Influence of Gender on Academic Achievement of Slow Learners in Kakamega County, Kenya

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Abstract
Background: *Gender disparity is an issue of concern to education stakeholders. Differences in academic achievement among males and females has always been inferred.Advocacy and mitigation measures ought to focus on the gender at risk. For this reason, the researchers set out to determine the influence of gender on academic achievement among slow learners in secondary schools in Kakamega County.*
Materials and Methods:*Descriptive survey and correlational research designs were used. Target population was 73,985 form three and four students, 1,288 class teachers, and 12 sub-county Education Directors. Stratified random, purposive, and saturated sampling techniques were used. Fisher's formula was used to calculate the student sample size. Questionnaires, interview schedules, achievement tests and focus group discussion guides were used to collect data.Data collection tools had reliability coefficient index of $\geq .6$. Data was analyzed using percentages, means, standard deviations, and t-test.*
Results: *The t-test results indicated a significant difference between the male and female means; t =2.662, df= 230, p-value = 0.008 < 0.05.*
Conclusion: *Male students in the slow learners' category perform better than the female students. Female slow learners therefore need more encouragement and support because they are at a greater risk of performing poorly compared to the male slow learners.*
Key words: *Gender, Slow learners, Academic achievement*

I. Introduction

Research has revealed gender difference in academic achievement of the general student population; some studies portrayed that males had lower academic achievement compared to females based on standardized tests, teachers' ratings of school performance and in school learning outcomes[1,2,3]. Some studies have indicated that on average girls perform better in school than boys; girls get higher grades and complete high school at higher rates compared to boys[4]. Further studies have corroborated the concept of gender difference in academic achievemen[5,6]. However, some studies found that while boys show spelling deficits and general low performance in language and arts subjects the girls have a greater deficit in arithmetic and science subjects[7]. On the contrary other researchers[8,9] indicated that boys outperformed girls in Kenya Certificate of Secondary Education(KCSE)and mathematics and that generally teachers rated boys as more competent academically.Research has also study revealed that boys outnumber girls in learning difficulties with the indication that 60% of the students identified with learning difficulties are male[10,11].

Gender is postulated to considerably influence student academic performance[2]. Research has inferred gender difference in academic achievement[1,5,6]. On average girls perform better in school than boys; girls get higher grades and complete high school at higher rates compared to boy[3,4]. However, it is observed that while boys showed spelling deficits and general low performance in language and arts subjects the girls had a greater deficit in arithmetic and science subjects[7]. Yet another study showed a significant gender achievement gap with boys outperforming girls in math and science while girls excelled in literacy subjects[12,13]. Other studies have howeverfound no significant difference between gender in relation to mathematics learning disabilities[14].Furthermore, it is observed that there is a disproportionate representation of males in special education service[3].Incidentally studies reveal that boys outnumber girls in learning difficulties with an approximate 60% of the students identified with learning difficulties being male[10]. It is opined that apart from high representation in receiving special education services male students are more likely to drop out of high school[15]. It is also indicated that females are outperforming males in elementary, secondary and high school with males received majority of the D's and F's grades awarded[16].

However, there are contradicting findings on level of academic achievement based on gender. Some studies found a higher academic achievement level for girls[2,4]however other studies[12] found boys outperformed girls in math and sciences while girls outperformed boys in literacy subjects. On the other hand, some studies noted inconsistencies in gender differences[17] or a small significant female advantage in relation to academic achievement[18].

Incidentally, a higher risk for the girl- child in terms of access and retention within the education system is inferred.It is observed that the girl-child in Botswana, and to a lesser extent, the boy child is disadvantaged by inadequate access to basic education[19]. In essence it's the girl student who is at greater risk of academic underachievement. Notably, in India findings clearly show differences in parental perceptions related to student's gender. It emerges that parents expect more, academically, from male children than female children. Boys are expected to achieve higher levels in education, hold better positions and be financially secure in the cultural context in the country[20]. This suggests more academic pressure on boys as compared to girls.

