

DIFFERENCES IN TEACHERS' PERCEPTION OF COEDUCATION AND SINGLE-SEX SCHOOLS IN ONITSHA URBAN AREAS: IMPLICATIONS FOR INNOVATION IN EDUCATION

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ABSTRACT

The study investigated secondary school teachers' perception of co-education and single-sex schools in Onitsha urban areas: Implication for Innovation in Education. Three research questions were posed to guide the study. The research design adopted for this study is the descriptive survey. The population for the study is 998 teachers, comprising all the teachers of post primary schools in Onitsha urban areas. The sample size for this study was 200 teachers. The instrument for data collection termed "Teacher Perception of School Type Questionnaire (TPSTQ)" was administered directly to the teachers. Data relating to research questions were analysed using mean scores, while those relating to hypothesis were analysed using a Z-test. Findings from the study revealed that teachers have positive view of co-education and single-sex schooling. The findings further revealed that there is no significant difference between the Mean perception score of teachers on co-education and single-sex schooling. Based on these findings, recommendations were made among others that Students should not be restricted to any school type (single-sex or co-education) for their secondary school career, but should be given equal opportunities and encouragement to excel in their academic endeavours.

INTRODUCTION

Education is indispensable for society to survive and thrive; being that it is a social institution serving the needs of society. Today, the need for educational innovations has become acute. It is widely believed that the people's social and economic well-being will depend to an ever greater extent on the quality of their citizens' education. Hence, to meet the challenges of the fast-changing and unpredictable globalized world, Sharratt and Harild(2015) observed that there is need for comprehensive, sustainable and innovative education. This is a type of education that may involve transforming the theory and practice of teaching and learning, as well as all other aspects of this complex organization to ensure quality preparation of all students to face the challenges of life and work. According to Spanghland Hoffman (2012), to innovate is to look beyond what one is currently doing and develop a novel idea that helps people to do their job in a new way. The purpose of any invention, therefore, is to create something different from what they have been doing, be it in quality or quantity or both.

In Anambra state, Nigeria, underlying pressure to innovate seems to emanate from political, economic, demographic, and technological forces from both inside and outside of the state. However, what seems to have resonated is that many seem to recognize that education at all levels critically needs renewal. Education

at all levels has to change. It needs more innovation. Yet, something does not seem right, which is that lack of innovation can have profound economic and social repercussions.

Innovative education systems are inclusive and gender-equitable. According to an Organization for Economic Cooperation and Development (OECD) (2014) report, the pressure to increase equity and improve educational outcomes for students is growing around the world. They support early learning and foster innovations to extend education opportunities to the hardest-to-reach children and adolescents. Thus, the topic of single-sex and coeducation has been a subject of debate in long while. Advocates of single-sex schooling tend to argue that single-sex aids student outcomes such as test scores, graduation rates, and solutions to behavioural difficulties. The opponents (those in support of coeducation) however are apt to argue that evidence for such effects is inflated or non-existent, and instead argue that such segregation can lead to increased prejudice and cost students social skills (US Department of Education, Washington, DC, 2015).

Co-educational schooling could be defined according to Heric (2009) as schools that have some or all classes with students of the same sex, both male and female students are together during recess or other activities while Single sex schooling refers to schools in which males or females attend classes exclusively with members of their own sex. Hence co-education is defined for the purpose of this study as mix schools where both male and female attend together while single sex schools are schools where only male or only females attend separately.

Advocates of coeducational schooling speak in favour students being educated in an environment that mimics real life, while also being provided access to what is often a broader range of study and extracurricular options, in part due to larger enrolments but also opportunities in areas typically taking smaller intakes from either gender. The rationale for promoting co-education according to Hattie (2010) has been based on considerations such as: social change, given by the active integration of women into society and by the concept of the “unnaturalness” of different educational establishments in a society in which men and women live together; equal opportunities for men and women and, economic factors, such as reducing costs for educational institutions. However, after decades of criticism following the poor outcomes seen in some cases, some countries such as France and the United States of America have stepped back and are reconsidering the benefits of single-sex education (Daly & Defty, 2004; Salomone, 2013).

