

TEACHERS' PERCEPTIONS OF SECURING NATIONAL GROWTHS THROUGH MATHEMATICS TEACHING IN A DEPRESSED ECONOMY

¹Olaoye, Adetunji Abiola and ²Chukwulobe, Iyore Evelyn

¹Department of Science & Technology Education,
Faculty of Education
Lagos State University, Ojo, Lagos

²Department of Mathematics/Statistics,
School of Science Education,
Federal College of Education (Technical), Akoka, Lagos

Correspondent Author: chukwulobed@yahoo.com

Abstract

The study assessed Teachers' perceptions of Securing National Growth through Mathematics teaching in a depressed economy. The population included all secondary teachers in Lagos State. The sample consisted of 60 selected public secondary schools with 163 Mathematics teachers (79 male and 84 female) in five Local Government Areas of Lagos State. The instrument used for data collection was a questionnaire designed by the researchers. The questionnaire sought the personal information of the respondent in terms of sex and age with a list of twenty items. A Four Likert Scale response option was used with option – Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD). The questionnaire was face-validated by experts in Mathematics Education. Cronbach Alpha method was used to determine the reliability of the instrument and the process returned a reliability coefficient of 0.81. The data were analysed using both descriptive statistics (mean, standard deviation, item analysis and percentages) and inferential statistics (t-test) which was used in testing the hypothesis at a 0.05 level of significance. The findings of this study revealed that government is the most factor accountable for securing national growth as perceived by Mathematics teachers and there was a significant gender difference in the teachers' perception, thus, the hypothesis is accepted.

Keywords: Growths, politics, economy, government, education and religion

Introduction

Mathematics is a science subject that entails intellectual activity in the calculation to discover information about the world. It is one of the core subjects recommended in the National Policy on Education for both primary and secondary education. Mubeen, Saeed, and Arif (2013) stated that “Mathematics education is to a nation what protein is to a young human organism” (p. 38). Given its usefulness in everyday activities, every nation has to focus on a reliable education curriculum that embraces the prosperous growth and development of their national economy. In securing national growth in a depressed economy through mathematics, its teaching and learning mathematics need to be focused and effective. The National Institute of Education (2014) focused on eight basics principles to include:

1. Religion: To recognise the religious values, principles and practices in the community and supports the development of individuals who understand and practice their faith.
2. Identity and Culture: To have an in-depth awareness of the unique culture, and the appreciation of their heritage that promotes the development of a strong national identity and an in-depth understanding of our nation: its history, its present and its future.
3. Human Rights, Democracy and Justice: The National Curriculum upholds human rights, democracy and justice. It strives to provide opportunities for students to explore related values, understand their essence, and experience these concepts through their learning environment.
4. Holistic Development: To promote the holistic development of the child and focuses on enhancing students' spiritual, moral, social, cultural, physical and mental development, and thereby the overall well-being of the individual.
5. Personal Excellence: To empower all students to reach their maximum potential and attain personal excellence and ensures that students are provided with learning experiences that are challenging at the appropriate level, require deep understanding, involve active participation, and sustain their motivation.
6. Inclusivity: To be devoid of discrimination and ensures that all students can learn and achieve through the learning needs of all students are being identified and recognised, personalising the learning to respond to individual needs, aptitudes and talents.
7. Preparation for life: To foster the development of skills in preparation for life and encourages students to be self-reliant, responsible and independent; to be individuals who value work and persevere in their efforts to succeed.
8. Relevance: To offer purposeful learning, encourages students to see the value of what they are learning and ensures that learning is relevant to their present and future lives, by exploring significant contemporary and emerging issues such as technology, sustainability, enterprise and citizenship

