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Transformation and decolonisation of mathematics education for sustainable development: A case study of its learning trend in Nigeria

Abstract

the quest to contextualise education in Africa has been on-going for a while and many countries have been making efforts towards it. During this time of educational review, conscious efforts should be made to identify problematic levels of some subjects that are dreadful to the learners to pave the way for curriculum re-design for context appropriateness. Mathematics learning in African countries has been a source of concern to all educational stakeholders despite several efforts towards its deconstruction. An examination of performance trend in the subject might reveal at what point the learning started declining and this will suggest intervention towards decolonisation of its content. This study measured the academic performance of pupils from preschool level up to the end of primary education (VI class). A descriptive survey research design was adopted and 720 Primary VI pupils were selected through multi-stage sampling technique in a state in Nigeria. Primary School Mathematics Performance Record Sheet (PSM_PRS) was used to collect mathematics scores from preschool through Primary VI class. Data were analysed using descriptive statistics and graphs. Pupils started experiencing major declines in mathematics from Primary III class. Results also indicate no significant difference in the class where male and female pupils' performances started declining. Therefore, there is the need to review and contextualise mathematics content from third year in primary/elementary school for effective learning. Activity-based and exploratory strategies using contextual experiences and resources to deliver mathematics lessons were recommended for third year in primary/elementary schools and beyond.

Keywords: *Basic mathematics; declining performance; decolonised content; mathematics learning; contextualised teaching*

1. Introduction

The clarion call for decolonisation of education in Africa has been ongoing for a while and it is getting louder by the day. While some are calling for decolonisation of entire education systems in Africa (Hogan, 2008), some are calling for decolonisation of certain levels of education (Heleta, 2016; Brodie, 2016) and some are calling for decolonisation or contextualisation of the content of certain school subjects. The content of Mathematics is also affected by this call as

some mathematics educators are of the opinion that contextualisation of mathematics might bring about better learning and applicability (Venkat, Bomie & Graven, 2009; Brodie, 2016). This view about the content and learning of mathematics is not unconnected with the definition given to the subject. Venkat, Bomie and Graven (2009:2) reported that mathematics is now defined as

> *… Mathematics literacy is a subject driven by life-related applications of mathematics. It enables learners to develop the ability and confidence to think numerically and spatially in order to interpret and critically analyse everyday situations and to solve problems.*

Therefore, the efforts to make education in general and mathematics in particular relevant to the immediate society of the learners cannot be considered as being wasteful. But the questions that quickly run through the mind are: can this bring about significant improvement into the learning of mathematics? Can a clear understanding of the trend of performance in mathematics across stages of basic education assist in the decolonisation processes? To start with, how well are learners performing in mathematics across the land of Africa?

Literature from Kenya (Simba *et al.,* 2016), Nigeria (Omenka & Otor, 2015) and South Africa (Hagoramagara, 2015), based on children's reports, reveals that learning of mathematics at preschool stage does not seem to be a problem and the children do not seem to have problems learning the important skills related to mathematics. It was observed that the children's performances in number work at preschool level are as good as their performances in other subject areas. However, the story is not the same after preschool education, not only in these three countries but also across countries in the continent.

2. What we know about mathematics learning in some selected African countries

Studies in Nigeria have shown that the performance of pupils in primary mathematics is below average and that the problem solving skills of the pupils is poor. The two most recent national assessments in primary mathematics in Nigeria were conducted in 2004 and 2009. In the report prepared by the Nigeria Education Sector Analysis (ESA 2004), the national percentage mean scores of primary four and six pupils in numeracy are put at 33.7 and 35.7 respectively. Again, the National Assessment of the Universal Basic Education Programme presented the performance of primary six pupils across the nation in 2009. The results show that only three states out of the thirty-six states and the Federal Capital Territory have scores that are up to average – Jigawa State (mean = 58.26%), Bayelsa State (mean = 55.96%) and Osun State (mean = 54%). Fifteen states have mean scores that are not up to the pass mark (40%). Their scores range from 23.35% for Kano State to 29.23% for Ondo state. The national mean score is 42.87%, which is below average (NAUBEP 2009). Sa'ad, Adamu and Sadiq (2014) reported that performance in mathematics is nothing to write home about as those that pass the subject at credit level in the year 2014 national examinations range between 26% and 32%.