Comparatively, in Kenya boys generally outperform girls in KCSE and are rated by teachers as more competent academically[8]. However, even though boys generallyperform better than girls in mathematics it emerged that girls from county boarding schools out performed male students in sub-county day schools[9]. This Impliesthat the nature of the school may be an important factor. However,another study undertaken in Kenya established that gender had a statistically significant effect on academic achievement $(F(1, 2137)=31.987, p< 0.001)$ with female students performing better than male students in biology[21]. Research has tended to yield mixed findings about the influence of gender on academic achievement. The purpose of the study was therefore to establish the relationship between gender and academic achievement of slow learners in Kakamega County in order to focus on the gender that is at-risk.

Coincidentally, studies in Kenya indicate that women with disabilities are more likely to be discriminated and chances of a girl with disability getting education are limited[22].However, one key objective of the Special Needs Education Policy in Kenya is to enhance gender mainstreaming and to ensure increased enrolment, participation and completion rates for both girls and boys, men and women with special needs and disabilities in education[23]. However, it is noted that the tradition of favoring boys runs deep in the African culture; Society in general has a negative attitude towardspeople with special needs but the situation is worse for the girl-child withspecial needs and disabilities[24]. This may imply that girls with learning difficulties are in greater jeopardy of dropping out of school. Gender gap in academic achievement is an important issue that needs to be explored to facilitate education equality[2]. The study therefore aimed at establishing the influence of gender on academic achievement of slow learners in Kakamega County. This will facilitate focused remedial and advocacy measures.

II. Materials and Methods

This descriptive-correlational study involved form three and four students, form three and four class teachers and sub-county education directors in Kakamega County, Kenya from January 2019- August 2019. The mean age of students was 19.03 years and comprised both males and females.

Study design: Descriptive survey and correlational research design.(Punch and Oncaea, 2014; Mertler, 2019

Study location:Kakamega County, Kenya

Study Duration: January 2019 to August 2019.

Sample Size: 246 students, 129, class teachers, 2 sub-county education directors.

Sample size calculation: Stratified random sampling was used to select the schools because they are not homogenous. The strata consisted of schools based on the school type (sub-county, county, extra county and national) thus a sample of 35 schools was selected. Fisher's formula was used to compute slow learners sample of 246. A ten percent sample size was drawn from the target population of 1288 class teachers and 12 sub-county education directors.

Subjects and selection method: The slow learner study population was drawn from low achievers in form three and four. The teachers then rated the cognitive abilities of the learner based on the cognitive rating scale appendix 2. The studentsidentified as having deficits in cognitive abilities participated in the study.

Inclusion criteria:

1.Form three and four student.

2.Consistently scores mean grade D, D-, E in examinations.

3.cognitive disabilities.

Exclusion criteria:

1.Learner with indiscipline cases.

2.Frequent absenteeism.

Procedure

The researcher got approval to collect data from the school of Graduate studies of Masinde Muliro University of Science and Technology and got permission from the National Council for Science Technology and Innovations

(NACOSTI) to conduct a study in Kakamega County. The researcher communicated with County administrative and education officers for further permission to collect the data from schools. A pre-visit to the schools was organized to familiarize with the environment and set up appointment dates. Briefing and debriefing activities were organized at appropriate times. Questionnaires were issued by the drop and pick technique and administered directly as time availed. Interviews and focus group discussions were carried out through face to face approach however some interviews with class teachers were undertaken on phone because they could not be accessed directly. The researcher informed the respondents that the data would be used for research purpose only and confidentiality would be maintained. The researcher involved the guidance and counseling teacher and Parents-Teachers representatives to get consent on behalf of parents and provide follow-up debriefing and counseling sessions. Focus group discussions wound up with pep-talks and prayer sessions with permission from the participants to lighten the occasionally emotional discussions. During the administration of the academic Mathematics and English tests candies were provided to the learners which visibly made the learners relax and focus. Sharing of personal experiences by the researcher created a rapport and made it easier for the participants to open up and discuss freely. Efforts were made to ensure that the participants were protected from any psychological harm during the data collection. Punctuality was observed during interviews and other visits to avoid any inconveniences to the respondents.

