all students are same sex. Besides, they will also break out of their behavior when they are left to their own devices. Single sex education has a delightful way of encouraging students to be fearless, to be curious, to be enthusiastic, and to just be themselves. In the same vain, Ibid (2011) alludes that, single sex education is advantageous to pupil academic performance because it has more controlled social outlets is just the ticket for many students. Firstly, is less pressure to act cool around friends of other sex. Secondly is less conflict between friends of the opposite sex. Thirdly is more relaxed attitude such as not putting on a show for boys or girls they like. Last but not least, they have lower levels of anxiety over appearance or clothing. Also, less emotional stress brought on by the “head games” teens play while in relationships.

In addition, Sabatier (2013) notes that, there are several valuable reasons for choosing a single sex school. For example, boys tend to soften their competitive edge and become more cooperative in a single sex school. They can just be boys and not worry about what girls might think or judge them. Furthermore, boys enjoy playing in an orchestra as opposed to a marching band and learn Latin in single sex settings. For girls, teachers will quickly feel comfortable exploring non-traditional subjects like mathematics, advanced science, computers, and technology if the teacher understands how to teach girls. Besides this, Sapru (2014) conquers that, girls may drop their shyness in a single sex setting and they may join some sports like hockey, football follow their hobbies without worrying about appearing like tom boys’ girls are free from sexual harassment which always happens in co-education secondary schools. In all-girls schools, girls take over all the positions of leadership whether it's drama, sports, or debate team. Also, they participate in class discussions freely, which boys always dominate in co-educational schools. They tend to gain confidence in themselves as students and score higher on their examinations. Girls no longer have to live up to expectations that they must be nice, quiet, non-athletic, and passive. Moreover, girls may work harder without boys distracting them. Girls’ brains usually work differently from boys’ because girls are more likely to take up subjects normally dominated by boys. For example, like Maths and Sciences. Consequently, CAMFED (2017) gives in that, single-sex schools are advantageous to pupil’s academic performance as they have a gender specific curriculum which has specialized teaching methods target and encourages the natural differences between the sexes in a way that is impossible in a traditional co-education school. Boys generally benefit from an active learning environment that encourages movement, while girls generally thrive in an encouraging cooperative environment. Self-esteem is likely to improve for both genders when they have the opportunity to learn in an environment that is most conducive to their gender.

Additionally, Studies have revealed that in a single sex educational setting leads to increased participation in class and outside class activities. For Mannion (2013) revealed that, boys contribute more to classroom interaction for example, by calling out answers and dominate on hands on activities, such as laboratory work and computer sessions when in a single sex setting. What this implies is the understanding that this setting provides a comfortable atmosphere in which both senses are free to maximize their self-potentials and aspirations without intimidation. Myers (2017) using the 1958 cohort data previously analyzed by steed man, found that girls in single sex schools had higher chances of obtaining five or more pass grades in the state o-level exam (ordinary level exams) taken at the ages of 16, than girls in coeducational schools, all things been equal. This finding suggests that this environment has a way of boosting the esteem of the girls thereby prompting them to aim higher and for better grades, even in the slimmest of odds. One cannot ignore the level of progress experiences at individual levels.

2.4. Effects of Co-Education on the Academic Performance of Learners

One of the good things about enrolling students, especially kids in mixed gender schools is the diversity that this decision offers students. If young boys and girls are given exposure to diversity in an early age, they will find it easier to adapt in different environment when they grow up. The diversity of this setup offers is significant in teaching other forms of diversity such as cultural and social. When both males and female students attending classes together and participating in class activities, these students will be able to learn about equality between men and women. As opposed to single sex schools, co-education schools treat students equally with no preference to sex. For example, when test is given, there are no special treatments and students are graded and evaluated on their performance and not on gender (Egonmwan,
2012). Furthermore, some people who are not educated in co-education setup find it difficult to socialize freely with the opposite sex since they are not used to interacting and talking to members of the opposite sex. Conversely, students enrolled in mixed classrooms experience being with members of the opposite sex find it easy to socialize with the opposite sex. The familiarity will teach them about coexistence and at some time prepare them when they get out of school where they will have to deal with different kinds of people (Ham, 2009).