The poor performance in mathematics in South Africa is also shocking (Siyepu 2013). The Annual National Assessment for Grade 9 in the year 2012 reveals that 0.2% of all the learners scored 80% and above; 0.3% scored between 70–79%; 0.6% scored between 60–69%; 1.1% scored between 50–59%; 2.1% scored between 40–49%; 3.8% scored between 30–39% and 91.9% scored less than 30% (McCarthy & Oliphant, 2013). The Department of Education (DoE, 2014) also reported that the average score for Annual National Assessment of mathematics in Grade 4 in the year 2014 is 20%.

In Kenya, Bosire, Mondoh and Barmao (2008) reported that performance in mathematics learning is so poor that only 15% of students who enrolled for mathematics examination scored a D+ grade (30–40%). A 10 year study of performance in mathematics in the Kenya Certificate of Secondary Education Examination between 1999 and 2008 shows that the national mean scores range from 12.23 to 18.73 (Mbugua *et al.,* 2012).

Ngware *et al.*'s (2015) submission will be used to drive the argument in this section home. These scholars submit that African countries' performance in mathematics appears much poorer than elsewhere in the world by citing the instance of those five countries that participated in the International Mathematics and Science competition and were ranked among the last seven of the 45 countries that took part.

3. Mathematics and its benefits

Mathematics is made a core subject in the curriculum of preschool and primary education because of its content that encompasses knowledge, skills and procedures that can be used in a variety of ways such as descriptive, illustration, interpretation and logical reasoning. This is not limited to when the children are young but throughout their lifetime. The qualities and characteristics of mathematics allow it to be regarded as an essential tool for the child in understanding the world around him or her (Omenka & Otor, 2015). Besides the child development role, mathematics knowledge not only plays pivotal roles in science and technological advancement but its several and varied applications are felt in all human endeavours (Inyang, 2005). It is therefore not an overstatement to refer to mathematics as an indispensable element of development.

The status of mathematics as the bedrock for the development of scientific reasoning and the many benefits associated with it must have informed it being made compulsory at all levels of Basic Education in Nigeria (Omenka & Otor, 2015). Preschool education shares in this where the subject is termed *number work* in the majority of the centres. At the preschool level, mathematics learning is fun and it has also been observed by these researchers that the performances of male and female children seem high and impressive. But the story changes at the end of primary education where research findings have shown that generally, performance of pupils in mathematics is below average and male pupils outperform their female counterparts (Paulsen & Dednam, 2016). One then wonders at what point, in terms of age level or class where the performance of pupils in mathematics starts declining. This can then pave the way for an effective pedagogical intervention to improve pupils' performance in the subject, hence this study.

Mathematics education seeks to enable the child to think and communicate quantitatively and spatially, solve problems and recognise situations that require mathematical skills. Otunu-Ogbisi (2009) explains mathematics teaching and learning as the act of imparting and acquiring of skills, knowledge, aptitude, abilities and attitude capable of making the individual functional and productive towards the achievement of the nation's developmental goals. Mathematics as a school subject is taught primarily for the development of thinking skills and reflections on oneself, environmental and societal issues and organising one's experiences for possible solution(s) to problems. On this basis, Odumosu *et al.* (2012) describe mathematics as the carpenter's hammer, tailor's tape, artist's pencil, barber's clipper, hair dresser's comb, journalist's pen, broadcaster's microphone, doctor's stethoscope and lawyer's wig. This is to say that mathematics stands as a tool for solving societal problems. However, for a given

society to make use of mathematics in this way, a good number of the citizenry should not only acquire the skills but also be able to apply the skills to solve day-to-day mathematics-related problems. Because of this, the National Science Foundation (2002) asserts that for students to possess the conceptual understanding of mathematics in different ways, they should know how and when these different mathematical representations could be used for different purposes. Such presentation could enable the students to experience, discover, discuss and reconstruct the socially negotiated nature of mathematics.

