STUDENTS' STUDY HABIT AND PERFORMANCE IN PUBLIC AND PRIVATE SECONDARY SCHOOLS MATHEMATICS IN PORT HARCOURT LOCAL GOVERNMENT AREA, RIVERS STATE

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ABSTRACT

This research on students study habits and their performance in mathematics was carried out in public and private secondary schools in Port Harcourt Local Government Area, Rivers State. The study aimed at assessing the students study habits in relation to their performance in mathematics examination. Three research questions and three (3) hypotheses guided this study and were tested at 0.05 level of significance. The target population for the study was 3,013 of Senior Secondary School One in Port Harcourt City Local Government Area, Rivers State of Nigeria. However, a sample of 400 SSS1 made up of 172 males and 228 females were used for the study. The sample was drawn from 10 public secondary schools using purposive random sampling technique via balloting. The research instrument used for data collection was Study Habit Assessment Rating Scale (SHARS). It was validated by experts in Psychometric Analysis and Curriculum Studies. It has a reliability coefficient of 0.71. Data collected were analyzed using Mean, Standard Deviation and t-test and Two Way ANOVA. Findings from the showed that there was significant difference in the influence of study habits on performance of students in Mathematics; there were significant influence of good and poor study habits on students performance of male and female students in favour of male students; and gender significantly influence the extent to which study habits influence performance of students in Mathematics. Based on these findings, it was recommended that teaching of study habits should be part of the school curriculum especially at the earlier stage to develop students for better performance in Mathematics; exchange of academic programme like quiz, workshops, seminar and competition between public and private secondary schools in Mathematics should be encouraged.

INTRODUCTION

A strong background in mathematics is crucial for many careers and job opportunities in today's increasingly technological society. No other subject has greater application than mathematics because it is wheel on which science, technology and a nation's economy moves (Rahman and Amoo, 2009). Indeed, there seems to be a growing nexus between
mathematics education as the foundation of science and technology and a nation's ability to become prosperous and economically independent. The vastly increased importance of mathematics in our time makes it more imperative that the modern man knows something about the nature and role of mathematics (Nwoke, 2009).

This underscores the reason for making mathematics compulsory and one of the leading core subjects in the primary and the secondary school curriculum. Mathematics with its logical sequence holds the key to scientific methods. This statement agrees with the view of Ogunkunle (2007) noted that the wide spread utility of mathematics in scientific and technological applications has made mathematics educators a key predictor of scientific competitiveness. Moore, (2005) summarize the centrality of mathematics in human development when he opined that mathematics is the logical language for expressing ideas, shapes, quantities, size, order, change and dynamism in the system and for explaining the complexities of modern society in the business, economic, academic, engineering and medical setting. No wonder the Federal Republic of Nigeria (2004) in the National Policy on Education accorded prominence to mathematics in both primary and secondary schools as it is made compulsory.

Study habits such as learning to listen, note-taking and test-taking enhance cognitive abilities which help the student to perform better in a subject like mathematics. Markson (2002) suggested the use of learning partnerships group discussions and case studies for better performance. The mathematics students should utilize these habits to demonstrate practical competence so as to accomplish a task. Despite the difficulties in problem solving of mathematics, teachers should teach the students study habits to enable them learn better with the right attitude and develop better understanding of the subject. Since study habit has been defined as a consistent pattern of learning behavior, Poiani (2002) noted that raising students’ mathematical abilities required enhancing mathematics performance by cultivating good study habits such as personal development skills of the learners, the process skills and the expression skills.

The picture that emerged in the foregoing section shows the relevance of mathematics in everyday life and as a basic tool for the scientific and technological development of the nation. But despite its utility values, the performances of students in both internal and public examinations are generally very low. Alio (2001) noted that secondary school students achievement in mathematics has be degenerating as years go by at an alarming rate. Furthermore, poor achievement by candidates in the junior and senior school certificate
examinations in mathematics has attracted much public comments and criticism. An equally disturbing phenomenon is the questionable ability of even the few who have passed the subject to cope with the mathematics content of higher institutions that have offered them admissions. Also, Kolawole (2008) found that the forecasting strength of school certificate results in mathematics in predicting college results is low. Thus mathematics results, as claimed on paper, might not be worth the expectations attached to it.

