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ANALYSIS OF MATHEMATICS QUESTIONS 'SET' FROM 1988-2008 OF THE WEST AFRICAN SCHOOL CERTIFICATE EXAMINATION

CHAPTER 22

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Abstract

The study was conducted to examine and analyse mathematics questions set from 1988 to 2008 in the West African School Certificate Examination. As a qualitative research study sample to the study consisted of twenty one past questions set by the West African Examination Council for which two research questions were raised. Study highlighted varying trend of the mathematics questions 'set' within 1988-2088 as well as the area of the shortfall of the questions save 2006 where even distribution was relatively maintained. The implications of the findings were discussed along with conclusion and recommendation towards minimizing the students' dismal performance in mathematics in the school system.

Introduction

Line of communication is discernable when two or more people that are involved understand the issues being raised. One of the means of communication is the language which an individual uses to express oneself, but varies from one discipline to the other. Mathematics is one such language that expresses the relationship between development and science, since it constitutes the fundamental basis of science itself; hence it is accorded one of the core subjects in the nation school curriculum. The underline assumption to this lie in the fact that no nation can develop to a level of modern technological advancement without science, and science itself thrives very well when its language is understood. As a prerequisite condition to acclimatize with the rest of the world technologically, Mathematics has occupied sensitive position in the nation curriculum, relatively to other school subjects. No wonder government at different levels place the subject in an esteem position in terms of number of personnel recruited to teach the subject in the primary and secondary levels. To this end one may expect that the learning outcome of these huge expenditures on the subject should be justified, rather the opposite is the result as corroborated by Uwadiae (2009) that 77% of the candidates that took part in the 2008 WASCE failed to get credit in some core subjects, Mathematics inclusive. The worst was recorded in the 2009 National Examination Council, as corroborated by Okpala(2010) that mere 1.8% of the candidates that sat for the examination had credit pass in five ordinary level results, Mathematics inclusive. This among others is a worrisome issue as the expenditure incurred to make the teaching and learning of the subject, compare to other school subjects, seem to be inestimable. Various reasons advanced for the students' dismal performance were quite implicit and explicit but no study has tried to examine the pattern of questions set by the examining body with a view for the nation to overcome this perennial syndrome in Mathematics, which is considered pertinent to the national development. Some of the explicit reasons include the knowledge of the prospective mathematics teachers in handling the subject as one cannot give out what one does not posses. This raises the issue of whether teachers of mathematics themselves understand the

conceptual aspects of the subject as well as the objective of teaching the subject at different level of the nation educational system. On the other hand one is not sure if the public examination bodies that set an achievement test for the students actually take into cognisance all the areas of Mathematics in the nation curriculum. Essentially, there are six broad topics in mathematics no matter the level of educational system of any nation, but the spread of these topics seem to be beclouded by the knowledge of an individual teacher of mathematics. The broad topics include number and numeration, algebraic processes, geometry and mensuration, everyday statistics, trigonometry and probability as shown in table 1 below:

Table1:Classification of Six Broad Topics in Mathematics into Junior and Senior Secondary Schools

S/N	Major Topics	Junior secondary school levels	Senior secondary school levels
1	Numbers & Numeration	Number system, functions, decimal, factorization, proportion and approximation	Indices and logarithms, Exponents, sets theory and progressions.
2	Algebraic processes	Mathematical statements simple equations and inequalities variables	Quadratic equation, simultaneous equation, and inequalities
3	Geometry and Mensuration	Basic properties on 2-dimensional and 3-dimensional shapes, properties of angles, scales and the elementary trigonometry ratios.	Geometrical constructions, basic Euclid theorems, Advanced mensurations in 2 and 3- dimensional shapes
4	Everyday Statistics	Data collection techniques and graphical representation, frequency tables, measures of central tendency (mean, median, mode) for discreteness, elementary ideas of probability	Construction and interpretation of statistical representation: histogram, bar graph and chart, group data analysis measures of central tendency and dispersion in a continuous case, and data interpretation
5	Trigonometry		Further treatment of angles and compound angles, equation involving trigonometry identity.
6	Probability		Experimental and theoretical probability, conditional and discrete cases.

