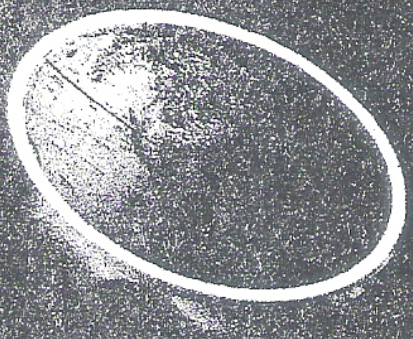

INTERNATIONAL JOURNAL OF CONTEMPORARY ISSUES IN EDUCATION AND PSYCHOLOGY

Volume 1, Issue 3

November, 2009

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Number Classification & Application: Crossroad to solid preparatory foundation in primary Mathematics

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Abstract

The study was carried out to explore the knowledge of classification and application of 'Numbers' among the public primary school pupils with the aim of tracking down the perennial problem that associated with the four basic arithmetic operations in Mathematics. As a qualitative research study, 4 research questions and 3 hypotheses were raised with sample of one thousand, two hundred primary III pupils and their teachers, chosen via a purposive sampling technique. A 40-multiple choice achievement test based on 'Number Classification and Application' and four arithmetic operations was used for the study, having been validated by classroom teachers and subjected to Pearson Correlation formula which gave the coefficient of 0.86. Data were analysed through simple descriptive statistics, matrix correlation, t-test and One-way Anova with findings that there was a significant relationship between pupils' knowledge of number system and their classifications in the primary school Mathematics {df =(4, 1195), f-cal > f-val; P<0.05}, there was significant relationship between pupils' knowledge of number system and addition which constitute one of the four basic arithmetic operations in the primary school Mathematics {(df =(4, 1195), f-cal > f-val; P<0.05}, there was significant relationships between pupils' knowledge of number system and subtractions in the primary school Mathematics {(df =(4, 1195), f-cal > f-val; P<0.05}, there was a significant relationships between pupils' knowledge of number system and

subtractions in the primary school Mathematics {(df =(4, 1195), f-cal > f-val; P<0.05}.The implications of these findings were discussed and recommendations suggested towards building a solid and preparatory foundation in primary Mathematics

Key words: Numbers, Classification-Application, Crossroad, Foundation, Primary-Mathematics

Introduction

Every subject in the school curriculum has its basic and fundamental rules, which prospective learners have to understudy for proper understanding of the subject ahead of its application in life. This is why Bloom (1965) classified educational objectives into domains such as cognitive, affective and psychomotor. Each of these domains is further subdivided into components such like cognitive domain which has knowledge, comprehension, application, analysis, synthesis and evaluation. The direct inference to be drawn from this lies in the fact that every learner needs to have in-depth knowledge of a concept and this could enrich broad comprehension to facilitate the application to the problem at hand. It is the aftermaths of application that analysis of various components of the learnt concept could be demystified and thereby leading to the synthesis that give support to the evaluation or better still the mastery of the entire concept. Mathematics as a crucial subject in the nation curriculum has different components which learners have to understand before proper use to solve the daily problems. One of the components of Mathematics is number as it constitutes vital elements for proper understanding of the subject. There is no gain saying to make learners recite numbers at the detriment of clarifying the groups to which each number belongs. This makes the learner understand why some numbers behave in a certain way as opposed to the others. At an interactive session with some pupils on the concept of 'numbers' by the researcher it was discovered that recitation of numbers has become predominant life style of pupils but the phylum/group to which these numbers belongs is a mystery. At the primary school level, Mathematics is a core subject which makes primary education fulfils the following objectives, namely (i) providing the child with the necessary basic skills in numeracy, (ii)exposing the child to ways of applying these skills to his problems, (iii)providing the child with the basic manipulative skills useful in ordinary life, (iv)providing the child with the basic skills in logical thinking, (v) introducing the child to the basic concepts of spatial

relationship, and (vi)introducing the child to the basic of record keeping and aspect of accounting (NCPE, 1981). These objectives over the years seem to be a mirage when one observes the continual dismal academic turn-out of the pupils in their final examination, especially in Mathematics. This trend over the years have made scholars (Okebukola & Ogunniyi, 1984; Yee, 1990; Decorte, 1992; Gage, 1994; Wharton MacDonald, Pressley & Hampston, 1998; Adamolekun, 2002;, Olowojaiye, 2004 and Adegoke, 2004) to raise alarm as to how well each subject has fair to the nation goal, considering the importance placed on each, and identifying a gross lapses in the way Mathematics has justified the much preference which the government has placed on it. However, there is a need to examine the background knowledge of numbers in Mathematics among the primary school pupils so as to pin down the actual perennial dismal performance, which earlier different studies had acclaimed to have caused by teachers, materials, pupils and subject itself to mention a few.

