

IMPACT OF STUDENTS' ACHIEVEMENT IN MATHEMATICS ON SKILLS DEVELOPMENT AMONG NIGERIAN YOUTHS

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Abstract

The role of mathematics in entrepreneurial skills development and job opportunity for self reliance cannot be overemphasized. This paper therefore examined mathematics and its roles in the acquisition and development of entrepreneurial skills among learners. Three research hypotheses were examined and survey research design was adopted for the research. One hundred students were selected from sampled school and questionnaire was validated and reliable was administered on the sample. Also, chi-square was used to analyze the data collected and the result of the findings showed that depth knowledge of mathematics enhances acquisition and development of entrepreneurial skills among others. Then recommendation were made.

Introduction

Most developing nations of the world are plagued with various social economic political and educational problems. These problems include; poverty, unemployment, under-employment, diseases. In addition, Adetayo (2009) pointed out some of the problems to include inflation, political instability, ethnic crises, population explosion. These problems are more prevalent among students and graduates of universities, polytechnics and colleges of education who are mostly youths. The most perturbing of these problems is unemployment.

Unemployment is a global issue which increases everyday. It remains one of the most critical problems facing every nation today, including Nigeria. Uka (2015) stressed that Nigeria as the most populous country in Africa and the second largest economy in the continent is blessed with diverse human and material resources. Yet, unemployment rate among the youths is high. Olatunji (2007) pointed out that after graduation most youths in Nigeria depend mainly on white collar jobs which has now become an illusion and most Nigerian youths are now facing the problem of unemployment. Unemployment is simply a situation where skilled people who are willing and able to work cannot find any work to do. It is a serious problem that has led Nigerian youths into different kinds of criminal activities ranging from armed robbery, oil theft, kidnapping insurgency, militancy to election rigging.

Despite several programmes such as Youth Empowerment Scheme (YES), Youth Enterprise with Innovation (YOU-WIN), Operation Feed the Nation and others, unemployment is still prevalent in our society today. Adetayo (2009) stated that one major cause of unemployment is the belief arising from our present educational system where the products are 'white collar' job seekers, the type inherited from the colonial masters that do not prepare students for the acquisition of skills that could equip them from schools for self-employment.

This has been attributed largely to lack of creativity, innovative skills and mathematical skills. Mathematics has been described as an indispensable tool that opens doors to career opportunities. According to Gigane (2017), mathematics is an integral part of everyone's life and virtually affects every field of human endeavour. Mathematics is a powerful tool for instilling self-reliance. Ogunkunle (2004) opined that mathematics is filled with unending skills and confidence. It has potential of developing skills in the learners that

will enable them contribute meaningfully to the development of the societies in which they live. Notable among these mathematics skills are computation and numeracy manipulation and communicative, and problem solving to man in his day to day activities. Mathematics is therefore a key to development of human capacity building in the private or informal sector. With increasing urbanization and employment in Nigeria, there is proliferation of informal/private sector across country which serves to increase the severity of poverty in poor households by enabling them to meet survival needs rather than inducing saving that can be translated into human capacity building through mathematical skills. It is through this that people will be able to finance their development in terms of acquiring knowledge and mathematics skills that will help them to survive in the society. So mathematics makes students entrepreneurs. An entrepreneur has been defined as a person who makes money by starting or running business, especially when this involves taking financial risks. He or she is a person who is willing to take risks that others could not, an individual who starts and builds successful businesses. According to Mind Tools in Abakpa and Agbo-Egun (2014), successful entrepreneurs have some traits that are common. They are personal characteristics (Abakpa & Agbo-Egwu, 2014). Mathematics equips learners with the skills they needed to interpret and analyse information, simplify and solve problems, assess risks and make informed discussion. According to Chado and Bala (2014), if a learner is exposed enough to mathematical activities requiring manipulative skills, then the learner could grow to become a useful practical and industrious member of his community and hence creative job for himself and others. This implies that mathematical activities take cognizance of physical development which is necessary in technology thereby providing jobs for individuals. It is background that can create wealth and employ others. A good knowledge of mathematics helps to convert human skills and enterprises into material wealth and social amenities. It affords one a comfortable living and simplifies his or her activities. In the words of Thomas Kutty and George (2008), mathematics cannot be considered as classroom discipline only. To explain this, James (2005) asserted that not only an academician, a scientist, engineer need mathematics but also, a shop keeper, a grocer, a housewife, a sport man and an employee need mathematics. In fact, everybody needs mathematics. According to Ajani, Arelu and Adeyemi (2011), mathematics has been discovered to be of great importance interpersonal skills, critical and creative thinking, and practical skills.