Other than that, in co-educational schools the students are exposed to a normal environment in the sense that society is composed of both male and women. If they are taught and motivated to interact with both sexes, they can use this skill when they graduate in colleges and be in the real world where men and women coexist and if a student is studying in a school with members of the opposite sex he or she is going to be able to communicate freely with the opposite sex, since both genders have different ways of expressing themselves, studying in co-education setup can help an individual with good communication skills. Schools with mixed students offer an environment that gives men and women the chance to express themselves and share their views which will teach boys and girls about equality and this is because in the educational environment, students are allowed to discuss and debate as a result they will be able to explore each other’s perspective and differences when it comes to views, this will make it easier for them to agree or disagree (Jerkins, 2011). On the different note, one of the downsides of missed schools where there are boys and girls is that students might not be able to concentrate on their studies. This is more possible to happen with students who are in secondary schools because is where there is a growing attraction of the opposite sex, that is trying to make romantic relationship. For instance, if pupils engage in such relationships and something goes wrong in their relationships this affects their concentration on studies because the can be emotionally drained, unlike in single sex schools where learners to some extent do not grow the feeling of engaging in intimate relationships with the opposite sex there by been the best environment for them to concentrate on their studies (Sabatier, 2013).

Furthermore, boys tend to perform better than girls when it comes to technical subjects like mathematics and girls tend to perform better in communication skills and language than boys. Having said that the problem may arise when it comes to performance in the classroom, for example, the subject is mathematics and the boys perform better than girls the teacher may need to come up with a technique to teach the lesson in order to strike a balanced outcome as girls find it difficult and they are slow to understanding spatial tasks and this can eat up much of the time for more lessons. Moreover, participation in class will not be balanced since one gender might be performing well than other and this can also affect the atmosphere and the flow of lessons in the classroom (Barry, 2010). Beside this, co-existence of boys and girls in the classroom can lead to shyness or intimidation to some students. Some educators who teach in single sex schools suggest that most students perform better academically in all boys or all girls’ schools than in co-education schools. This is so because in a single sex education setup the shyness is minimal and intimidation is to a lesser extent compared to co-education setup thereby learners performing better academically. Other than that, girls are less confident in co-education setup compared to the confidence shown in single sex schools. This is because they are naturally shy around the opposite sex especially when it comes to participating in a classroom environment and this negatively affects the performance of girls academically (Biggs, 2012).

3. Research methodology

3.1. Study Design

The study adopted a mixed methods approach combining quantitative and qualitative data. Exploratory and descriptive designs were as well considered appropriate as they also allowed for more flexible strategies of data collection in order to answer the research questions. The study was aimed at collecting information from respondents on academic performance of learners at co- and single sex schools at some selected secondary schools in Kasama district of Northern Province in Zambia.

3.2. Research Site

The research was conducted in Kasama district of Northern Province in Zambia at some selected secondary schools from which respondents were also sampled.

3.3. Population, Sample and Sampling Procedure

The population for the study comprised of head teachers, teachers and learners at the selected secondary schools. The target population was 2000. The sample size involved a total of 200 respondents which included five (5) head teachers, one from each selected school. Twenty (20) teachers, four from each selected school. One hundred seventy-five (175) pupils, thirty-five (35) from each selected school. The study employed both purposive and simple
random sampling on different participants from the selected secondary schools. Simple random sampling was used on teachers and pupils whereas purposive sampling was used on the head teachers.

3.4. Data Analysis
Data were analyzed qualitatively as the semi-structured interview schedules were used as data collection instruments. The thematic approach was used, where data analysis started with the categorizing themes from the semi-structured interview schedules. The data gathered was analyzed according to the themes of the study and the order of the research objectives. Data generated from the questionnaires were analyzed by using the Statistical Package for Social Sciences (version 26) and Microsoft Excel (version 16) to come up with frequency tables, pie charts and bar graphs.

3.5. Ethical Issues
The researcher upheld research ethical considerations for example voluntary participation of the respondents, confidentiality, honesty, right of privacy and so forth in a manner that the research was not disrupt the daily routine of the schools under research and education offices. The researcher briefed and debriefed the participants at the beginning and at the end of the study and assured the participants that the data to be collected was purely for academic purposes only. The researcher also assured participants that identification symbols used like names were not recorded in the questionnaires to ensure anonymity of the respondents. The researcher also ensured that the respondents were protected from any possible harm that might have risen from the study. Additionally, the researcher got an introductory letter from Rockview University and permission from Kasama DEBS office as well as from the head teachers on behalf of the independent schools.

4. Results and discussions
The following findings and discussions were presented according to set research objectives:

4.1. Effects of Co- and Single Sex Education

4.1.1. Benefits of Single Sex Education
60% of the pupils stated that, the single sex school enabled them to focus on school only such that they showed more commitment to lessons. 30% of teachers reported that, in single-sex school, pupils had full concentration, good morals, discipline and good teaching environment, 10% of headmasters engaged that single sex schools provided a more interactive environment between teachers and pupils and that pupils easily socialize and help each other.