These aforementioned principles will not only help the teaching and learning Mathematics to take place but also guide the teachers and learners on the right part to follow. Thus, the need to educate every citizen on some factors accountable for growth and development cannot be underestimated. Several literatures had revealed similar or different factors accountable for securing national growth in a depressed economy (Mes'ed, 2004; Nur, 2010, Mubeen, et.al., 2013). Ishaq, Musa and Abdulhafiz, (2019) identified some insufficient factors in education accountable for securing a nation in a depressed economy. Meanwhile, over the years various types of research had also identified Mathematics as the major tool for improving inadequate-education (Mes'ed, 2004; Nur, 2010 Mubeen, et.al., 2013), In the meantime, the level of national education had been relegated among other priorities which had been established in the literatures. This is also in support of the study conducted by Bashar and Muhammad (2017), which identified unemployment and poverty as products of the poor economy. This further signifies the need for any nation to dwell more on improving the quality of education. Meanwhile, Ekwue, Umukoro, & Olaniyan (2017) identified insecurity and unemployment among others as the two main challenges in particular to securing the national economy of Nigeria.

One can argue less on the position of Ekwue, et. al. as these two factors continue to grow up negatively in our daily activities. In another study by Onifade, Imhonopi, & Urim, (2013), socio-economic, political, religious and educational are identified as factors accountable for securing the national economy. The position of Onifade et. al. was supported by Nwagboso, (2018) that identified unemployment, inequality, poverty, fraudulent electoral process, corruption, skewed federalism, porous nature of Nigeria's borders, sabotage among

political elites, bad governance, religious intolerance, citizen-settler controversies as factors accountable for securing national economy. All these aforementioned factors had been identified for securing nations in a depressed economy with different perceptions of researchers in the literature. These perceptions were then categorised under four factors as deduced which include: Politics (P), Religion (R), Education (E) and Government (G).

Statement of the Problem

The importance of mathematics is so numerous that they are capable to bring about positive change for every nation. Among the important include ameliorating the challenges of any nation towards their growth and development. In supporting this importance, Ezeugwu and Igbo (2014) opined that “Mathematics is a tool for re-branding Nigeria” (p. 63). This is a reflection of what Mathematics is capable of doing which is not reflected in the case of many nations in particular Nigeria's economy. Efforts had been made in the past by various stakeholders to put in place a formidable mechanism that will bring about considerable desire towards growth and development of the national economy as reported by various researchers (A Dambatta, 2013; Nwagbara & Ezekwe, 2020). Hitherto, there is little or no significance (Adigan & Sam-Kayode, 2018; improvements have been made in securing the nation in a depressed economy. Therefore, this study is aimed at teachers' perceptions of securing national through mathematics teaching in a depressed economy.

Purpose of Study

The main purpose of the study is to:

1. Examine teachers' perceptions of securing national through mathematics teaching in a depressed economy.
2. Find out mathematics teachers' perceptions based on gender
3. Determine which among the factors is mostly accountable for securing national growth through mathematics teaching in a depressed economy.

Research Questions

The following research questions guided the study:

1. What is the mean value of teachers' perceptions of securing national growth through mathematics teaching in a depressed economy?
2. What is the mean value of teachers' perceptions of securing national growth through mathematics teaching in a depressed economy based on gender?
3. Which among the factors mostly accountable for securing national growth through mathematics teaching in a depressed economy?

Research Hypothesis

1. There is no significant gender difference in the teachers' perceptions of securing national growth through mathematics teaching in a depressed economy.

Methodology

The research design adopted for this study was a descriptive survey. It provides the researchers with the opportunity to sample the views of teachers' perceptions of securing national growth through mathematics teaching in a depressed economy. The population for the study involves all secondary schools in Lagos State. The sample consisted of 60 selected public secondary schools and 163 (comprising 79 males and 84 females) Mathematics teachers in five Local Government Areas of Lagos State. The instrument used for this study was a questionnaire designed by the researchers to get information on factors accountable for growth and development in securing the national economy. The questionnaire sought the personal

information of the respondent in terms of sex with a list of twenty questions. Four Point Likert Scale was used with options of – Strongly Agree, Agree, Disagree and Strongly Disagree.