At the primary school levels the objectives of teaching mathematics as stipulated in the National Policy of Education (2006) include:
(i)   Provision of child necessary basics skills in numeracy
(ii)   Making a child to apply these skills to his problem
(iii) Providing child with basic manipulative skills useful in ordinary life
(iv)   Providing child with basic skills in logical thinking

(v)   Introducing child to concepts of spatial relationship
(vi) Introducing child to basic of record keeping and aspects of accounting

Similarly, the Policy highlights the specific objectives which the secondary school mathematics curriculum should attain, and these include:

(i)   Generating interest in Mathematics and providing a solid foundation for everyday living
(ii) Development of computational skills in students
(iii) Fostering the desire and ability of accuracy to a problem at hand
(iv) Development of accurate, logical and abstract thinking
(v)   Development of ability to recognize problems and solve them with related Mathematical knowledge
(vi) Provision of necessary Mathematical background for further education
(vii) Stimulation and encouragement of creativity

Going by the above-stated objectives and the classification of six broad topics in mathematics in table 1 one is not sure if the teachers really understand the relationship between these topics and the objectives of teaching and learning of the subject especially when one observes the rate of students' dismal performance in the subject as shown in a study conducted by Odubunmi(2006) and adapted in table 2 below.

Table 2: Students' Performance in Mathematics from 1991-2004 in the WASCE

Years	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Credit (%)	11.1	21.7	10.9	16.5	16.5	10.0	07.6	11.3	18.3	32.8	36.6	31.6	36.9	34.5
Failure(%)	88.9	78.3	89.1	83.5	83.5	90.0	92.4	88.8	81.8	67.2	63.5	68.4	63.1	65.5

Source: Adaptation of West African Examination Council Annual reports in Odubunmi (2006)

The erroneous belief that mathematics is difficult to understand could be nipped-in-bud if what the public examination body set for the students are in line with what the teachers teach them ahead of the examination. As a result, it is imperative for the mathematics teacher to teach students all sub-topics that would aid the understanding of the main topics which the public examination body examined. The question that bothers one most is the level at which all these topics were evenly represented by the public examination body, knowing fully that too much skewed to one aspect of the topics than others would amount to the dismal performance of students that were not taught such topics in the school. Hence, the need to analyse the mathematics questions 'set' from 1988 to 2008 in one of the public examination bodies in Nigeria to ascertain the extent to which all the six broad topics earlier mentioned, had been adequately touched.

Statement of the Problem

The study was conducted to examine the trend of and analyse mathematics questions set of West African School Certificate Examination with a view to ascertaining the extent to which all the six broad topics in mathematics have been evenly represented, and at the same time achieve the objectives of teaching mathematics as shown in the final evaluation of students via the achievement examination. Meanwhile, the following research questions have been raised for the study

RQ_1: What are the analyses of mathematics questions 'set' of West African School Certificate Examination from 1988 to 2008?

RQ$_2$: What are the short falls of the six broad topics in mathematics from 1988 to 2008 in the West African School Certificate Examination?

Research Design

The study was a qualitative research design that tried to examine the extent to which the West African School Certificate Examination has touched all the six broad topics areas of mathematics from 1988 to 2008. The study's population of questions comprised of all the questions set by the West African Examination Council from its inception to date but sample questions to the study comprised of all the past questions of the West African School Certificate Examination from 1988 to 2008. These were chosen purposely as it encompassed the period where failure rates were reported pronounced even in the local media nationwide, and as corroborated by Uwadiae (2009) that 77% of the candidates that took part in the 2008 WASCE failed to get credit in some core subjects, Mathematics inclusive

Findings and Discussions

RQ$_1$: What are the analyses of mathematics questions set of West African School Certificate Examination from 1988 to 2008?

Questions were set in section (a)-General, section (b)-Commercial and section (c)-Technical but from 1988 to 1998 of the theory aspect of the examination papers twelve questions were set and thirteen questions from 1999 to 2008 as tabulated in tables 3 (a-d)below:

Table 3a: Blue Print of Theory Questions Set in Six Broad Topics of Mathematics from 1988 to 2008