Many factors have been pointed to as being behind the poor performance of pupils in mathematics. Galadima (2002) asserts that poor quality instructional technique employed by the teachers is one of the major causes of poor achievement in mathematics. Adeyemo and Adetona (2007) and Amobi (2006) support this positing that non-provision of an activity-oriented and pupil-centred lesson, which could demystify the teaching and learning of the subject, is the main reason for the poor performance. In their own submission, Simeon and Francis (2012) enumerated these other factors as being the problems facing effective mathematics learning: *mathurlurgy* (inability to deal with figures); Mathematics aversion (mathematics students shying away from class) and the absence of mathematics resource materials. None of the research studies that brought about these findings examine at what point of the education pupils start experiencing a decline in their performance in mathematics and what will happen if the content and resources used in teaching mathematics at such a level is contextualised.

The concern of this study is that all the factors pointed out by scholars, as determinant of poor performance of learners in mathematics, have not explained why children at early years do well in mathematics but later, their performance started declining. Seemingly, there is a situation or a given point at which the teaching and learning of mathematics become unfamiliar and complex. For instance, studies by Hagoramagara (2015) in South Africa; Omenka and Otor in Nigeria as well as that of Simba *et al.* (2016) in Kenya indicate not only that learners' performance in mathematics appears to drop as they progress through the grades or various classes to below the acceptable standards in many instances. Therefore, this calls for a research study on the trend of performance in mathematics in order to identify at what point the performance started declining.

If the educational level where pupils experience decline in mathematics performance is known, this will not only call for curriculum review but also reveal what part of the content, resources used to teach and the strategies adopted that seems foreign and which if decolonised will demystify the problem of poor performance. It is against this background that this study examined the trend of academic performance of pupils in mathematics from preschool level to the end of primary education focusing on a state (Oyo State) in Nigeria as a case study.

4. Theoretical background

This study is anchored on maturational theory propounded by Arnold Gesell in the year 1925. Maturational theory states that while the child's social and cultural environments also play a role in their development, these socialising forces are most effective when they are harmonious with the inner maturational timetable (Excell, Linington & Schaik, 2015). To Gesell, the growth of the nervous system largely determines the total development of the child. The nervous system, which consists of the complicated web of nerve fibres, spinal cord and brain, grows

as the chronological age of the child increases. As the age of the child increases, the nervous system grows, the mind develops and their behaviour changes accordingly.

This explains why children learning at higher classes are expected to be more advance than that of the lower classes. It is expected that children's capacity to learn should be growing as the age increases in a normal situation. In this respect, learning of mathematics is expected to be getting better as the child increases in age and class not the other way round.

However, mathematics curriculum is spiral in nature in that what is plan for at a higher class is a bit more complex than the previous class even when the concept is the same. Nevertheless, the complexity is placed in the context of age appropriateness, meaning that what the child can do at a given age is considered in planning the curriculum (Kruger & Wessels, 2015). Not only this, the curriculum is planned such that what is learnt in the lower class forms the prerequisite for what is going to be learnt in the higher class in order to form the spiral nature. Therefore, the child is expected to find the learning easy and able to handle. However, other factors might come into play for the expected behaviour not to happen. The learning generally and learning of mathematics in particular at higher classes might be affected by other factors at one point or the order (Paulsen & Dednam, 2016).

Now that several research studies have shown that learning of Mathematics at higher classes of basic education is getting poorer, it is pertinent to identify at what point the performance in the subject started declining. This should help to focus the transformation and decolonisation activities towards the content of mathematics and resources used in delivering it, which might demystify the problem of mathematics learning.

