

ECONOMIC HARDSHIP AND STUDENTS' ATTITUDE TOWARD MATHEMATICS LEARNING IN SECONDARY SCHOOLS IN OYO METROPOLIS, OYO STATE, NIGERIA

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Abstract: This study is focused on how economic hardship influences the attitude of students towards mathematics learning in secondary schools Oyo metropolis, Oyo state, Nigeria. The study was carried out among secondary school students. The study adopted a descriptive survey research design in which six hundred and ninety-nine (699) from the population of six thousand five hundred and fifty-five (6,555) SS2 students in 33 public secondary schools in the three Local Government Areas of Oyo metropolis, Oyo State, Nigeria were randomly selected using Slovin's Formula. The instrument used for data collection was a self-structured questionnaire validated by experts. A reliability coefficient of 0.88 was established. The study was driven by three research questions and data collected were analysed using mean and standard deviation. The study revealed that the attitudes students exhibit toward mathematics learning as a result of economic hardship are negative and the extent to which economic hardship influences students' learning in mathematics is very high. Based on the findings it was recommended among others that mathematics teachers should make mathematics classes livelier by making the class activities based.

Keywords: Economic hardship; Students' attitude; Learning; Mathematics

1 INTRODUCTION

The economy is a determinant of the wealth or resources of a country notably in terms of the production and consumption of products and services. In the past decade, Nigeria's economy was seen and ranked as one of Africa faster faster-expanding economies until lately when the economy plunged into recession. The economic situation in Nigeria is very tough which may contribute to unfavourable attitude towards learning especially mathematics. Most pupils cannot afford the basic demands of life which may generate an unsettled mind and this in turn may hamper learning. Economic hardship is considered as the inability to meet fundamental demands of life such as food, shelter, and clothing. According to the Cambridge Business English dictionary [1], economic hardship is said to be trouble caused by having too little money or too few resources. There is an economic recession in Nigeria which impacts all sectors including the educational sector [2]. Christian Association of Nigeria (CAN) published a communique following her National Executive Meeting (NEC) which says the difficult economic circumstances in the country have caused mass poverty and hunger among millions of Nigerians. It also read that, prices of food and basic products are on the increase regularly and that many families can hardly get one meal in a day [3]. In an economic crisis, the economy is dramatically slowed down which is characterized by a reduction in wage rate, scarcity or insufficiency of funds, unemployment and poverty. The aforementioned variables affect students' educational results in terms of school enrollment, attendance, attainment and performance. Most institutions in Nigeria are encountering economic limitations and this slows down the pace of achieving the institution's tasks [4]. Economic difficulties may force some pupils to drop out of school completely. Also, economic adversity influences children's labour actions whether in the household or the labour market. Economic hardship produces a reduction in adult income which makes it harder for parents to fully compensate for the cost of education such as tuition fees, purchasing of educational materials like books, uniforms, private lessons and so on. Many of them depend on their parents for their income and the parents are also going through hard times economically. This may also encourage child labour to supplement the household income. Recently, the cashless policy in the nation has brought tremendous pain to the population in which pupils are included. Some pupils lose concentration in the classroom easily since some of the students trek great distances to school which may lead to tiredness and they may exhibit little enthusiasm in learning. This may warrant the loss of interest in academic activities considering the nature of mathematics as a subject and may expose the student to spending more time in labour or hawking more than studying and this may cause truancy, and lack of concentration in school which may eventually reduce academic performance or drop out of school [5]. The present incidence of economic crisis has caused

enormous hardship on the scholastic accomplishment of kids in mathematics. For example, the provision of infrastructure in the development of education by the government cannot be guaranteed any longer; inadequate laboratory equipment and instructional materials for mathematics precipitated by high cost made effective teaching so difficult in mathematics. Many mathematics classes consequently are not carried out due to the absence or poor instructional resources [6]. Poor funding, according to Aina [7], is another major and key factor militating against mathematics education in Nigeria. The researcher further concluded that the Nigerian government in this moment of economic crisis does not provide appropriate funds to make way for a congenial and enabling atmosphere to support the successful mathematics teaching and learning process. The relationship between the educational system and the national economy cannot be overemphasized. The school system is part of the wider macro-economy so whatever happens in the system will undoubtedly affect the schools. The school system cannot compromise standards and quality based on insufficient funding [6].