On the other hand, advocates of Single-sex education also have reported benefits, such as the ability to cater for the learning style of either male or female students. This adds to a learning experience free of distraction, particularly in the secondary years (Pahlke, Hyde & Allison, 2014). Based on the contrasting views, many proponents today take the stance that regardless of the effects of single-sex schooling, single-sex schooling should be available as an option for interested families. In this case, however, parents and school authorities making the choice need accurate information about whether single-sex programs yield better innovative outcomes than coeducation programs.

Here in Nigeria, opinions regarding genders in schools are influenced mostly by religious and cultural beliefs rather than the idea that students learn better when separated into their genders. Because of this, the attitude towards the separation/integration of gender varies depending on the ethnic makeup of the region. For example, people in northern Nigeria are mostly Muslim and as a result, are more inclined to choose single-sex education over co-education in-line with their religious beliefs. However, all over the country, co-education schools seems more common than single-sex schools. In contrast to the predominance of co-education schools, many prestigious educational institutions only accept one sex, major examples are, Christ the King College, Dennis Memorial Grammar School and Queen of the Rosary College all situated in Onitsha, Anambra State and King's College and Queen's College situated in Lagos State.

A number of explanations have been proffered for differences between single-sex and coeducational settings in educational processes, and ultimately, in student outcomes. One of the most commonly discussed differences between the two types of settings relates to the dominant presence of boys in the classroom. Most studies (such as Smyth, 2010), have indicated that boys contribute more to classroom interaction and tend to dominate in “hands-on” activities, such as laboratory work and computer sessions. Smyth furthermore observed that boys tend to be more disruptive in the classroom and experience more negative interaction

with teachers as a result of their misbehaviour. From this perspective, the presence of boys in the classroom is seen as having a negative effect on girls' academic engagement and achievement.

Studies have compared the educational achievement of children attending single-sex and co-educational secondary schools. In general, the results of earlier studies have been inconsistent with some studies providing support for the benefit of co-education (example, Daly & Defty, 2004; Salomone, 2013), others supporting single sex education (example, Calvo, 2005; Puleo, 2001) yet some findings show no achievement differences between children attending single-sex and those of co-educational schools. However, in recent times, Pahlke, Hyde and Allison (2014) study of more than 20 countries, which sought to establish the extent to which single-sex schooling leads to superior academic outcomes. A study by Dix (2018) found that, after accounting for socioeconomic status, students in single-sex schools did outperform their co-ed counterparts in reading and numeracy. The fact that most of these studies were done outside Nigeria has left a wide gap in literature, hence the need for this study to fill the gap. This study therefore sought to investigate differences in teachers' perception of coeducation and single sex schools in Onitsha urban areas, Anambra State: Implications for innovation in education.

Purpose of the Study

The main purpose of this study is to investigate differences in teachers' perception of co-education and single-sex schools in Onitsha urban areas. Specifically, the study sought to investigate;

1. The perception of teachers on co-educational schools
2. The perception of teachers on single-sex schools
3. The differences in teachers' perception of teachers on co-educational and single-sex schools.

Research Questions

1. What are the perception scores of teachers on co-education schools?
2. What are the perception scores of teachers on single-sex schools?
3. What are the differences in teachers' perception of co-education and single-sex schools?

Hypothesis

H01: There is no significant difference between the teacher's perception of single-sex and co-education schools in Onitsha urban areas.

METHOD

The research design adopted for this study is the descriptive survey. This is used in line with Akuezilo and Agu (2015) who stated that a descriptive survey is one in which a group of people or items are studied by collecting and analysing data from only a few people or items considered to be representative of the entire group. The study will be conducted in Onitsha urban areas of Anambra State. The population for this study is 998 teachers. This comprised of all the teachers of post primary schools in Onitsha urban, Anambra State (Anambra State Education Commission, Awka, 2015). There is total number of 21 secondary schools in Onitsha urban areas (16 schools in Onitsha North and 5 schools in Onitsha South).