The content of the instrument was categorised as factors into Politics (P), Religion (R), Education (E) and Government (G) to distinguish the factor(s) accountable for securing the nation in a depressed economy as perceived by Mathematics teachers. The questionnaire was face-validated by some experts in the field of research. Cronbach Alpha method was used to determine the reliability of the items and a reliability coefficient of 0.81 was obtained. The data collected was analysed in the consideration of the research questions and hypothesis. In analyzing the data, both descriptive statistics (mean, standard deviation, item analysis and percentage bar chart) and inferential statistics. In testing the hypothesis formulated, the t-test analysis was used and it was tested at a 5% level of significance.

Results

Research Question One: what is the mean value of teachers' perceptions of securing national through mathematics teaching in a depressed economy?

To answer this question, responses of the respondents to the questionnaire items were summarized and means and standard deviation in respect of several teachers that agreed and those that disagreed with each item were computed. Table I gives the summary of these results.

Table 1

Mean and Standard Deviation values on teachers' perceptions of securing national through mathematics teaching in a depressed economy.

S/N	Items	Category	Mean	Std Dev.	Remark
1	The national economy can be well managed under an educationist if it receives better through mathematics.	E	2.63	0.98	Agreed
2	The religious preacher will ameliorate national challenges on the economy with the use of Mathematics knowledge.	R	2.67	1.02	Agreed
3	The politics in Nigeria is associated with poor Mathematics knowledge towards the national economy.	P	2.52	0.93	Agreed
4	The Nigerian government is faced with various mayhems which include teaching Mathematics that affects her national economy.	G	2.85	0.97	Agreed
5	Too many political parties without basic knowledge of Mathematics in Nigeria have not influenced the national economy.	P	2.78	1.00	Agreed

6	The religious diversities had negatively influenced Nigeria's economy without basic Mathematics knowledge.	R	2.60	0.95	Agreed
7	The Nigerian government's strengths and weaknesses in their governance of the national economy and teaching of Mathematics.	E	2.76	0.97	Agreed
8	Atrocities being perpetrated under the guise of religion endangers the teaching of Mathematics.	R	2.43	1.01	Disagreed
9	Nigeria's government's inability to develop personal skills negates the national economy through teaching Mathematics.	G	2.81	1.02	Agreed
10	A well-structured education will improve the economy of Nigeria country and teaching of Mathematics.	E	2.61	0.97	Agreed
11	Nigeria's politics adversely affect the national economy without the teaching of Mathematics.	P	2.60	0.95	Agreed
12	The national economy with knowledge of Mathematics is better managed by the current Nigerian government than the previous one.	G	2.67	1.06	Agreed
13	The price for education in Nigeria with little Mathematics knowledge does not help the nation in a depressed economy.	E	2.56	0.96	Agreed
14	The obedience to religious practice with knowledge of Mathematics will not have a meaningful impact on the national economy.	R	2.31	0.93	Disagreed
15	Nigeria's government's leadership style is the most factor accountable for the poor national economy without knowledge of Mathematics.	G	2.63	1.01	Agreed
16	Using mathematical solving problems to activate the economy will increase growth and development.	E	2.53	1.04	Agreed

17	If politics is not rooted in the implementation of policy in Nigeria, the national economy will improve positively through Mathematics knowledge.	P	2.75	0.98	Agreed
18	The considerable practice of religion with maximum devotion to God will enable the national economy through the knowledge of Mathematics.	R	2.75	1.04	Agreed
19	Low youth participation in Nigerian politics contributed to the national economy through teaching Mathematics.	P	2.25	0.89	Disagreed
20	The unemployment status in Nigeria is a major economic factor experienced by the government without basic Mathematics knowledge.	G	2.34	0.95	Disagreed

The results in table I shows that item numbers 8, 14, 19 and 20 responses to which revealed that Mathematics teachers disagreed with the views that; atrocities are being perpetrated under the guise of religious endangerment the and teaching of Mathematics; the obedient of religious practice with knowledge of Mathematics will not have a meaningful impact in the national economy; low youth participation in Nigeria politics contributed to the growths of the national economy through the teaching of Mathematics and the unemployment status in Nigeria is major economy factor experienced by the government without basic Mathematics knowledge. These results indicate that Mathematics teachers disagreed on 20% of political items, 40% of religious items, 0% of education items and 20% of government items.