![Figure 1 Benefits of Single Sex Education](Source: Author, 2023)
4.1.2. Disadvantages of Single Sex Education

50% of pupils stated that, it led to drug abuse and had less competition in school. 30% of teachers stated that, it led to stubbornness by pupils and also poor development of social skills among pupils. 20% of headteachers responded that, it reduced competition and that pupils were not often exposed to the concept of equality among male and female learners.

![Figure 2 Disadvantages of Single Sex Education](source: Author, 2023)

<table>
<thead>
<tr>
<th>Benefits of Co-Education</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preparing for the real world</td>
<td>40</td>
<td>33.%</td>
</tr>
<tr>
<td>Better communication skills</td>
<td>30</td>
<td>25%</td>
</tr>
<tr>
<td>Healthy competition</td>
<td>35</td>
<td>29%</td>
</tr>
<tr>
<td>Gender equality</td>
<td>10</td>
<td>8%</td>
</tr>
<tr>
<td>Breaking down barriers</td>
<td>5</td>
<td>5%</td>
</tr>
<tr>
<td>Total</td>
<td>120</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: Author, 2023
4.2. Comparisons on Academic Performance between Co-Education and Single Sex Learners

60% of pupils noted that, a single sex educational setting leads to increased participation in class and outside class activities. 30% of teachers reported that, female graduates of single gender education excelled more academically than those who came from mixed classroom settings and they pointed out that girls in single-sex schools scored higher on tests/examinations because they spent more time reviewing and doing homework while in high school than those who were distracted with the presence and attention of boys in a classroom where they co-existed. 10% of head teachers responded that, single-sex classroom learners faced challenges in some subjects such as; mathematics, English and sciences where as in a co-education setup the learners were able to complement each other in those subjects.
4.3. Recommendations on how to Improve Single Sex Education

![Recommendations on how to Improve Single Sex Education](image)

Figure 5 Recommendations on how to Improve Single Sex Education

Source: Author, 2023

40% of pupils responded that, school districts should implement single-sex education because it was beneficial to pupils, particularly minorities and those in poverty, in that their learning-styles are more easily matched, their behaviors improve, and ultimately their academic performance improves. 40% of teachers noted that, teachers and pupils should be talked to either through the guiding and counseling departments or motivational talks in order to foster positive attitude towards single-sex education. 20% of head teachers reviewed that, policy makers should establish more single-sex secondary schools and convert underperforming co-education secondary schools into single-sex secondary schools in order to improve on learner’s academic performance.

5. Conclusion

Based on the results of this study, it can be concluded that in as much as single sex school provide an environment where learns concentrate more on school, the environment is hostile such that stiff punishment for learners is prevalent and that teachers abuse learners physically and verbally and it does not help learners to easily socialize with the opposite sex thereby affecting them after school when they get in society where they will have to socialize with the opposite sex. Additionally, single sex schools do not promote gender equity and equality for learners. Further, most of the students and teachers prefer single-sex schools to co-education schools and the reasons for the dislike of co-education context include, high level of indiscipline, boys’ offensive behavior towards girls, encouragement of boy-girl relationships that interfere with learning, the fear of girls to participate freely within classroom as well as teachers’ differential treatment of boys and girls in favor of girls. Therefore, the study recommends policy makers to reconsider the type of schools they institute to be accommodative to all genders so as to ensure better and complemented academic performance.

Recommendations

The following are actions that should be taken on the basis of the findings of this study:

- The ministry of education and policy makers should establish more single-sex secondary schools and convert underperforming co-education secondary schools into single-sex secondary schools in order to improve on learners ‘academic performance.
- School administrators and teachers in co-education secondary schools should improve on the learners ‘discipline level to create conducive learning environment and improve on both girls’ and boys’ academic performance.
- Teachers within co-education classrooms should ensure that girls are motivated to actively participate in learning. They should discourage the dominance and offensive behavior of boys towards girls.
The school administrators from single sex schools should consider programs that will bring together boys and girls to enable them familiarize with the opposite sex so as to reduce the risk of having future challenges in relating with persons of the opposite sex especially outside the school setup such as the work environment.

References


Author’s short biography

Chanda Chansa Thelma, specializes in Civic Education and has taught Civic Education at university level for seven years now. Currently, she is lecturing Civic Education, Political Science, Religious Studies, Social Sciences Research Methods and Educational Research at Rockview University in Lusaka, Zambia. She holds a Doctor of Philosophy in Civic Education, Master of Arts in Civic Education, Bachelor of Arts Degree, Diploma in Education and several Educational Certificates. She is currently the Coordinator for Open Distance Learning at Rockview University.