III. Results

H_0: *There is no significant relationship between gender and the academic achievement of slow learners in secondary schools in Kakamega County.*

To test for the hypothesis, the study used the student t-test technique to assess the influence of gender on the Academic Achievement of Slow learners in Secondary Schools in Kakamega County. The results were as shown in Table 1.

Table 1: T-test Analysis for the influence of Gender on Academic Achievement.

Descriptive Statistics of the academic achievement across gender

Gender	Sample size	Mean performance (%)	Std. Deviation	Std. Error Mean
Male	112	46.7946	23.28182	2.19992
Female	120	39.2417	19.90270	1.81686

t-test for equality in the means

					95% Confidence Interval of the difference	
t value	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
2.662	230	.008	7.55298	2.83785	1.96146	13.14449

T-test Analysis for the influence of Gender on Mathematics and English Tests.

Test	Gender	N	Mean	Std. Deviation	Std. Error Mean	t-test for equality in the means		
						t	df	p-value
Mathematics (% Score)	Male	112	42.00	34.963	3.304	1.884	230	.061>0.05
	Female	120	34.23	27.613	2.521			
English(% Score)	Male	111	52.05	18.280	1.735	3.096	229	.002<0.05
	Female	120	44.25	19.902	1.817			

The descriptive results of table 1. indicates that in Mathematics, male slow learner students scored an average of 42% (Mean = 42.00, Std. Dev. = 34.963) and female slow learner students scored an average of 34.23% (Mean = 34.23, Std. Dev. = 27.613). However, the t-test results indicated that the two mean scores were not significantly different from each other as shown by t =1.884, df= 230, p-value = 0.061 > 0.05. For the English test, the boys had a mean score of 52.05% (Mean = 52.05, Std. Dev. = 18.280) and female scored a mean of 44.25% (Mean = 44.25, Std. Dev. = 19.902) and the means were significantly different from each other (t =3.096, df= 229, p-value = 0.002 < 0.05); this is an indication that the male students among the slow learners performed better in English compared to the female slow learners. The descriptive results of table 1. also indicate that male slow learner students scored an average of 46.7946% (Mean = 46.7946, Std. Dev. = 23.28182) and female slow learner students scored an average of 39.2417% (Mean = 39.2417, Std. Dev. = 19.90270). The t-test results indicated that the mean difference (Mean = 7.55298, Std. Dev. = 2.83785) was significant as shown by t =2.662, df= 230, p-value = 0.008 < 0.05. We therefore reject the null hypothesis (H_0) and conclude that gender had a significant influence on the performance of the slow learner students in Kakamega county. The male slow learner performs better compared to the female slow learner in secondary schools in Kakamega county.

IV. Discussions

The results indicate no significant gender difference in mathematics which concurs with the findings are supported by Karimi[14] who found no significant difference between gender in relation to mathematics learning disabilities. However, it contradicts prevailing assumptions about males outperforming females in mathematics[9]. In essence among slow learners both males and females struggle and ultimately both gender attain low scores in mathematics.

Equally, the results indicate that male slow learners outperform female slow learners in English This is a contradiction to popular assumptions that girls generally perform better in literacy subjects particularly English[2,12]. Implicitly, in the slow learners' cadre the male students outperform the female students in English compared to the general student population where commonly the girls outperform boys in languages and literacy subjects. On average the male slow learner outperformed the female slow learner. The female slow learner therefore needs more support and assistance in order to improve their academic performance.