Research Question Two: What is the mean value of teachers' gender perceptions of securing national through mathematics teaching in a depressed economy?

To answer this question, responses of the respondents to the questionnaire items were summarized and means and standard deviation in respect of male and female teachers that agreed and those that disagreed with each item were computed. Table 2 gives the summary of these results.

Table 2

Mean and Standard Deviation values of teachers' gender perceptions of securing national through mathematics teaching in a depressed economy.

S/N	Items	Cate gory	Gender	Mean	Std. Dev.	Remark
1	The national economy can be well managed under an educationist if it receives better through mathematics.	E	Male	2.62	0.95	Agreed
			Female	2.63	1.02	Agreed
2	The religious preacher will ameliorate national challenges on the economy	R	Male	2.58	0.99	Agreed
			Female	2.75	1.05	Agreed

	with the use of Mathematics knowledge.					
3	The politics in Nigeria is associated with poor Mathematics knowledge towards the national economy.	P	Male	2.87	0.90	Agreed
			Female	2.18	0.82	Disagreed
4	The Nigerian government is faced with various mayhems which include teaching Mathematics that affects her national economy.	G	Male	2.84	1.01	Agreed
			Female	2.86	0.93	Agreed
5	Too many political parties without basic knowledge of Mathematics in Nigeria have not influenced the national economy.	P	Male	2.76	1.02	Agreed
			Female	2.80	0.99	Agreed
6	The religious diversities had negatively influenced Nigeria's economy without basic Mathematics knowledge.	R	Male	2.84	0.97	Agreed
			Female	2.38	0.88	Disagreed
7	The Nigerian government's strengths and weaknesses in their governance of the national economy and teaching of Mathematics.	E	Male	2.70	0.97	Agreed
			Female	2.82	0.97	Agreed
8	Atrocities being perpetrated under the guise of religion endangers the teaching of Mathematics.	R	Male	2.78	1.06	Agreed
			Female	2.10	0.84	Disagreed
9	Nigeria's government's inability to develop personal skills negating the national economy through teaching Mathematics.	G	Male	2.81	0.99	Agreed
			Female	2.81	1.06	Agreed
10	A well-structured education will improve the economy of Nigeria country and teaching of Mathematics.	E	Male	2.27	0.87	Disagreed
			Female	2.94	0.95	Agreed
11	Nigeria's politics adversely affect the national economy without the teaching of Mathematics.	P	Male	2.57	0.93	Agreed
			Female	2.63	0.97	Agreed
12	The national economy with knowledge of Mathematics is better managed by the current Nigerian government than the previous one.	G	Male	2.56	0.94	Agreed
			Female	2.79	1.15	Agreed
13	The price for education in Nigeria with little Mathematics knowledge does not help the nation in a depressed economy.	E	Male	2.25	0.76	Disagreed
			Female	2.86	1.04	Agreed
14	The obedience to religious practice with knowledge of Mathematics will not have a meaningful impact on the national economy.	R	Male	2.09	0.89	Disagreed
			Female	2.52	0.91	Agreed
15	Nigeria's government's leadership style is the most factor accountable for the poor national economy without knowledge of Mathematics.	G	Male	2.61	1.01	Agreed
			Female	2.64	1.01	Agreed

16	Using mathematical solving problems to activate the economy will increase growth and development.	E	Male	2.51	1.00	Agreed
			Female	2.56	1.09	Agreed
17	If politics is not rooted in the implementation of policy in Nigeria, the national economy will improve positively through Mathematics knowledge.	P	Male	2.61	1.02	Agreed
			Female		0.93	Agreed
18	The considerable practice of religion with maximum devotion to God will enable the national economy through the knowledge of Mathematics.	R	Male	2.62	1.03	Agreed
			Female	2.87	1.04	Agreed
19	Low youth participation in Nigerian politics contributed to the national economy through teaching Mathematics.	P	Male	2.16	0.94	Disagreed
			Female	2.33	0.84	Disagreed
20	The unemployment status in Nigeria is a major economic factor experienced by the government without basic Mathematics knowledge.	G	Male	2.56	0.96	Agreed
			Female	2.14	0.89	Disagreed