The sample size for this study is 200 teachers. This comprised all the teachers that were randomly selected for the study. First, simple random sampling was used to select 6 (2 male schools, 2 female schools and 2 coeducation schools) schools from the existing 21 schools in Onitsha urban areas. This was used to ensure that each of the school has equal and independent chance of being selected and included in the study. Furthermore, randomly sampling technique was employed to choose 200 teachers from the six schools that formed the study sample. Random sampling method used is described according to Nworgu (2006) as a statistical method drawing representative data by selecting people because of the ease of their volunteering. The instrument for data collection is a questionnaire termed "Teacher Perception of School Type Questionnaire (TPSTQ)" this was used to assess the teachers' perceptions of co-education and single-sex schools. The questionnaire was developed by the researcher. Views and information gathered from the review of the related literature were used as a guide for the construction of the questionnaire. The instrument has 28 items with 4 response options in each scale, and has two sections;

Section A: Personal Data

Section B: Responses of the teachers on coeducation and single-sex schools. The scale used in items includes; Strongly Agree, Agree, Disagree, and Strongly Disagree. The questionnaire was validated by experts in Guidance and Counselling and Measurement and Evaluation. The topic of study, the purpose and

the research questions were presented along with the questionnaire items. The experts ascertained the relevance of the items to the research study.

The reliability of the instrument is 0.73. This was established using test–retest method. This was used to determine the degree of the relationship of the respondents’ rating for both variables according to Akuezilo and Agu (2015).

The questionnaire was administered directly to the teachers. The researcher and three research assistants assisted in distributing and collecting the copies of the questionnaire. The data relating to research questions were analysed using mean scores, while those relating to hypothesis was analysed using a Z-test. The mean rating was used in analysing the responses to the questionnaire. Normal values of 4,3,2,1 were assigned to different scale of Strongly Agree, Agree, Disagree and Strongly Disagree. A mean decision rule of 2.50 was used to determine the acceptance or rejection of responses. The mean of 2.50 and above were regarded as ‘Accepted’ while below 2.5 were regarded as “Not accepted”.

RESULTS

Research Question 1

What are the perception scores of teachers on co-education schools?

Table 1: A table showing the Mean perception scores of teachers on co-education schools

S/N	ITEMS	Total	Mean	Decision
1	Lessons are designed to allow me to monitoring student progress in coeducation schools	582	3.20	Accepted
2	The instructional methods and activities reflect attention to issues of access, equity and diversity for students in Coeducation	477	2.62	Accepted
3	The design of lessons incorporate tasks, roles, and interactions consistent with investigative language in coeducation schools	491	2.70	Accepted
4	The students’ reasoning probed better in co-education	601	3.30	Accepted
5	The instructional methods and activities I use reflect attention to students’ experiences and readiness coeducation schools	437	2.40	Not accepted
6	Adequate time and structure for reflection is provided in coeducation schools	510	2.80	Accepted
7	Coeducation provides opportunity to interact with my students, both male and female	692	3.80	Accepted
8	Students are encouraged to talk and share ideas	655	3.60	Accepted
9	Students are given immediate feedback when they need directions to proceed in coeducation schools	510	2.80	Accepted
10	Lessons do progress based on students’ responses.	546	3.00	Accepted
11	The in class activities in coeducation schools consolidates the main ideas of the lesson.	473	2.60	Accepted
12	Coeducation provides the opportunity to identity students who have difficulties in understanding the main ideas of the lesson.	546	3.00	Accepted
13	Students in coeducation had better chance to ask questions	491	2.70	Accepted
14	The overall performance of students in coeducation is commendable	419	2.30	Not Accepted
TOTAL MEAN SCORE			2.92	Accepted

Table 1 above revealed that with the exception of items 5 (2.40) and 14 (2.30) which were below the mean acceptance rule, all the other items were all above the mean acceptance rule. However, the total mean score (2.92) is above the acceptance mean, hence accepted.

Research Question 2: What are the perception scores of teachers on single-sex schools?