Questions		1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
1	a	x	p	p	p	p	p	q	q	p	p	q	p	p	p	q	q	p	p	P	p	p
	b	-	q	q	-	p	p	p	q	p	p	q	p	p	p	q	q	p	q	P	p	p
	c	-	-	-	-	-	-	-	-	p	p	-	-	q	-	-	-	-	-	-	-	-
2	a	p	x	q	p	q	q	p	q	q	q	p	q	y	p	q	p	q	p	P	q	q
	b	-	x	-	p	q	q	r	q	r	q	p	q	y	q	q	p	q	r	P	p	q
	c	-	x	-	-	-	q	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	a	y	r	r	q	y	y	y	r	x	y	q	r	q	r	q	p	r	p	P	r	x
	b	y	-	r	q	y	-	y	r	x	y	q	r	q	r	q	y	r	r	R	-	x
	c	-	-	-	-	-	-	-	-	x	-	-	-	-	-	-	-	-	-	-	-	-
4	a	x	r	p	z	r	q	p	z	p	x	r	r	r	x	p	r	r	r	Q	y	y
	b	-	r	p	-	r	p	r	y	y	x	r	r	r	x	r	-	y	y	R	y	r
	c	-	-	-	-	-	-	-	-	-	-	-	r	r	x	-	-	-	-	-	-	-
5	a	r	y	y	r	z	z	x	x	r	q	z	q	x	r	z	x	x	x	Q	z	r
	b	r	y	-	-	z	z	x	x	z	q	r	x	x	r	z	x	x	x	Q	z	r
	c	-	-	-	-	-	z	-	-	-	-	-	-	x	-	z	-	-	-	-	z	-
6	a	q	r	r	q	q	p	q	y	p	P	q	x	z	q	p	q	q	q	Z	p	p
	b	q	r	r	q	q	p	p	p	p	z	q	x	q	q	p	r	y	y	Z	q	q
	c	-	-	-	-	q	-	-	p	r	-	q	x	-	q	q	-	q	q	-	-	-
7	a	q	q	x	p	r	r	z	q	q	r	p	r	p	x	p	x	Y	y	R	p	q
	b	-	q	x	p	r	q	z	q	x	r	q	r	p	x	q	x	r	r	R	p	p
	c	-	-	-	-	-	-	-	q	-	-	-	-	-	x	y	x	-	-	-	q	p
8	a	q	r	r	q	r	r	r	y	p	q	q	y	q	q	r	q	r	r	Q	r	x
	b	q	r	r	-	r	r	r	y	r	p	q	q	q	p	q	p	r	r	P	r	x
	c	-	-	-	-	-	-	-	y	-	-	q	q	q	-	-	p	-	-	-	-	x
	a	y	p	z	r	r	q	x	r	q	r	r	y	x	r	r	x	r	r	R	r	r
	b	-	p	z	r	q	q	x	r	q	r	r	y	r	r	r	x	r	r	-	r	y

9	c	-	-	-	-	-	q	x	r	q	-	-	-	-	r	-	x	-	-	-	-	-
10	a	r	z	q	x	x	y	q	y	p	q	y	q	y	z	r	r	y	y	R	q	r
	b	r	z	q	x	x	y	q	y	r	q	y	q	r	p	r	r	p	p	R	r	r
	c	-	-	q	-	-	y	q	-	-	q	-	-	y	-	-	-	-	-	-	-	-
11	a	r	y	q	r	y	x	q	x	y	r	r	r	r	q	y	y	x	x	X	r	r
	b	r	y	q	r	y	x	q	x	z	r	r	r	r	q	y	y	x	x	X	y	r
	c	-	-	-	-	-	-	-	-	-	-	-	r	r	-	-	-	-	-	Z	-	r
12	a	x	q	r	y	x	r	y	z	y	x	x	q	q	y	x	r	p	p	R	p	q
	b	x	q	r	-	x	r	y	z	y	x	x	r	r	y	x	r	r	r	P	r	q
	c	-	-	r	-	x	-	-	z	-	x	x	-	r	y	x	r	r	r	-	-	q
13	a	0	0	0	0	0	0	0	0	0	0	0	y	y	r	q	q	q	q	Y	x	p
	b	0	0	0	0	0	0	0	0	0	0	0	y	r	y	q	q	q	q	Y	x	p
	c	0	0	0	0	0	0	0	0	0	0	0	y	-	-	q	q	q	q	Y	-	-

Keys: p= Numbers & numeration, q = Algebraic processes, r = Geometry & Mensuration, x = Everyday Statistics, y = Trigonometry, z = Probability, 0 = Question not set & - = No available question

Table 3a described the setting s of questions along the six classified topics in Mathematics with varying shortfall in some aspect and others over being set too many. In a situation where the set questions were not covered by the mathematics teachers for the students ahead of the examination, one could imagine the rate of the failures that could be recorded as the cases had been in the past.