Theoretical and Conceptual framework on 'Number'

The concept 'Number' was derived from the Latin word 'Numeri', and in fact it was a very conspicuous fourth book of Old Testament that constitutes an opening chapter, which deals with the census or numbering of the Israelites tribes. In Encarta (2005), Number refers to a word or symbol used to designate quantities or entities that behave like quantities. Prior to the modern numeral, ancient civilization had different symbols with which numbers were represented but less emphasises were placed on the system, which showed the way and manner these numbers behaved. The underline assumption then might not be unconnected to the representation and primitive association of symbols to identify the quantities that took too much space, which modern numerals have saved the shortcomings. For instance in the representation of 19 by Roman numeral one observed the acquired space by the symbol 'XVIIII' as compared to the two digit space of the modern numeral. Some of these shortcomings among others might have contributed to the fact that less emphasises were placed on the number classification into groups until mathematicians Cauchy, Riemann, Weierstrass, and Dedekind encountered further difficulties in properties of numbers around 19th century. In the contemporary real numbers refer to both positive and negative numbers with zero inclusive. It is synonymous to natural numbers, counting numbers, integers and the rational though excluding the imaginary numbers. e.g. ....-3,-2, -1, 0, 1, 2, 3....

Another group of numbers is even numbers that comprise of all numbers that are divisible by two without remainder when basic arithmetic operation

is performed on them, and this include 2, 4, 6, 8, 10.... etc. Odd numbers comprise of all numbers that are not divisible by two but other integer other than zero with(out) remainder, and these include 1, 3, 5, 7, 9 etc. Another set of numbers that seem to be similar to the odd number is the prime number though with distinct feature in certain manner. Prime numbers refers to the set of numbers that could only be divisible by one and itself, unlike odd that could not be divisible by two alone. e.g. 2, 3, 5, 7, 11 etc. One should not be confused at seeing 2 in the bottom line on one hand, and the notion that the same number is even on the other hand, yet it constitutes the least number to reckon with in the proper identification of the group system. Also, composite numbers refer to all numbers that have more than two factors after a basic arithmetic operation without remainder, and it comprises of 4, 6, 8, 9, 10, 12 etc. Multiple numbers comprise of all numbers that could accommodate another set of numbers at several divisible level without remainder. e.g. 12= {1, 2, 3, 4, 6}, and this more advanced to some extent for the primary school level in order not to inhibit the free flow of understanding of number system. Other classification of numbers depends on the tradition of such numbers as shown in the basic arithmetic operation performed on any natural numbers earlier discussed. For example the rational numbers refer to set of numbers without the recurrence of decimal point based on the arithmetic operation on them. e.g $\sqrt{9} = \pm 3$. On the other hand, irrational numbers refer to set of numbers that do not give precise value after basic arithmetic operation but recurrence value after the decimal point. e. g $\sqrt{2} = 1.41824182...$

More of these numbers abound in Mathematics which prospective learners ought to have understood their classification in order to facilitate the smooth learning of the subject at the higher level, which depends on foundation. There is no error in making the young ones reciting numbers at the elementary level but equally there is a need to make knowledge acquisition flexible and prepare much ground for future application instead of teaching to pass the examination only. The genesis of much dismal performance of pupils in Mathematics cannot be unconnected to the foundation knowledge acquisition of numbers, which are the fundamental tools in the understanding of the subject. This is more a reason for the conduct of the study among the primary three pupils towards making sure the level to which they have understood the number system, which facilitate their proper application in the subsequent learning of Mathematics could improve academic performance in Mathematics.

Statement of the problem

The study was carried out to explore the knowledge of classification and application of 'numbers' among the public primary school pupils with the aim of tracking down the perennial problem that are associated with the four basic arithmetic operation in Mathematics. In view of that, the study suggested the under-listed research questions and hypotheses to validate the claim.

Research Questions

RQ ,: What are the relationships between pupils' knowledge of number system and four basic arithmetic operations in the primary school Mathematics?

RQ ,: What are the intra-relationships between pupils' knowledge of numbers in the four basic arithmetic operations in the primary school Mathematics?

RQ ,: What are the gender relationships between pupils' knowledge of number system and four basic arithmetic operations in the primary school Mathematics?

RQ ,: What are the gender intra-relationships between pupils' knowledge of numbers in the four basic arithmetic operations in the primary school Mathematics?

Based on the above stated questions, the following hypotheses were generated for the study in order to substantiate the extent of generalization of the findings.

Hypotheses

Ho,: There are no significant relationships between pupils' knowledge of number system and four basic arithmetic operations in the primary school Mathematics

Ho,: There are no significant intra-relationships between pupils' knowledge of numbers in the four basic arithmetic operations in the primary school Mathematics

Ho,: There are no significant gender relationships between pupils' knowledge of number system and four basic arithmetic operations in the primary school Mathematics

Methodology

Research Design

The study was an empirical study which tried to find the pupils' knowledge of number classification and application/manipulation in four arithmetic operations in Mathematics at the public primary schools.

Population

Population to the study comprised of the primary school pupils and the classroom teachers in the public primary schools in Ojo Local Government Area of Lagos State. Specifically, the target population was the primary III pupils and their teachers, as topics under consideration were meant to have been taught at this level of Nigerian Education System.

Sample and Sampling procedures

Sample to the study included one thousand, two hundred primary III pupils and thirty classroom teachers, chosen via a purposive sampling technique on one hand, and for logistic reason couple with these classroom teachers that were willing to take part in the study. Summarily, eighty pupils and two teachers were selected in each school out of which fifteen schools were used in all.