Statement of the Problem

Olatunji (2007) pointed out that after graduation most youths in Nigeria depend mainly on white collar jobs which has now become an illusion and most Nigerian youths are now facing the problem of unemployment. But a good knowledge of mathematics helps to convert human skills and enterprises into material wealth and social amenities. Hence, the study shall investigate if the knowledge of mathematics enhances entrepreneurial skills acquisition of the learners.

Purpose of the Study

The main purpose of this study is to determine if the knowledge of mathematics has anything to do with skills development among students in some Colleges of Education in Oyo state. The study sought to find out;

- (i) If the knowledge of mathematics will enhance self reliance.
- (ii) To what extent the skills required mathematics knowledge.

Scope of Study:

The study was carried out in two Colleges of Education in Oyo state, Nigeria.

Research Design

A survey research method was adopted for the study.

Research Population

The population of the study comprises students of FCE(S), Oyo and Emmanuel Alayande College of Education.

Sample and Sampling Technique

One hundred (100) NCE students were randomly selected from the 300 Level mathematics students in the two colleges. Stratified randomly sampling approach/methods was adopted for this research work.

Research Instrument

The major instrument for data collection was the structured questionnaire with items on a 4-point Likert Scale of Strongly Agreed, Agreed, Disagreed and Strongly Disagreed.

Validity of the Instrument

The structured questionnaire was validated. The validity of the instrument was established by experts in the subject.

Reliability of the Instrument: the result of the student’s performances were used to establish the reliability of the instrument using Pearson’s product moment correlation coefficient. The reliability (r) values obtained was 0.55.

Method of Data Collection: The data obtained for this study was analyzed using Chi-Square method of data analysis. Total number of hundred (100) questionnaires were administered to the respondents from the sample population.

Data Presentation (Analysis)

H₀₁: There is no significant difference between the knowledge of mathematics and acquisition of skills among learners.

Table 1

X	Df	X-level	X ² -cal	X ² -tab	Decision
100	4	0.05	67.7876	9.488	rejected

From table 1 above $X^2\text{-cal} (67.7876) > X^2\text{-tab} (9.488)$, this implies that the hypothesis was rejected.

H₀₂: There is no significant difference between the knowledge of mathematics and development of acquisition of skills among learners.

Table 2

X	Df	X-level	X ² -cal	X ² -tab	Decision
100	3	0.05	27.4941	7.815	rejected

Since from table 2 above, $X^2\text{-cal} > X^2\text{-table}$ i.e. $27.4941 > 7.815$, this implies that the hypothesis was rejected.

H₀₃: There is no significant difference between skills acquisition and self reliance.

Table 3

X	Df	X-level	X²-cal	X²-tab	Decision
100	5	0.05	43.93461	11.070	rejected

From table 3, since $X^2\text{-cal} > X^2\text{-tab}$ i.e. $43.93461 > 11.070$, this implies that the hypothesis was rejected.

Discussion of Results

From table 1, since the hypothesis was rejected, it implies that there is significant difference between knowledge of mathematics and acquisition of skills among learners. This implies that the knowledge of mathematics acquired has effect on the acquisition of skills acquired by learners. This results is in line with the submission of Ogunkunle (2004) who opined that mathematics is filled with unending skills and confidence that has potential of developing life-long skills in the learners that will enable them contribute meaningfully to the development of the societies in which they live.

Moreover, in table 2 the hypotheses was rejected which reveals that there is significant difference between the knowledge of mathematics acquired and development of skills. This implies that, mathematics has the potentiality of developing the entrepreneurial skills acquired by learners. This result buttresses the thought of Chado and Bala (2014) that if a learner is exposed to enough mathematical activities requiring manipulative skills, then the learner could grow to become a useful practical and industrious member of his community and hence create job for himself and others.

Furthermore, in table 3, the hypothesis was rejected which implies that skills acquisition births self reliance among learners. This supports the argument of Aguomuo (2015), that entrepreneurial skills acquired by an individual makes him/her operate his/her business.

Conclusion

The study revealed that the knowledge of mathematics is crucial in the development of skills among learners. So, the learners need the knowledge of mathematics to scale through in the acquisition of needed/required skills and thereafter become self reliable and dependent.

Recommendations

Based on the findings of this study, the following recommendations are made;

- (i) The government should incorporate mathematics capable of making the learner useful outside the classroom into the curriculum.
- (ii) Practical mathematics should be encouraged among learners by the teachers.
- (iii) Lessons of mathematics capable of developing logical reasoning should be encouraged among learners.

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