5. Aim and objectives of the study

The aim of this study is to determine empirically at what class in primary school do pupils' performance in mathematics start declining. Specifically, the objectives of the study are:

1. to determine the trend of pupils' performance in mathematics from preschool class to primary VI
2. to determine the class where pupils' performance in mathematics starts declining
3. to determine if the demographic characteristics of the pupils contribute to the decline in mathematics performance, other than unfamiliar and complexity of the content and teaching.

6. Research questions

Based on the stated problem, the study will be guided by the following questions:

1. How does pupils' mathematics performance change/fluctuate from preschool through to primary school in Oyo State, Nigeria??
2. In which class does pupils' performance in mathematics start declining?
3. What is the average age of the pupils in the class where their performance in mathematics starts declining?
4. Is the class where male pupils' performance starts declining in mathematics different from female pupils?

7. Methodology

The study adopted a descriptive survey research design. The data collected were the academic performance of pupils as measured from preschool level up to primary VI class. Ary, Jacobs and Sorensen (2010) submits that when data already exist and all that was done was to collect it, analyse and describe it, as fit the study at hand, such a study is a survey of the descriptive type. The target population for this study comprised all pupils in Primary VI classes in public, demonstration and private schools in Oyo State. The reason for this choice is that they are in the best position where their performance could be studied from their preschool days. The study adopted a multi-stage sampling technique to select the sample used. The stages of sampling were the educational zones, local government, schools and class. Oyo State is stratified along eight educational zones. Total enumeration technique was adopted to involve all the educational zones in this study. Disproportionate stratified random sampling technique was employed to select one Local Government Areas (LGAs) each from the eight educational zones. This resulted in eight LGAs sampled for the study. Purposive sampling technique was employed to select one each of public, private and demonstration primary school in each of the selected LGAs, which amount to 24 primary schools selected across the state. The criteria for being selected are firstly, the school must have a preschool section that has been functioning for the past seven years; secondly, there must be a good system of record keeping wherein the academic performances of the pupils in current primary VI could be traced as far back as seven years ago when they were in preschool. Simple random sampling technique was used to select an arm (With approximately 30 pupils) of primary VI classes. Any pupil with incomplete performance data from preschool to primary VI is removed and replaced with another with complete data. With this, 720 primary VI pupils selected from 24 schools across Oyo State form the sample of this study. The breakdown shows that 58.4% of the pupils were selected from privately owned schools; 33.3% were from public schools while 8.3% were from demonstration schools. Again, 44.6% of them are female and 55.4% are male pupils.

A performance record sheet titled *Primary Mathematics Performance Record Sheet* (PMP_RS) was designed to collect data for the study. PMP_RS contains two sections – Section A contains information about the school such as school name, class and number of male and female pupils in the class. Section B contains the list of the pupils (admission numbers without names) and is divided into seven sub-sections each for preschool, Primary I to Primary VI. The admission numbers as well as the year the pupils were admitted were clearly written on each subsection. There are three empty columns for the mathematics score (in percentage) for first, second and third term against each child's number. Validation of data collected with this instrument was done by double check with the end of year records given to some selected pupils.

Six research assistants were trained on how to collect data for this study. In each of the sampled school, the research assistants (closely monitored and supervised by the researchers) collected the data on the performance of the pupils in mathematics. A digital camera was also used to snap the score sheet of some classes whenever the teachers had no time to write it out. Data collected were analysed using descriptive statistics of frequency count, percentage, mean and standard deviation. A line graph was also employed to present the trend of performance where necessary. Huck (2012) opines that descriptive statistics is capable enough to summarise data on a single dependent variable such as the pupils' performance in this study.

8. Ethical consideration

Ethical clearance was obtained from the Oyo State Universal Basic Education Board. The approval was attached to consent forms made available to the school head teachers and the parents of the pupils involved in the study. The record sheets snapped with digital camera were blinded so as not to show the names of the pupils.