The results in table II shows that item numbers 10, 13, 14 and 19 responses to which revealed that male Mathematics teachers disagreed with the views that; a well-structured education will improve the economy of Nigeria country and teaching Mathematics; the price for education in Nigeria with little Mathematics knowledge does not help the growths of the nation in a depressed economy; the obedient of religion practice with knowledge of Mathematics will not have a meaningful impact in the national economy and low youth participation in Nigeria politics contributed to the growths of the national economy through the teaching of Mathematics. These results indicate that male Mathematics teachers disagreed on 20% of political items, 20% of religious items, 40% of education items and 0% of government items.

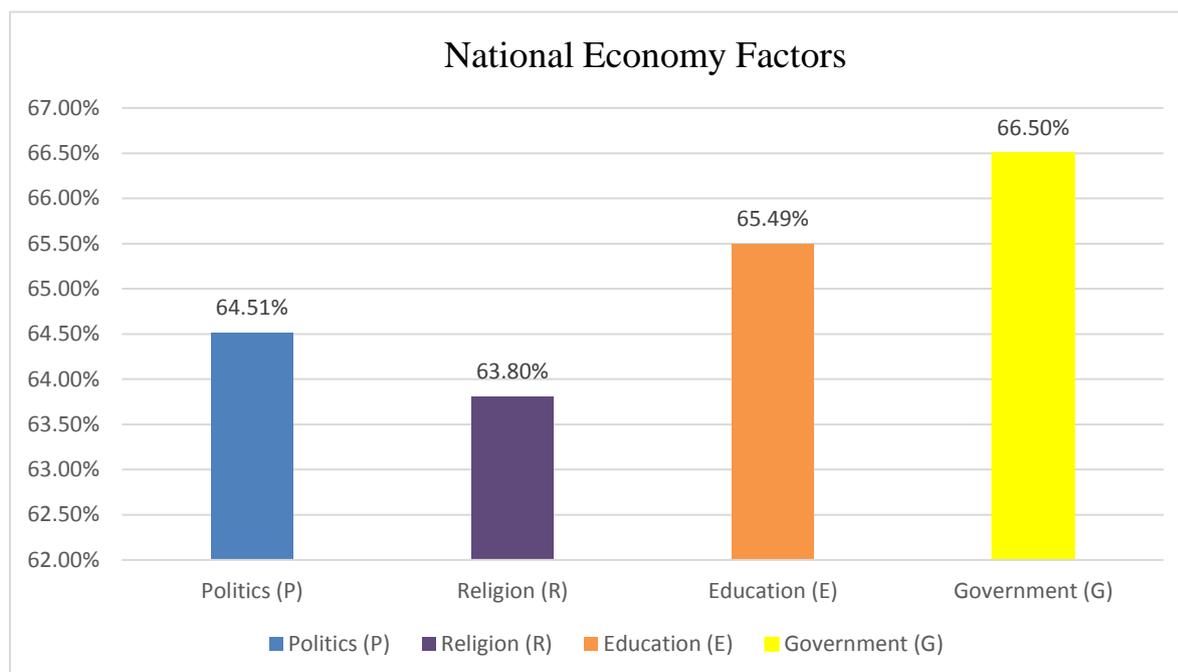
Similarly, the results in table II that items numbers 3, 6, 8, 19 and 20 responses to which revealed that female Mathematics teachers disagreed with the views that; the politics in Nigeria is associated with poor Mathematics knowledge towards the national economy; the religious diversities had negatively influenced the growths of Nigeria economy without basic Mathematics knowledge; atrocities are being perpetrated under the guise of religious endanger the growths and teaching of Mathematics; low youth participation in Nigeria politics contributed to the growths of the national economy through the teaching of Mathematics and the unemployment status in Nigeria is major economy factor experienced by the government without basic Mathematics knowledge. These results indicate that female Mathematics teachers disagreed on 40% of political items, 40% of religious items, 0% of education items and 20% of government items.