The progress of any nation can be sustained if mathematics is employed as a parameter for change. [7] argued that sustainable development may be attained if the economy supports the requirements of people living in a country. Sustainable development is nothing other than the ability of a government to provide a conducive atmosphere that promotes production and design programs that boost economic advancement that alleviates poverty. But in Nigeria reverse is the case our youths are not gainfully employed and the few that are hired loss focused because they were not endowed with mathematical, scientific and technical skills that could enable them to think critically and logically. The benefit of any citizen living in a nation may be realised when the resources of that nation are well explore and utilize to the highest level to reflect the operation of industries with efficient technology.

Mathematics is a pyramid of concepts and information that support and raise economic activities to optimal proportions. It promotes logical reasoning and critical thinking of individuals and enables them to operate effectively in the exploration of country resources that support economic improvement [6]. Mathematics is the backbone of the economy through which government and people decide on how the nation's resources could be efficiently utilized. [1] opined that the economic activities of a nation continually diminish if there is the low income per capita, low productivity and underutilized of workers. Mathematics is the airbag of intellect, a pillar on which each field and source of enlightenment to human critical thinking lies [6]. Mathematics is a cornerstone of science, technology, economy and engineering. It expands philosophical principles that are utilized to solve economic difficulties.

The concept of attitude is often stated as positive or negative feelings and thoughts associated with a given social entity such as individuals, objects, facts or events [8]. Attitude is a state of mental or neurological preparedness both as the foundation and the consequences of conduct as a result of inclinations of emotions, thoughts and feelings owing to previous experiences [8-9]. Attitudes are not directly experienced but can be observed through behaviours. They give direction to human behaviours, they are a phenomenon that can impact decision-making, problem-solving processes and all other interactions. Therefore, the attempt of the student to display the expected behaviours in terms of teaching objectives, as a positive or negative attitude towards learning, is viewed as a predictor of the academic achievement of the student. A student shows sentiments and thoughts in terms of the learning environment and learning processes with appropriate or inappropriate behaviours by the expectations of the environment. He or she prefers to describe ones' self with positive or negative attitudes [8,10-11].

Learning is a function of intelligence, it is the working mind that has transported the primitive human to the modern human, causing change and progress and distinguishing human beings from other living things (Agir, 2019). Learning is a generally enduring change in behaviour arising from learned experience. It is the acquisition of information, knowledge, and abilities. Learning is not restricted to formal education which takes place within the four walls of any school, but it is a continuing process that takes place throughout life [12]. Learning occurs as a result of experience. The learning process begins when you have a new experience, whether that be reading a new term, listening to someone explain an idea, or attempting a new way of solving an issue. Once you have tried a new approach for boiling eggs or an alternative route to work, you may assess whether it works for you and then employ it in the future which shows that learning has taken place. Olson [13] believes that the learning process begins when you have a new experience, whether that is reading a new term, listening to someone explain an idea, or trying a new way of solving a problem. The process of learning is not always the same, learning can happen in a broad range of ways. Access to learning opportunities and elements of the learning environment plays a role in how people learn.

Olson [13] further explains that learning can impact attitudes, knowledge, or behaviour. There is significantly more to learning than "book learning." Yes, you can learn new words, concepts, and facts. But you can also learn how to accomplish things and how to feel about things. It is crucial to remember that learning can involve both helpful and bad behaviours. Learning is a natural and ongoing component of life that takes place consistently, both for better and for worse. Sometimes learning means being more knowledgeable and enjoying a better life. In other circumstances, it entails learning practices that are damaging to health and well-being. This study tends to examine the influence of economic hardship on students' attitudes to the learning of mathematics in Oyo Metropolis, Oyo State, Nigeria.

2 STATEMENT OF THE PROBLEM

The economic hardship faced in Nigeria bears its toll on individuals, families, firms, society and social institutions of the nation. Individuals, firms and the community at large are required to make fundamental changes to cope in the face of economic hardship. However, these economic and lifestyle shifts may have a painful effect on individuals, society and the nation at large. In the face of poverty, young age in the society nationwide could be experiencing considerable difficulties to cater for them. As a result, some youths of secondary school could find it difficult to pay for transportation, be absent from classrooms and have no means of paying for educational materials needed as a result of the hardship facing their parents in the society. The effect of economic hardship on the educational attainment of students has received the attention of numerous academics and experts. Despite various works on hardship and students' attitudes to learning, no research has been specifically carried out on the influence of economic hardship on secondary school students in mathematics. Therefore, this encouraged the researchers to find out how economic hardship influences the attitude of secondary school students towards learning mathematics in Oyo metropolis, Oyo State, Nigeria.