Table 3b: Summary of Theory Questions Set in Six Broad Topics of Mathematics from 1988 to 2008

Topics	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
p	01	03	03	05	02	05	04	02	08	05	03	02	04	05	04	05	04	05	07	07	07
q	05	05	07	05	06	06	07	07	05	08	11	08	08	07	12	07	07	06	04	04	07
r	06	07	09	05	07	05	04	05	05	06	07	11	11	08	06	07	10	10	08	08	09
x	04	03	02	02	05	02	05	04	04	05	03	04	04	06	03	08	04	04	02	02	05
y	03	04	01	01	04	04	04	07	04	02	02	06	05	04	03	03	04	04	03	03	02
z		02	02	01	02	03	02	04	02	01	01		01	01	03				03	03	
Total	19	24	24	19	26	25	26	29	28	27	27	31	33	31	31	30	29	29	27	27	30

Keys: p= Numbers & numeration, q = Algebraic processes, r = Geometry & Mensuration, x = Everyday Statistics, y = Trigonometry, z = Probability, () = Question not set & - = No available question

Table 3b described the entire summary of all questions set in the theory aspect of mathematics from 1988 to 2008 but with varying emphasise on the topics in Mathematics covered for each year. Where students had been prepared in one aspect of the topics by the teachers at the detriment of others portend dangers to the academic excellence of the students. The academic excellence of students in Mathematics translates into meaningful

communication of what were taught relatively to what came to be the response of the students in terms of achievement.

RQ$_2$: What are the short falls of the six broad topics in mathematics from 1988 to 2008 in the West African School Certificate Examination?

Table 3c: Blue Print of Objectives Questions Set in Six Broad topics of Mathematics from 1988 to 2008

Questions/	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
1	p	p	p	p	Q	q	p	p	p	p	q	p	p	p	r	p	p	p	p	p	p
2	p	p	p	p	P	p	p	p	p	p	p	q	p	p.	p	x	p	p	p	p	p
3	p	r	p	p	Q	q	p	p	p	q	p	p	p	p	x	x	y	p	p	p	p
4	p	p	p	q	P	p	p	p	p	q	p	p	p	q	q	x	q	p	q	q	p
5	x	r	p	p	P	p	p	p	p	p	p	p	p	q	q	q	p	q	q	p	q
6	x	q	p	p	P	p	p	p	p	p	p	r	p	p	r	q	r	q	r	q	p
7	x	q	p	q	P	p	p	p	p	q	p	p	r	p	p	q	r	y	z	p	p
8	y	q	p	q	P	p	p	p	q	q	q	r	p	p	q	p	z	z	p	p	q
9	r	y	p	q	Q	q	p	q	q	q	q	p	p	p	q	r	q	r	p	q	q
10	y	p	q	p	Q	q	p	q	q	q	q	p	p	p	q	p	y	r	y	q	p
11	y	q	q	p	Q	q	p	q	q	q	q	y	p	p	r	p	r	p	r	q	q
12	p	y	r	q	Q	q	q	q	q	q	q	x	p	q	p	q	q	p	r	q	q
13	y	p	-	q	Q	q	q	q	q	q	q	x	p	q	y	p	r	q	r	p	q
14	y	r	q	r	R	r	q	q	q	r	q	z	y	q	p	r	p	q	q	p	q
15	y	r	q	p	R	r	q	q	q	y	q	r	y	z	q	r	r	z	r	r	q
16	p	y	q	r	R	r	q	q	q	r	q	r	y	z	y	r	q	r	z	r	r
17	q	q	q	p	R	r	q	q	q	r	r	r	y	q	p	q	p	r	r	r	r
18	r	r	r	r	R	r	q	q	q	r	r	r	x	q	r	r	-	y	q	r	r
19	q	q	q	r	R	r	q	q	r	r	x	r	x'	q	r	y	q	r	q	r	r
20	p	q	q	r	R	r	q	q	r	r	x	r	x	q	r	y	q	r	q	r	r
21	z	y	q	r	R	r	q	q	r	r	z	q	z	q	q	r	x	q	r	r	r
22	r	y	q	p	R	r	q	r	r	r	r	q	r	q	q	r	r	q	q	r	r
23	r	r	q	p	R	r	q	r	r	r	q	q	r	q	r	r	q	r	p	r	r