9. Results

Research Question 1: *How does pupils' mathematics performance change/fluctuate from preschool through to primary school in Oyo State, Nigeria?*

Table 2: Summary of overall mathematics score from preschool to primary six

Class	N	Mean score	Std. D	Yearly mean diff	% of year mean diff	Remark
Pre-Sch.	720	74.655	19.836	-	-	-
Pry_1	720	73.426	19.108	-1.229	-1.65	Decrease
Pry_2	720	71.124	18.668	-2.302	-3.14	Decrease
Pry_3	720	65.491	18.419	-5.633	-7.92	Decrease
Pry_4	720	62.900	16.248	-2.591	-3.96	Decrease
Pry_5	720	63.169	19.630	0.269	0.43	Increase
Pry_6	720	63.319	16.921	0.15	0.24	Increase

Table 1 reveals that preschool children had excellent performance in number work with a mean performance of 74.66% but by the end of primary one, the performance decrease by 1.65% to reduce the mean performance to 73.43%. The performance decreased further by 3.14% at primary two to have the mean performance be 71.12%. The performance experienced a drastic decrease at primary three with 7.92% to have the mean score of 65.49%. It decreased further at primary four by 3.96% to have the mean performance reduced to 62.90%. But at primary five, the performance increase by 0.43% to have the mean performance improved to 63.17% and increased again at primary six by 0.24% to have the mean performance score to 63.32%. Therefore, performance of the pupils kept gradually decreasing up to primary four and experience small increases in primary five and six. Figure 1 shows the trend of mathematics performance in a line graph.

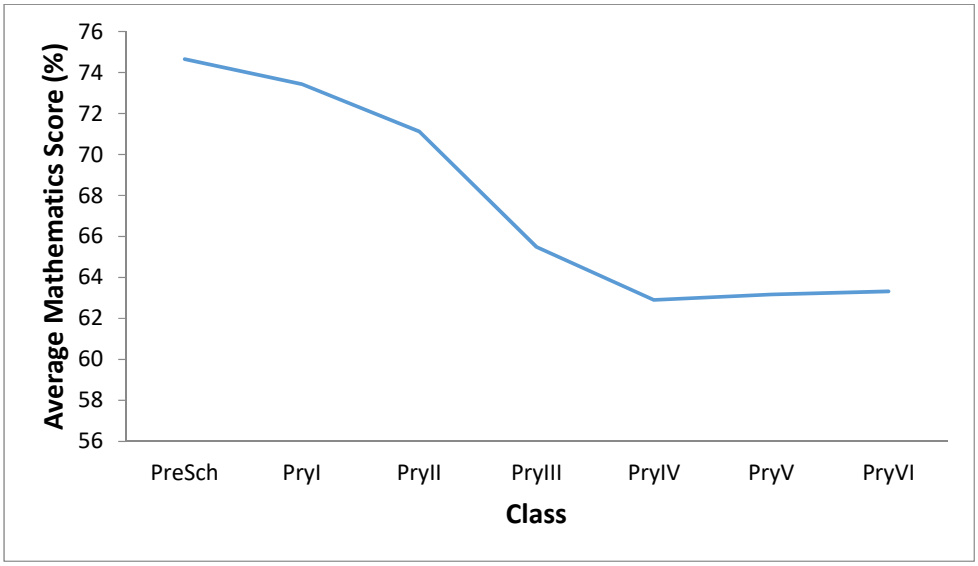

Figure 1: Line graph showing the trend in pupils' performance in mathematics from preschool through primary school

Research Question 2: *In which class does pupils' performance in mathematics start declining?*

Table 2 as well as figure 1 clearly shows that the decline starts from Primary I but at Primary III, a substantial decline happened in pupils' performance in mathematics up to primary IV. However, at Primary V and VI there was a slight increase in the performance of pupils in mathematics.