Table 2: showing the Mean perception scores of teachers on academic performance of students from single-sex schools

S/N	Items	TOTAL	Mean ($\bar{X}$)	Decision
1	Lessons are designed to allow me to monitoring Student progress in single-sex schools	655	3.60	Accepted
2	The instructional methods and activities reflect attention to issues of access, equity and diversity for students in single sex schools	588	3.23	Accepted
3	The design of lessons incorporate tasks, roles, and interactions consistent with investigative language in single-sex schools	522	2.87	Accepted
4	The students' reasoning probed better in single-sex	673	3.70	Accepted
5	The instructional methods and activities I use reflect attention to students' experiences and readiness single-sex schools	582	3.2	Accepted
6	Adequate time and structure for reflection is provided in single-sex schools.	628	3.45	Accepted
7	Single-sex schooling provides opportunity to interact with my students, both male and female	360	1.98	Not accepted
8	Students are encouraged to talk and share ideas	628	3.45	Accepted
9	Students are given immediate feedback when they need directions to proceed in single-sex schools	571	3.14	Accepted
10	Lessons do progress based on students' responses.	655	3.60	Accepted
11	The in class activities in single-sex schools consolidates the main ideas of the lesson.	601	3.30	Accepted
12	Single-sex provides the opportunity to identity students who have difficulties in understanding the main ideas of the lesson.	588	3.23	Accepted
13	Students in single-sex had better chance to ask questions	692	3.80	Accepted
14	The overall performance of students in single-sex is commendable	619	3.40	Accepted
Total Mean Score			3.29	Accepted

The table above reveals that with the exception of item 7 (1.98) which is below the mean acceptance score, the rest of the items are above the mean acceptance score of 2.5. The total mean score (3.29) is above the mean acceptance rule, hence are accepted.

Research Question 3: What are the differences in teachers' perception of co-education and single-sex schools?

Table 3: showing differences in teachers' perception of academic performance of students from co-education and single-sex schools

	N	$\bar{X}$	Md
Coeducation	86	2.92	0.37
Single-sex	96	3.29	

Table 3 above reveals that teachers perception score from coeducational schools is 2.92, while those from single-sex schools is 3.29 indicating a mean difference of 0.37.

Testing Hypothesis

H01: There is no significant difference between the teacher's perception of single-sex and co-education schools in Onitsha urban areas.

Table 4: A Z-test analysis on the perception of teachers of coeducational and single-sex schools

School Type	N	$\bar{X}$	Sd	df	Z-cal	Z-crit.	P	Test
Coeducation	86	59	8.74	198	1.381	1.960	P<0.5	2-tailed
Single-sex	96	62	9.91					

Table 4 above shows that the Z-test result of the sample of Mean score of scores of secondary school teachers in single-sex and co-education schools in Onitsha urban areas, Anambra State. The Mean score for teachers in single-sex schools is 62, while that of teachers in co-education schools is 59. The table also shows that

$z_{cal} = 1.381$, while $z_{crit} = 1.960$. The implication is that Mean score for girls in both single-sex and co-education schools are not statistically significant. This therefore means that there is no significant difference between the perception of teachers on coeducation and single-sex schools.

DISCUSSION

This section discusses the major findings of the study and their implications. It also highlights the conclusions and recommendations.

Teachers' Perception of Coeducation Schools

The responses indicating secondary schools teachers' perception of coeducation revealed that teachers agreed with most of the listed items. This shows that teachers have a positive view of coeducation. Although most of the research findings seems to oppose coeducation, finding from this study is not much different from the reported findings from previous studies (For instance; Yusuf and Adigun (2010), Myhill and Jones (2006) and Jackson (2002)). However, teachers disagreed on the item which stated that "the instructional methods and activities I use reflect attention to students' experiences and readiness coeducation schools". This therefore showed that the instructional method and activities do not truly reflect the attention of students in coeducation, hence the possibility of playing in their academic performance.

Nevertheless, The rationale for promoting co-education has been based on considerations such as: social change, given by the active integration of women into society and by the concept of the "unnaturalness" of different educational establishments in a society in which men and women live together; equal opportunities for men and women and, economic factors, such as reducing costs for educational institutions.

