

# **Mathematics and Gender in Ugandan Primary Schools: Influence on Teachers, Parents and Learners**

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## **Problem, Objectives and Significance**

In Uganda, gender disaggregated primary school performance data indicates that though mathematics is poorly performed relative to other subjects (Social Studies, English and Integrated Science), there is a significant gap between the performances of girls as compared to that of boys. This gap is not only evident during; teacher made and standardised examinations but also with the classroom participation. Basing on this observation, one would then wonder what the cause of this performance disparity is, since both girls and boys come from similar homes, sit in the same classrooms, are taught by the same teachers and are subjected to the same assessment. This rises an automatic question that of the stakeholders; parents, teachers and pupils, who is responsible for the observed gender disparities. The paper presents results of a study that was conceptualised with the overall aim of finding out the possible causes to the performance disparities among boys and girls in primary schools in Uganda. It was hoped that if careful note of the findings of this research was taken, the study would contribute to the bridging the performance gap between girls and boys in Ugandan primary schools.

## **Context And Underlying Assumptions About Gender And Mathematics In The Classroom**

Research over the last two decades has shown that males and females have different classroom experiences because they approach learning differently and because teachers tend to treat them differently. Girls' achievement in mathematics during elementary grades is equal to boys' but decreases in the middle school (Callahan & Clements, 1984; Dossey et al., 1988). An analysis of math achievement of twelfth grade girls in 15 countries revealed that in all but three countries girls were less successful than boys (Hanna, Kundiger, & Larouche, 1990). That gender differences seem not to surface until age ten (Callahan & Clements, 1984; Dossey, Mulis, Lindquist, & Chambers, 1988) suggests that the decline of female achievement is the result of a strong pattern of socialization to mathematics success or failure rather than to gender differences in innate ability. As girls progress through school, they are less likely to continue their math education, either taking more rudimentary courses or dropping the subject altogether (Pallas & Alexander, 1983).

## Study design and procedures

The study followed a cross-sectional survey design in which primary data was collected from; teachers, pupils, parents and the education policy makers. The respondents were randomly selected from primary schools within Kampala and wakiso districts while secondary data was collected from documents obtained from; schools, ministries of; Education and Sports (MoES) and that of Gender, labour and Social Development (MoGLSD), the Uganda National Examinations Board (UNEB) and the National Curriculum Development Centre (NCDC). To fit the study in within the context of the current debates, online interrogation of both published and unpublished reports was done. Data from both primary and secondary sources was analysed using qualitative and quantitative methods. Content analysis approach was employed for analysing the qualitative data using Nudist (N6) qualitative analysis software, while the quantitative analysis employed descriptive statistics computed using the Statistical Package for Social Scientists (SPSS).

## Results, discussion and recommendations

Summary of results from this study indicated that attitudes of; parents, teachers and pupils themselves contribute to the gender performance gap between the female and male pupils in primary schools in Uganda. Other problems highlighted by this study are the unbalanced work burden at home, lack of motivation, confidence and the biased learning materials (see below).

### Learners' Attitudes

Although about 100% of the females acknowledge Mathematics as useful, they did not work hard on the subject. Lack of interest, motivation and confidence made them view the subject as hard. Therefore females did not participate in Mathematics Clubs and did not do their Mathematics home works as much as did the males.

*80.4% of the male pupils and 63.8% of female pupils believed that Mathematics was a subject for males. 33% of the females did Mathematics only after special encouragement.*

### Parents and the housework Burden at home

Many parents 54% of the parents attested that home based problems do interfere with girl's study at home. Problems included noise, household duties, visitors, video, lack of electricity, walking long distances to and from school, and children's failure to comprehend the work on their own. About 68% of the parents indicated that females were busier at home than males. Due to gender stereotyping these duties were normally

the responsibilities of the female children. About 75% of the parents preferred male Mathematicians in the family and society.

## The teachers reveal

### *Biased Teaching Materials*

Teachers felt that maths textbooks were too difficult to be of much use in private study and that this adversely affect female who did not get as much external help as their counterpart boys. Teachers also reveal that the textbooks had a bias towards males, which could affect the females', drive towards Maths. Teachers thought this could be the reason why females hardly participated in class.

### *Females Lacked Confidence and Motivation in Mathematics*

Most of the teachers (80%) believed that some pupils especially girls lacked confidence. The teachers estimate that about 75% of pupils most of them females, lacked motivation, consequently many females missed classes. They also believe that other factors include perception of Mathematics as difficult, regarding the subject as a reserve for males, shortage of females Mathematics teachers to act as models for females and hating Mathematics as a result of hatred for one topic.

## Conclusions and Recommendations

In conclusion, pupils, teachers and parents suggested encouragement, explaining the importance of Mathematics, individual attention, regular roll-calls, putting pupils of various abilities to work together in teams, give more time for question, extra lessons and encouraging the pupils to practice problem solving. They also suggested the recruitment of more qualified teachers, on-the-job training of teachers, inspection by qualified senior teachers of Mathematics and the improvement of the teachers' conditions of service among others.