Effective study habits are taught and not acquired, though teachers are trained to teach, they rarely have the knowledge on how to help students learn. When teachers help students acquire good study habits, they can enhance learning and students are very glad to learn. Study habits such as learning to listen, note-taking and test-taking enhance cognitive abilities which help the student to perform better in a subject like mathematics. Every student has his/her own way of studying. Some students prefer to study in a quiet atmosphere alone without any interference, while others prefer studying with peers, discussing and reviewing ideas together. This therefore shows that learning is a matter of personal habits.

The explanation of the poor performance of students on mathematics cannot be based primarily on the inability of the students to comprehend mathematics expression and so mathematical skills must be developed over a period of time as studying mathematics takes effort and time (Louis, 2003).

Increase study time with consistency will spell success, (Fera, 2003).

Efficient use of time is a key to academic survival and success. According to Battles, (2003), the more challenging the material, the more time one should spend on it and studying. This is to say that one needs to do all the class work and home and home work in mathematics for complete understanding as to take much time on studying.

**Purpose of the Study**

The purpose of this study was to determine the extent to which study habit influence performance in Mathematics of among secondary school student.

In specific terms, the study sought to:

1. Determine study habits used by students in studying mathematics.
2. Ascertain the extent to which study habits influence students’ performance in Mathematics.
3. Ascertain how study habits influences male and female students’ performance in Mathematics.
Research Questions
The understated research questions directed the conduct of this research

1. How does study habit influence students’ performance in Mathematics?
2. What is the influence of gender on the performance of students in Mathematics?
3. What influences have study habits on performance of students in Mathematics due to gender?

Hypotheses
The following null hypotheses were tested at 0.05 alpha level.

1. There is no significance difference on the influence of study habits on performance of students in Mathematics.
2. There is no significant difference on the influence of gender on performance of students in mathematics.
3. There is no significant interaction of gender and study habits on performance of students in mathematics.

Method
The researchers design adopted the expost facto research design in conducting this study; with the aim of determining the influence of study habits on performance of students in Mathematics. Three (3) research questions were postulated and answered, while three (3) null hypotheses were tested at 0.05 level of significance.

The target population for the study was 3,013 of senior Secondary School One in Port Harcourt City Local Government Area, Rivers State of Nigeria. However, a sample of 400 SSS1 made up of 172 males and 228 females was used for the study. The sample was drawn from 10 public secondary schools using purposive random sampling technique via balloting. The research instrument used for data collection was Study Habit Assessment Rating Scale (SHARS). It was validated by experts in Psychometric Analysis and Curriculum Studies. It has a reliability coefficient of 0.71. Data collected were analyzed using Mean, Standard Deviation and t-test and Two Way ANOVA.

Results
After data analysis, the results as presented in the tables below were got. These were based on the research questions and hypotheses.

Research Question 1: How does study habit influence students’ performance in Mathematics?
Hypothesis 1: There is no significant influence of study habits on performance of students in Mathematics.

Table 1: t-test analysis of influence of study habits on performance of students in Mathematics

<table>
<thead>
<tr>
<th>Level of Performance</th>
<th>N</th>
<th>X</th>
<th>S.D</th>
<th>Df</th>
<th>Cal t</th>
<th>Crit t</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good Study Habits</td>
<td>200</td>
<td>69.67</td>
<td>13.55</td>
<td>398</td>
<td>29.15</td>
<td>1.96</td>
<td>Rejected</td>
</tr>
<tr>
<td>Poor Study Habit</td>
<td>200</td>
<td>38.04</td>
<td>7.21</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 1 showed that t-calculated value of 29.15 at 0.05 alpha level and df of 398 was greater than the t-critical value of 1.96. The null hypothesis 1 was therefore rejected. This implied that there is significant difference in the influence of study habit on performance of students in Mathematics in favour of good study habits.

Research Question 2: What is the influence of gender on the performance of students in Mathematics?