However, majority (40.3%) of the teachers felt that gender had no influence on the academic achievement of slow learners while 24.2% felt that the influence was to a very small or small extent. This implies that 88.7% of the teachers felt that gender has a minimal influence on the academic achievement of slow learners in secondary schools in Kakamega County. The sub-county director of education nonetheless observed *"The boys wonder why they should continue to hustle and be ridiculed by teachers and peers yet there is a ready means of earning money by boda boda. The girls on the other hand have limited options hence they are less likely to drop out of school".* This implied that the presence of the motor bike courier services (boda boda) increases the risk of male slow learners dropping out of school. Essentially, when the academic pressure is too high many male slow learners may opt to drop out of school however the female slow learners are more likely to stay in school.

The current study generally established that male slow learners outperform female slow learners. These finding support the assertions by Mukonyi and M'mbasu[8] and Mwalya[9] that boys outperform girls in academic achievement but are in contradiction to the findings by Zembar & Blume[4] and Smith[3] who observed that females outperform males academically. Research generally depicts gender difference in academic achievement[1,5,6]. The inference that on average girls perform better in school than boys, get higher grades and complete high school at higher rates compared to boys[3,4] and that boys show spelling deficits and general low performance in language[7] is therefore contradicted by the current study female slow learners are at a greater risk of performing poorly. These findings are in line with Wapula[19] who observed that the girl child in Botswana, and to a reduced extent, the boy child is disadvantaged by inadequate access to basic education particularly those with learning difficulties. The implication is girls with learning difficulties are at a higher risk of attaining lower grades and are in greater jeopardy of dropping out of school. Consequently, in the current situation the female slow learner is at a greater risk of attaining low grades compared to the male slow learner.

V. Conclusion

Gender has an influence on academic achievement of slow learners. Male slow learners perform better than female slow learners. Female slow learners therefore need more support and assistance from teachers, parents and peers in order to improve academically.

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Appendix 1
Please rate the identified learner on the following cognitive characteristics. Circle the number besides the statement that appropriately describes the identified learner.
 Rating
1.   Comprehending Meaning of Words
Extremely immature level of understanding   1
Fails to grasp simple word meaning, misunderstands words at grade level   2
Good grasp of vocabulary for age and grade   3
Understands all grade-level vocabulary   4
Superior understanding of abstract words   5
2.   Following Instructions
Unable to follow instructions, always confused   1
Usually follows simple instructions but often needs help   2
Follows instructions that are familiar and not complex   3
Remembers and follows extended instructions   4
Unusual skillful in remembering and following instructions   5
3.   Comprehending Class Discussions
Unable to follow and understand class discussions, always inattentive   1
Listens but rarely understands well; mind often wanders   2
Listens and follows discussions according to age and class   3
Understands well; benefits from discussions   4
Becomes involved; shows unusual understanding of material   5
4.   Retaining information
Almost total lack of recall; poor memory   1
Retains simple ideas and procedures if repeated   2
Average retention of materials, adequate memory for age and class   3
Remembers information from various sources; good immediate and delayed recall 4
Superior memory for details and content   5
5.   Attention
Never attentive; very distractible   1
Rarely listens; attention frequently wanders   2
Attention adequate for age and class   3
Above average in attention; almost always attends   4
Always attends to important aspects; long attention span   5
6.   Organization
Highly disorganized   1
Often disorganized in manner of working; careless   2
Maintains average organization of work; careful   3

Above average organization; organizes and completes work	4
Highly organized; completes assignment in a meticulous manner	5

7.   Completion of assignments

Never finishes even with guidance	1
Seldom finishes even with guidance	2
Average performance; follows through on assignments	3
Above average performance; completes assignment without urging	4
Always completes assignment without supervision	5

Summary Scores

1. Comprehending meaning of words   _____
2. Following instructions   _____
3. Comprehending class discussions   _____
4. Retaining information   _____
5. Attention   _____
6. Organization   _____
7. Completion of assignments   _____
Total Score   _____

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