24	p	q	q	y	R	r	q	r	y	r	q	q	r	q	x	z	r	p	p	r	r
25	q	x	r	y	R	p	q	r	r	r	z	q	r	q	x	q	q	p	p	r	r
26	q	x	r	y	R	p	r	r	r	r	r	q	r	y	x	r	q	q	q	x	r
27	p	q	y	y	R	q	r	r	r	q	r	y	r	y	r	p	r	r	r	z	y
28	r	x	r	y	R	y	y	r	r	p	y	y	q	y	z	q	x	x	q	x	y
29	q	x	r	r	Y	y	r	r	r	p	y	r	q	Y	r	q	y	r	q	x	x
30	y	x	r	q	Y	y	r	y	r	-	y	r	q	z	r	q	r	r	q	x	p
31	p	r	r	q	Y	y	r	r	r	p	r	y	q	z	r	p	p	q	p	y	q
32	r	p	r	q	Y	y	r	r	r	r	r	r	q	z	p	P	p	q	r	r	p
33	p	r	r	x	Y	y	r	r	r	r	r	r	q	x	y	r	r	r	r	y	r
34	p	q	r	x	Y	y	r	r	r	r	r	p	q	x	r	r	x	q	p	p	r
35	y	r	r	x	Y	y	r	r	r	p	r	p	q	x	p	q	z	y	r	p	r
36	r	z	r	x	Y	y	r	p	r	r	r	q	q	r	q	q	x	p	p	p	r
	y	r	r	q	Y	x	r	r	r	r	r	r	q	r	q	q	y	r	x	p	r
38	p	r	r	q	X	q	r	r	r	r	r	r	q	r	r	q	r	q	x	q	r
39	r	q	r	q	X	x	r	r	r	y	r	q	q	r	r	q	q	r	q	q	q
40	r	r	y	z	X	x	r	r	y	y	x	q	r	r	r	z	q	x	r	r	q
41	r	p	y	z	X	x	y	r	y	y	x	q	r	r	r	r	q	x	r	q	q
42	r	r	y	r	X	x	y	r	y	y	r	q	r	r	p	r	r	r	q	q	q
43	r	r	y	r	X	x	y	y	y	y	r	z	r	r	y	z	q	y	r	q	q
44	y	y	y	r	X	x	y	r	x	x	r	q	r	r	r	y	r	q	r	q	r
45	q	q	x	r	Z	z	x	y	x	x	r	r	r	r	r	r	r	r	r	q	r
46	x	p	x	r	Z	z	x	x	x	x	r	r	r	r	q	r	r	q	r	q	r
47	x	y	x	r	Z	z	x	x	x	x	r	r	r	r	q	r	q	r	x	r	z
48	z	z	x	r	Z	z	z	x	z	z	r	r	r	r	z	p	p	q	p	r	z
49	z	r	z	r	Z	z	z	z	z	z	r	r	q	r	p	y	z	p	p	r	z

50	q	p	z	r	Z	z	p	z	z	z	r	r	q	r	r	x	y	p	y	r	x

Keys: p= Numbers & numeration, q = Algebraic processes, r = Geometry & Mensuration, x = Everyday Statistics, y = Trigonometry, z = Probability, () = Question not set & - = No available question

Table 3c described the nature of objectives set of the questions along the six broad topics in Mathematics by the examining body from 1988 to 2008, and demonstrated the importance placed on these topics to complement the objective of learning mathematics at the secondary school level. Commendable features of the settings across the years reveal that no aspect of the topics was left out as each of the topics evaluates one thing or the other in students.