Hypothesis 2: There is no significant influence of gender on performance of students in Mathematics.

Table 2: t-test analysis of influence of gender on performance of students in Mathematics

<table>
<thead>
<tr>
<th>Level of Perf</th>
<th>Gender</th>
<th>N</th>
<th>X</th>
<th>S.D</th>
<th>Df</th>
<th>Cal t</th>
<th>Crit t</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Perf</td>
<td>Male</td>
<td>70</td>
<td>84.91</td>
<td>8.05</td>
<td>198</td>
<td>20.75</td>
<td>1.96</td>
<td>Rejected</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>130</td>
<td>61.46</td>
<td>7.38</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low Perf</td>
<td>Male</td>
<td>102</td>
<td>42.39</td>
<td>4.52</td>
<td>198</td>
<td>11.05</td>
<td>1.96</td>
<td>Rejected</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>98</td>
<td>38.04</td>
<td>6.68</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 2 indicated that the t-test analysis of influence of male and female students performance on good study habits gave a t-calculated value of 20.97 which is greater than the critical t-value of 1.96 at 0.05 level of significance and df of 198. The null hypothesis 2 in respect of high level of performance by gender is rejected. This implied that there is significance influence of good study habits on students performance of male and female students in favour of male. Further observation of Table 2 showed that the t-test analysis of influence of male and female students performance on poor study habits gave a t-calculated value of 11.05 which is greater than the critical value of 1.96 at 0.05 level of significance and df of 198. The null hypothesis 2 in respect of low performance by gender is rejected. This implied that there is significance influence of poor study habit on students performance of male and female students in favour of male.

Research Question 3: What influences have study habits on performance of students in Mathematics due to gender?

Hypothesis 3: What influences have study habits on performance of students in Mathematics due to gender.
From the Table 3 above, it was observed that F-calculated values for study habits and performance of students was 2616.822 which was significant at .000 level which was less than 0.05 probability level at df of 1. Moreover, gender F-calculated value of 550.885 was also significant at 0.000 level which is greater than 0.05 probability level. This implied that gender significantly influence the extent to which study habits influence performance of students in Mathematics.

**Discussion**

The influence of study habits and performance of students in Mathematics was investigated in this study. Findings indicated that there was a significant difference in the influence of study habits on performance of students in Mathematics in favour of good study habits (see Table 1). This finding corroborated with Aiken (1970) who asserted that there is a significant relationship between study habits and students performance in Mathematics examination. It is also in line with the view of Lock (1981) who posited that a consistent pattern of learning behaviour yields positive results, while poor performance of students in Mathematics cannot be primarily based on the inability of the students to comprehend mathematical expression, rather, the acquisition of good mathematics study habits developed over a period of time.

Findings also showed that there was significant difference of good study habits on students performance of male and female students in favour of male likewise for poor study habits. This implied that gender influence study habits of students in Mathematics. It also implied that the males are more incline to study Mathematics and show interest in the study than female students.
In case of influence of study habits on the performance of students in Mathematics due to gender, it was found that gender significantly influenced the extent to which study habits influence performance of students in mathematics. This findings is in line with Kolawole (2008) who posited that gender influences achievement of students in Mathematics also in favour of males. This implied that gender is a factor to consider in study habits as it relates to performance of students in Mathematics.

Conclusion

From the findings of this study, it was concluded that:

- There was significant difference in the influence of study habits on performance of students in Mathematics
- There were significant influence of good and poor study habits on students performance of male and female students in favour of male students.
- Gender significantly influence the extent to which study habits influence performance of students in Mathematics.

Recommendations

Based on the findings of this study, the following recommendations were made:

1. Teaching of study habits should be part of the school curriculum especially at the earlier stage to develop students for better performance in Mathematics.
2. Exchange of academic programme like quiz, workshops, seminar and competition between public and private secondary schools in Mathematics should be encouraged.
3. Various governments particularly Rivers State Government should on a regular basis organize appropriate workshops, seminars and in-service trainings for serving mathematics teachers on how students can be taught good study habits side by side with the teaching of mathematics.

References