2.1 Purpose of the Study

The main purpose of this study is to find out how economic hardship influences the attitude of students towards learning mathematics in Oyo metropolis, Oyo States, Nigeria. Specifically, it sought to determine;

1. the attitudes students exhibit to learning mathematics as a result of economic hardship.
2. To what extent has students' attitude in economic hardship affected students' learning in mathematics?
3. The probable remedies to economic hardship.

2.2 Research Questions

The following research questions guided the study;

1. What is the attitudes students' exhibit to mathematics as a result of economic hardship?
2. To what extent has students' attitudes in economic hardship affect students' learning in mathematics?
3. What are the probable remedies to economic hardship?

2.3 Methodology

The research design adopted for this study is descriptive research design. This study's population consists of 6,555 SS2 students in 33 public secondary schools in the three local government Areas of Oyo metropolis, Oyo State, Nigeria. These Local Government Areas are Oyo West, Oyo East, and Atiba. The class was taken into consideration because SSS 2 students are not transitioning into senior school like SSS 1 students do, nor are they getting ready for external exams like SSS 3 students do. Compared to the other two classes, they are steadier in the senior class.

A sample of six hundred and ninety-nine (699) senior secondary school II (SSS2) students was selected using the Multistage sampling procedure. At the first stage, the Simple random sampling technique was used to select two schools in each of the local government areas in Oyo. At the second stage, the Simple random sampling technique using Slovin's Formula was also used to select the six hundred and ninety-nine (699) male and female senior secondary school II (SSS2) students in the six schools. Thus in order to maintain the consistency in the selection process and to further ensure true representation of the sample, purposive sampling was used to select two schools in each of the three local government areas that met the following criteria in considering the sample school. The school must;

- Be a public co-education school.
- School with highest population in each local government.
- Have been graduating students for at least ten years.
- Be in good location with high population.

The instrument used to collect data for this study was a self-structured questionnaire constructed by the researchers titled "Economic Hardship and Mathematics Education Questionnaire" (EHMEQ). The questionnaire comprised of two sections, A and B. Section A elicited demographic information such as name of school, age, class, sex etc. Section B consists of the question items which were drafted to elicit response from the respondents in the sampled schools. 4-point likert scaling rating which are Strongly Agree assigned 4, Agree assigned 3, Disagree assigned 2 and Strongly Disagree assigned 1 was used. The instrument for this study was given face and content validity by experts in the field of educational evaluation. The reliability of the instrument was established using Cronbach Alpha. The reliability coefficient of 0.88 was obtained which was adjudged high enough for the study. Copies of the questionnaire were administered to the selected students in the schools. The respondents filled out the questionnaires and returned them. The administered copies were collated. Descriptive statistics was employed to analyze the data generated. Mean and standard deviation were used in result presentation.

3 RESULTS

Research Question 1: What are the attitudes students' exhibit to mathematics as a result of economic hardship?

Table 1 Students' Attitude to Mathematics Learning During Economic Hardship

S/N	Items	Mean	Std. Deviation
1	I can endure economic hardship.	1.58	.963
2	I come late to mathematics class always for lack of transport fare.	2.76	.952
3	I do not pay attention in mathematics class when I do not have money.	1.62	.871
4	I am always aggressive because of economic hardship.	2.82	1.093
5	I do not like relating with anyone because I do not have money.	1.68	.971
6	I do not submit school assignments on time for lack of money and hunger in the school.	2.52	.946
	Weighted Mean	2.16	

The above table 1 reveals a weighted mean of 2.16 out of the maximum obtainable score of 4.00 which is lower than the standard mean of 2.5. This reveals that the attitudes students' exhibit to mathematics learning as a result of economic hardship is negative.

Research Question 2: To what extent has students' attitude in economic hardship affect students' learning in mathematics?