Research Question Three: Which among the factors mostly accountable for securing national mathematics teaching in a depressed economy?

To answer this question, responses of the respondents to the questionnaire items were summarized and the percentage concerning security factors is illustrated in the bar chart below. Figure 1 gives the summary of these results

Figure 1

Percentage Bar chart of Categories of factors of securing national growth



The results in the bar chart, Figure I for the national economy factors revealed that Government (G) is most accountable for securing national as perceived by Mathematics teachers with 66.50%, followed by Education (E) factor with 65.49%, while Politics (P) and Religion (R) factors follow with 64.51% and 63.80% respectively. These results indicate that the role of the Nigerian government as well as education factors should be more checked and channelled appropriately to secure National through Mathematics teaching in a depressed economy.

Hypothesis: There is no significant gender difference in the teachers' perceptions of securing national through mathematics teaching in a depressed economy.

To test the hypothesis, the data on the questionnaire was pulled together and subjected to t-test analysis. The result of the t-test is presented in Table 3 below.

Table 3

T-test analysis on the teachers' gender perceptions of securing national through mathematics teaching in a depressed economy

Gender	N	Mean	Std. Deviation	Df	t value	P value	Decision
Male	79	2.58	0.27	161	-1.09	0.25	Not Significant
Female	84	2.63	0.26				

The result of the t-test in table III shows that there is no significant gender difference in the teachers' perceptions of securing national through mathematics teaching in a depressed economy. [$t=1.09$; $p>0.05$]. Therefore, H_{01} is not rejected.

Discussion

The result of the study revealed that all four factors (politics, religion, education and government) are capable of securing the national economy if they are well-managed towards their purpose. Research question one showed that 100% of education items were agreed by all respondents which signified it as the most accurate item for examining the teachers' perceptions of securing national through mathematics teaching in a depressed economy. Research question two showed that 100% of government items were agreed by all male respondents while 100% of education items were agreed by all female respondents which signified them respectively as the most accurate items for examining the teachers' perceptions of securing national through mathematics teaching in a depressed economy. Research question three revealed that the mean value of 66.5% of government items against others signified it as the most factor accountable for securing national as perceived by the teachers.

In supporting this finding, Bashar and Muhammad (2017) argued that unemployment and poverty which are elements of government factor is most accountable for securing national in Nigeria. The findings further show that item 19 from the instrument is outrightly disagreed by both male and female Mathematics teachers. This implies that the statement which read low youth participation in Nigerian politics contributed to the growth and development of the national economy should be expunged from the instrument. The study hypothesis revealed that there is no significant gender difference in the teachers' perceptions of securing national through mathematics teaching in a depressed economy. This implies that gender perspective would have no role to play in securing national in Nigeria as perceived by Mathematics teachers.

Conclusion

In consideration of the instrument items and as it was revealed from the findings of this study, it is noted that:

1. Mathematics teachers mostly disagreed on religious items with 40% when compared with other factors.
2. Male Mathematics teachers mostly disagreed on education items with 40% while female Mathematics teachers mostly disagreed on political items and religious items with 40% each when compared with other factors.
3. Government (G) is mostly accountable factor among others for securing national growth in a depressed economy as perceived by Mathematics teachers with 66.50%,
4. There is no significant gender difference in the teachers' perceptions of securing national through mathematics teaching in a depressed economy.

Recommendations

In consideration of the findings of this research study, the following recommendations were made:

1. The Nigerian government should focus more on education without political bias and concentrate on national through good policy.
2. Sensitization programmes at all levels of education on how to improve national growth in a depressed economy should be organised.

3. Politics with bitterness should not be encouraged at all levels of education rather national growth should be paramount.
4. The mathematics curriculum should accommodate contemporary issues on national in Nigeria.

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