Research Question 3: *What is the average age of the pupils in the class where their performance in mathematics started declining?*

Table 3: Pupils' ages and classes from preschool to primary six

Variable (Class)	N	Age Cohort (Years)	Ave. Age
Pry_6	720	10 ± 11+	10.57
Pry_5	720	9 ± 10+	9.89
Pry_4	720	8 ± 9+	8.91
Pry_3	720	7 ± 8+	7.86
Pry_2	720	6 ± 7+	6.79
Pry_1	720	5 ± 6+	5.83
Pre-Sch.	720	4 ± 5+	5.25

Table 3 reveals that the pupils completed their preschool at an average age of 5 years old (Average age = 5.25 [5years, 3 months]) and they were 11 years old as at the second term of primary VI (Average age = 10.57 [10years, 7months]). During Primary III when there was a drastic decline in their performance in mathematics, the pupils were approximately 8 years old (Average age = 7.86 [7years, 10months]). This data is presented in a line graph as shown in figure 2. Note that inconsistency in the interval among the years could be explained by the closure of schools because of strike actions during some of the years.

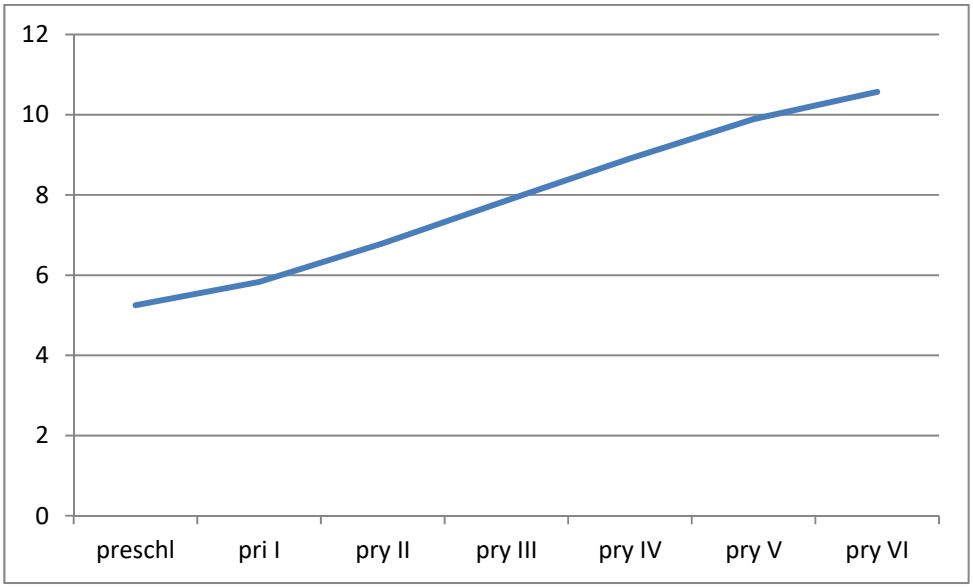

Figure 2: Age of pupils and classes from preschool through primary classes

Research Question 4: *Is the class where male pupils' performance started declining in mathematics different from that of female pupils?*

Table 4a: Mathematics score for female from preschool to primary six

Variable (Class)	N	Mean	Std. Dev	Yearly mean Diff	% Yearly mean Diff	Remark
Pre-School.	321	76.629	17.70401	-	-	-
Pry_1	321	73.042	19.97201	-3.587	-4.68	Decline
Pry_2	321	71.484	18.14877	-1.558	-2.13	Decline
Pry_3	321	66.491	18.62646	-4.993	-6.99	Decline
Pry_4	321	62.983	15.93524	-3.508	-5.28	Decline
Pry_5	321	61.680	23.91724	-1.303	-2.07	Decline
Pry_6	321	62.406	17.14737	0.726	1.18	Increase

Table 4b: Mathematics score for male from preschool to primary six

Variable (Class)	N	Mean	Std Dev	Yearly mean Diff	% Yearly mean Diff	Remark
Pre-school	399	73.252	21.12354	-	-	
Pry_1	399	73.721	18.42209	0.469	0.64	Increase
Pry_2	399	70.852	19.05572	-2.869	-3.89	Decline
Pry_3	399	64.731	18.23302	-6.121	-8.64	Decline
Pry_4	399	62.836	16.49237	-1.895	-2.93	Decline
Pry_5	399	64.263	15.67699	1.427	2.27	Increase
Pry_6	399	64.054	16.71685	-0.209	0.33	Decline

Table 4a reveals that female pupils' performance started declining from primary I with a 4.68% decrease and they experienced a drastic decline at primary III with a 6.99% decrease. The decrease continued until primary VI where a slight increase of 1.18% was experienced.