Table 2 Extent of Students' Attitude to Mathematics Learning

S/N	Items	Mean	Std. Deviation
7	I am living with someone not my parent because he or she provides my needs	3.18	.386
8	I have been involved in internet fraud because of economic hardship	3.01	.643
9	I have involved in drug abuse to prevent thinking about lack of money	3.37	.485
10	I have been forced to join bad gang to sponsor my education	3.05	1.067
11	I have involved in illicit sexual activities to get money	3.02	.619
12	I have missed examination before because I did not pay school fees on time	3.19	.394
13	I sleep in class often because of tiredness as a result of long trekking	3.22	.416
14	I cannot read and assimilate when there is little or no money	3.01	.659
15	I have difficulty in getting Mathematics textbooks for my studies	3.11	
	Weighted Mean	3.13	

The above table 2 reveals a weighted mean of 3.13 out of the maximum obtainable score of 4.00 which is higher than the standard mean of 2.5. This implies that extent at which students' attitude in economic hardship affect students' learning in mathematics is very high.

Research Question 3: What are the probable remedies to economic hardship?

Table 3 Remedies to Economic Hardship

S/N	Items	Mean	Std. Deviation
16	The government should put measures in place to improve the economy.	3.62	.651
17	School feeding programmes should be extended to secondary schools.	3.52	.733
18	Mathematics class should be made activities based.	3.58	.402
19	Jobs should be readily available to improve economic status of parents.	3.29	.496
20	Payment of school fees on instalments should be considered.	3.22	.416
	Weighted Mean	3.45	

The above table 3 reveals a weighted mean of 3.45 out of the maximum obtainable score of 4.00 which is higher than the standard mean of 2.5. The result shows that to remediate the influence of economic hardship on students' attitudes to mathematics learning, the government should put measures in place to improve the economy and extend the school feeding programmes to secondary schools as well as mathematics teachers being able to make the class activities based.

4 DISCUSSION OF FINDINGS

Table 1 above shows that the attitudes students' exhibit to mathematics learning as a result of economic stress are negative. Based on the result analysis, it could be determined that an average number of the respondents is expressing one attitude or the other to the study of mathematics as a result of economic difficulty. This agrees with the findings of McAuley, Leskovec, & Jurafsky [11] and Agir [8] who found out that a student may express feelings and thoughts in terms of learning environment and learning processes with suitable or improper behaviours. The research further demonstrated that the amount at which students' attitudes in economic difficulties influence students' learning in mathematics is quite great. It was revealed that the learning progress of a large number of respondents is being impeded in one manner or the other. The findings concurred with Olson [13] who suggested that access to learning opportunities and features of the learning environment play a role in how people learn. Also, Witteveen & Velthorst [14], found out that economic difficulty led to emotions of despair, loneliness and worry which damaged the mental health of so many people. It may be also observed

that the majority of the respondents agreed that there should be solutions to economic hardship. This is in keeping with the results of Aina [7], who found out that the Nigerian government in this moment of economic distress does not provide appropriate funds to create way for favourable and enabling environment so as to support effective teaching and learning process. Also, Awolere, Wahaab and Salau [6] argued that the present occurrence of the economic crisis has imposed terrible suffering on the academic success of pupils in so many areas such as the inadequate supply of infrastructure in the development of education by the government. Some probable remedies were also revealed in table 3 that to remediate the influence of economic hardship on students' attitudes towards mathematics learning, government should put measures in place to improve the economy and extend the school feeding programmes to secondary schools as well as mathematics teachers been able to make the class activities based.

5 CONCLUSION

Economic hardship is taking its toll on the ability of students to learn effectively where mathematics is not an exemption. The fact that some of the students engage in negative attitudes as a result of economic hardship calls for the attention of the stakeholders of education. Considering the importance of mathematics education as a bedrock for all studies to include technology and economic advancement, its learning needs the full concentration of the learners in order for its aim to be achieved.

6 RECOMMENDATIONS

Based on the findings of this study, it was recommended that;

- Mathematics teachers should make mathematics teaching more interesting and attractive to learners
- The government should look into how students will not be badly affected by the economy by extending the feeding programmes and making secondary education free and comprehensive.
- The school authorities should consider payment of school fees in instalments to alleviate economic hardship.

COMPETING INTERESTS

The authors have no relevant financial or non-financial interests to disclose.

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