Teachers' Perception of Single-Sex Schools

A finding from this study reveals that teachers' have positive view of single-sex schools. Teachers agreed with almost all the listed items on single-sex schooling in Onitsha urban areas. Things finding is in agreement with previous research findings. For example; Oludipe (2012), Pahlke, Hyde, and Allison (2014), Eisenkopf, Hessami, Fischbacher and Ursprung (2012) and Herric (2009) who also examined performance on assessments and how this relates to the two types of schooling. The teachers however did not agree with the item "Single-sex provides opportunity to interact with my students, both male and female". This response did not come by surprise since it is clearly obvious single-sex comprises of only male or female, and not male and female as posed in the item. Eisenkopf, Hessami, Fischbacher and Ursprung (2012) estimation result shows that single-sex schooling improves the performance of female students in mathematics. The positive effect increases if the single-sex class is taught by a male teacher. An accompanying survey reveals that single-sex schooling also strengthens female students' self-confidence and renders the self-assessment of their mathematics skills.

Differences in Teachers' Perception of Coeducation and Single-Sex Schools

Findings from the study reveal that there a slight difference in teachers' perception of coeducation and single-sex schools. This finding is in an agreement with some findings from previous studies. Pahlke, Hyde, and Allison (2014), used a meta-analysis to analyse studies that have tested the effects on students of single sex (SS) compared with coeducational (CE) schooling. Based on mixed-effects analyses, uncontrolled studies showed some modest advantages for single-sex schooling, for both girls and boys, for outcomes such as mathematics performance but not for science performance. Controlled studies, however, showed only trivial differences between students in Single-sex versus Coeducation, and in some cases showed small differences favouring Coeducation schooling.

On whether there is any significant difference between the perception of teachers on coeducation and single-sex schooling, finding from the study shows that there is no significant difference between the perception of teachers on coeducation and single-sex schools. These findings agree with the findings of Oudipe (2012) reporting that there was no significant difference in academic achievement of male and female students at the pretest, posttest, and delayed posttest levels respectively. Yusuf and Adigun (2010) also reported that school type, sex and location had no significant influence on students' academic performance. This finding is also in agreement with some other studies like; Gaer, Pustjens, Van Damme and De Munter (2004), Herric (2009), Jackson (2002), and Pahlke, Hyde, and Allison (2014).

The studies have proposed number of advantages for co-education, but there is also a strong case for single-sex schooling, mainly based on successful examples of academic performance observed in the latter. However, it is not known if schooling mode plays a role in the better outcomes observed in some single-sex

schools, or if the effects are confounded by other factors associated with better outcomes unknown to this researcher.

Conclusion

Findings of the study indicated that teachers have positive view of both coeducation and single sex schools. A slight difference in teachers' perception of coeducation and single-sex schools was also observed. There is no significant difference in teachers' perception of coeducation and single-sex schools.

Implication for innovative education

The implications for innovative education in this study are three folds. First, more co-educational institutions could be established to engender greater healthy rivalry between male and female students especially to bring innovation in education. Second, both coeducation and single-sex could now be able to get the much deserved attention in order to create an enabling environment for students to learn and interact. Third, teaching and evaluation strategies in all the classes could become gender-bias free. Thus, subject teachers could become be sure to call on both boys and girls for answers to questions, and to give them quality praise when appropriate. This will likely give rise to innovative education.

Lastly, this study suggests that the ways in which schools are organised and structured can have a considerable impact in students' performance irrespective of the school type.

Implication for counselling

All stakeholders in the school, the management, teachers, students and parents need the help of school counsellor to innovate ideas and solutions to improve instruction, management and the operation of the school, be it coeducation or single-sex schooling. However, knowing the teacher's perception of these school types could guide the counsellor in addressing issues related to gender and students performance.

Counsellors can serve as a consultant in this regard, providing methodical assistance to teachers, parents, administrators and the community to identify and remedy problems that can limit the effectiveness of innovation in education.

Recommendations

Based on the findings of this study, it is recommended that:

1. Students should not be restricted to any school type (single-sex or co-education) for their secondary school career, but should be given equal opportunities and encouragement to excel in their academic endeavours, be it in coeducation or in single-sex schools.
2. The finding indicates that there is not much difference in the teachers' view of coeducation and single-sex schools. It is therefore recommended that schools should be well funded and the learning environment enriched, so that their student's' capacity for efficiency and productivity can be improved, irrespective of the school type.
3. It has also been deduced from the findings that coeducation provides the required platform for students to interact and learn. Based on this, it is recommended that there is need to look into it to see how the curriculum and pedagogy could be structured to provide learning contexts and opportunities that will enable all students to learn effectively.

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