On the other hand, Table 4b reveals that male pupils experienced a small increase in primary I with 0.64% increase but experienced a drastic decline at primary III with an 8.64% decrease. The performances of male pupils started increasing at primary V with 2.27% and 0.33% at primary VI. It could therefore be inferred that male and female pupils experience a decline in their performance in mathematics at primary III. Figure 3 compares the information using a line graph.

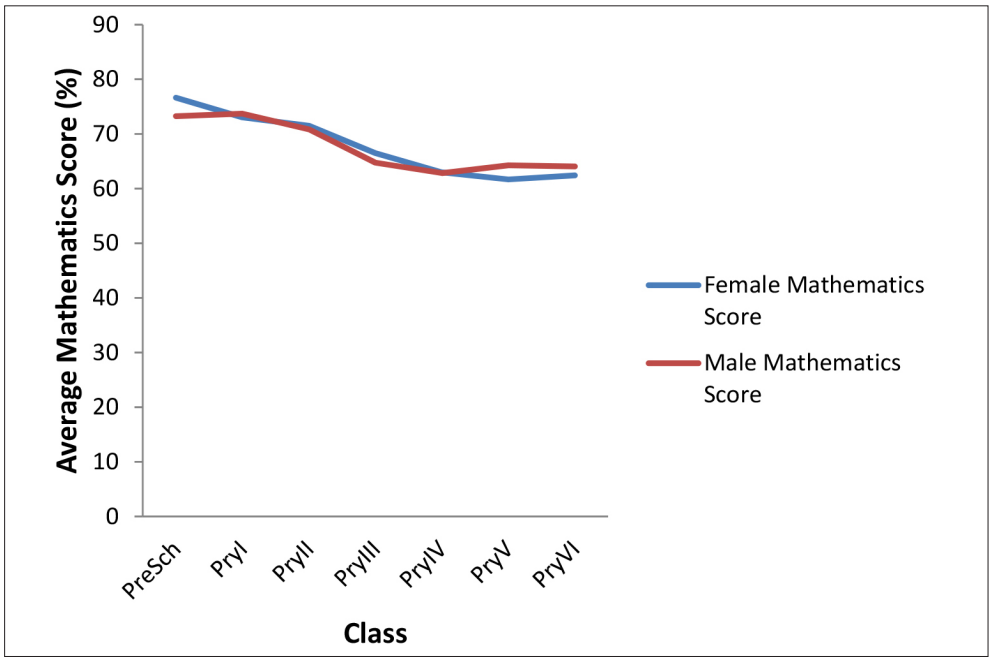

Figure 3: Line graph of classes and male and female pupils' performance in mathematics

Discussion of findings

The first finding of this study revealed that right from primary I, pupils started experiencing a decrease in their performance in mathematics but at primary III, their performance declined drastically and this continued until primary IV when the decrease in the pupils' performance in mathematics maintained a constant declining pattern until primary VI. This could be because of the fact that the methods of teaching mathematics adopted by the teachers at these levels make the content of the subject unfamiliar or abstract and hence complex. Salami (2012) submits that the common method of instruction adopted by primary school mathematics teachers is direct instruction, which is teacher-centred method and that the teacher was not making using instructional resources. Any mathematics concepts taught in such conditions will be too abstract and unfamiliar to the pupils. This is in line with Paulsen and Dednam (2016) who advocate for constructivist strategies for better and effective mathematics learning. At preschool level, a child-centred method of mathematics teaching is enforced with adequate use of familiar instructional resources, especially at private and demonstration schools. The finding is also in line with the finding of Babatunde (2009), Haury (2001) and the National Teachers Institute (2007) that primary school pupils' learning achievement in mathematics and sciences is poor. Kruger and Wessels (2015) and Paulsen and Dednam (2016) explain that the poor achievement in mathematics can be attributed to some teacher's factors such as teachers' knowledge of instruction and classroom practices such as an inability to contextualise the teaching.