Table 3d: Summary of Objectives Questions 'Set' in Six Broad Topics of Mathematics from 1988 to 2008

Topics	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
p	13	09	09	11	06	08	12	09	07	08	06	09	12	09	09	09	08	11	13	12	09
q	07	12	12	11	07	09	14	13	11	10	12	13	14	14	12	14	14	14	13	14	14
r	12	15	16	16	15	11	14	20	20	18	23	20	16	15	19	16	15	16	17	17	20
x	05	05	04	04	07	07	03	03	04	04	04	02	03	03	04	04	04	03	03	04	02
y	10	07	06	05	09	09	05	03	05	06	03	04	04	04	04	04	04	05	04	02	02	02
z	03	02	02	02	06	06	02	02	03	03	02	02	01	05	02	03	03	02	02	01	03
Total	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50

Keys: p= Numbers & numeration, q = Algebraic processes, r = Geometry & Mensuration, x = Everyday Statistics, y = Trigonometry, z = Probability, () = Question not set & - = No available question

Table 3d showed the level of commitment of questions set for each year as 50 objectives questions with varying emphasize on the quantity in each aspect of Mathematics. The immediate observation here lie in the fact that much emphasise were placed on the first three topics in Mathematics than the last three topics when considered the numbers of questions set overall.

Dismal performances of students in mathematics have long been the issues among the stakeholders from time immemorial and as corroborated by Odubunmi (2006) that the rate of failures were quite significant than the success rate; and that bother the present study to examine the trend of questions 'set' by an evaluative agent. Various reasons advanced have not looked into what transpired between the questions 'set' by the West African School Certificate Examination and what mathematics teachers have been teaching in line with the six broad topics in the subject.

By extension evaluation could be described as mechanism used to measure the attainment of the programme/education goal with a view to modify, recycle or terminate the process in order to give a credible judgement. West African school Certificate Examination (WASCE), without doubt, conduct a summative evaluation which is a kind of evaluation that was carried out at the end of a programme in order to assess the extent to which learners have benefited in the exposed package of instruction and to diagnose the difficult

encountered by the learners. As earlier shown in the study conducted by Odubunmi (2006), majority of the students could not be ascertained to have been better off in their future academic pursuits as far as performance in Mathematics is concerned.

Implications

The implication of the findings reveal that the much stated objective of learning Mathematics at the secondary school levels could not be achieved as result of dismal performances of students that could emanate from question set and might not be taught by the teachers for reasons peculiar to each school and teacher concerned. As soon as this is unachievable then the attainment of the nation philosophy of 'self-reliant' remains a dream without actualization. Furthermore, the nation stands the risk of matching up with the rest of the world in the race towards sustainable development as provided in the science and technology for which its language is Mathematics. Many human manpower in the area of science and technology like engineers, scientists, pharmacists and draughtsmanship that were direct product of Mathematics would have been thrown away into unusable elements of the society due to the failure of mathematics, for which error might have come from the questions 'set' and the teachers of mathematics that did not teach the aspect that came out of the examination.

Conclusion

Sequel to the findings above it is pertinent to reiterate the need for the examination body to set questions across all the six broad topics in Mathematics, and not skewed the setting to particular aspect of the entire topics. By this practice equal justice and fair chance would have been given to all students to answer in the examination. Settings in the objectives' aspect seemed to touch almost all the aspects of the identified six topics yet it could not be used as substantive yardstick to determine the level of performance alone since both objectives and theory parts were used to substantiate the academic performance and dexterity of students; hence the need to make sure that each facet of the six broad topics surface at each sub-unit questions to ascertain that justice is done to the subject as a whole.

Recommendations

An adage says that 'knife has already caused a little child havoc before dropping' is the case of perennial poor performance of students in Mathematics with cause(s) from the teachers or the examination 'set'. History of students' dismal performance in Mathematics should not be allowed to repeat itself in future as one of the main objectives of the history is to study the past to consider the present with a view to correct the future. It is hereby recommended that seminar be organized for the Mathematics teachers on the need to touch all the six broad topics in mathematics when preparing students for the examination. Secondly, the examination body should try as much as possible to make sure even distribution of questions 'set' so that if there is any teacher of Mathematics that could not cover the entire topics for the students yet the students would not be at disadvantage to solve the given ones. The implication is students are not sidelined in the process of passing the examination due to the negligence of their teachers or that examination question 'set' do not take cognizance of the level where their teachers taught. By this analysis there is a need for continual and update seminar for the teachers of mathematics towards the final solution to the dismal output of students in mathematics, which has different topics with different philosophical basis of inclusion. Hence, further study is recommended in other core subject in the secondary school system to make the entire system functional.

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