The second finding of the study revealed that the decline starts from Primary I but at Primary III, a substantial decline happened in pupils' performance in mathematics up to Primary IV. The major decline experience at primary III could be because of the implementation of the language of instruction policy. The policy allows the primary school teachers to use the language of the immediate environment to teach the pupils up to primary II but at primary III, foreign a language should be introduced (FRN, 2013). If the instructional methods are teacher-centred, no resource is used and at a point, foreign language is introduced, this might have a major influence on the academic performance of the learners. This view is in line with Wessels and Phatudi (2015) who observed that children are emotionally attached to the language and culture of his/her home, therefore any sharp diversity in the language of instruction will negatively affect the performances of the children.

The third finding of this study is that during Primary III when there was a drastic decline in the performance of pupils in mathematics, the pupils were approximately 8 years old. This is also expected because the formal education in Nigeria, according to the National Policy on Education (FRN, 2013), starts at 6 years old, therefore the pupils are expected to be 8 years old at primary III. Although, there is a major factor that affects pupils' age and what class they are in and that is frequent industrial actions by the teachers. What is certain from this finding is that the decline in pupils' performance in mathematics is not because they are underage.

The last finding of the study reveals that male and female pupils experience a drastic decline in their performance in mathematics in primary III class. This might be because of the fact that male and female pupils were exposed to the same condition of instructional methods and language of instruction. Since male and female pupils were taught using a teacher-centred method of instruction without the use of instructional resources and at primary III, they were both taught more in a foreign language, it is then expected that the performance of males and females will have almost the same decline history. However, there is a small difference in the

decline of male pupils in that there was little increase in their performance at primary I, unlike that of female pupils, who declined in performance in the same class. This could be because of the fact that male children have been reported to have better performance in mathematics than their female counterparts (Becker, 2003; Gilbert & Gilbert, 2003; James, 2007). It is noteworthy also that the decline was not influenced by gender of the pupils.

10. Conclusion

From the findings of the study, it was observed that there is a decline in the performance of pupils in mathematics from primary I but the decline is drastic at primary III and this continues until primary IV when the decrease in the pupils' performance in mathematics maintained a constant declining pattern until primary VI. It has also been shown that the decline was not influenced by the age and gender of the pupils. It is therefore concluded that the content of mathematics, methods used to teach it and the resources used are making the subject unfamiliar, unappealing and complex to the pupils as they move up to higher classes. This calls for the decolonisation of mathematics teaching and the resources used at primary school, which happens to be the foundation level, to experience improvement in the pupils' performance. Therefore, all African countries who are striving to decolonise or transform the educational system will need to replicate this study to see if the results are the same. With this, some interventions have to be put in place for mathematics learning at primary/elementary school to improve the pupils' performance. This study is considered timely now when almost all the countries in Africa are thinking about the contextualisation of mathematics learning for effectiveness and applicability.

11. Recommendations

Based on the finding of this study, the following recommendations are proffered in order to bring about improvement in pupils' performance in primary classes:

There should be more research studies across African countries on the performance trend to discover the causes of poor performance of pupils in primary mathematics. The causes might be in the area of methodology, teachers' subject matter knowledge (SMK), complexity of content delivered, methods of evaluating primary school pupils' mathematics skills and so on at a particular class or grade level.

The use of exploratory methods of teaching as well as the utilisation of contextualised instructional resources should be encouraged at primary school classes. Most importantly, all primary III teachers and primary school teachers in general should be re-trained in this aspect.

The mathematics curriculum, textbooks and workbooks should be thoroughly reviewed to make sure that the contents are contextualised. This will eventually remove the complexity in the subject when it is all about the pupils' daily activities and experience.

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