Instruments

An achievement test which made up different classification of numbers was constructed in such away that these numbers were mixed up so that pupils were instructed to identify by separation the natural numbers, even numbers, odd numbers, prime numbers, composite numbers, multiple numbers and the irrational numbers among the series of numbers written for the purpose of clear identification. The instrument made up of 40 items in multiple choice questions.

Validation of Instruments

Sequel to the advice of the classroom teachers in the public primary school outside the study the instrument was first given to the teacher to ensure the content validity of the series of numbers in Mathematics, and the amendments suggested were later incorporated into the ones trial tested within the classroom. The responses of twenty pupils used were further used to fine-tune the last one that were used later on the same set of pupils within couple of week to ascertain that this instrument measured what it was designed to measure.

Reliability of Instruments

Having trial tested the instrument for the second time on the same set of pupils, though not in the whole study, the results of both responses were subjected to simple Pearson correlation formula which gave the coefficient of 0.86, which could be considered significant for the reliability of a good instrument.

Procedures for the administration of instruments

The entire participated classroom teachers had been briefed earlier on the rationale for the conduct of the study a term before the commencement of the administration of the instrument. The reason behind the term briefing was not unconnected with researcher's knowledge of the school that could not just be interrupted on one hand, and the pledge of all the teachers to conduct the test at the same time to the pupils after they might have taught them the topic along with use of the four arithmetic operations on the other hand.

Data scoring and analysis

Scores obtained were scored with correct answer attracted one mark and the wrong attracted zero, while the entire data were descriptively scored via simple statistics like mean and standard deviation, matrix correlation, t-test and One-way ANOVA at 0.05 significant levels.

Findings

RQ ,: What are the relationships of the pupils' knowledge of four basic arithmetic operations in the primary Mathematics and pre-test knowledge of number system?

Table 1: Relationship between pupils' knowledge of four basic arithmetic operations and number system

Knowledge of:	Numbers	Addition(A)	Subtraction(S)	Multiplication(M)	Division(D)
Count	1200	1200	1200	1200	1200
Mean	39.67	55.01	44.60	48.01	44.62
Deviation	17.91	12.11	19.88	13.77	45.03
Correlations	N & N =0.191	N&A=-0.113	N & S =0.174	N & M =0.128	N&D=-0.199
Remarks	Weak	Negative	Weak	Weak	Negative

Table 1 describes the relationship between pupils' knowledge of four basic arithmetic operations in the primary Mathematics and pre-test knowledge of number system with correlation of 0.310, the value that was considered insufficient to understand the classification of numbers and as a pre-condition for their use. As result, the influence of the knowledge of number system did affect the application of addition where there was a negative relationship of -0.113. Also, it was observed that the same knowledge of number system coupled with the subtraction had correlation of 0.174 which was considered to be weak. Furthermore, there was a weak relationship of pupils' knowledge of number system and the multiplication knowledge which was 0.128; and the same number system knowledge had a negative relationship with pupils' multiplication knowledge. In general, it was found

that pupils were familiar with number system but they could not understan their classification, which in turn affects the manipulation in any of the fou elementary operations.

RQ ,: What are the intra-relationships between pupils' knowledge o numbers in the four basic arithmetic operations in the primary schoo Mathematics?

Table 2: Matrix intra-relationship between pupils' knowledge of fou basic arithmetic operations

Knowledge of:	Addition(A)	Subtraction(S)	Multiplication(M)	Division(D)
Addition(A)	1.000*	-0.199	0.093	-0.019
Subtraction(S)	-0.199	1.000*	0.964	0.643
Multiplication(M)	0.093	0.964	1.000*	0.654
Division(D)	-0.019	0.643	0.654	1.000*

***Upper and lower matrices refer to pre-test and post-test coefficient respectively.**

Table 2 showed the relationship within pupils' knowledge of four basi arithmetic operations with upper matrices describing the correlation c pupils' knowledge of the four arithmetic operations while the lower matrice describe the correlation coefficients of the post-test scores in relation to th four arithmetic operations. It was discovered that there was negativ correlation (-0.199) of pre-test additive knowledge of number compared t the knowledge of subtraction of number system. On the other hand it wa found that pupils' pre-knowledge of subtraction had a very stron correlation with that of post-test knowledge of multiplication in numb system, with coefficient of 0.964. Meanwhile, there was a slight abov average correlation between pupils' pre-test knowledge of multiplicatic and division which was found to be 0.654.

The varying trends of these relationships were observed in the post-te knowledge of these arithmetic operations, and these had varying influenc in the mastery of mathematical problems in life since the foundation seem t be porous.

RQ ,: What are the relationships between genders' knowledge of numb system and four basic arithmetic operations in the primary scho Mathematics?

Table 3: Gender relationship between pupils' knowledge of four basic arithmetic operations and number system

Pre-/Post-test	Numbers System(N)	Addition(A)	Subtraction(S)	Multiplication(M)	Division(D)
Numbers System(N)	0.037*	0.014	0.020	0.019	0.048
Addition(A)	0.179	0.174*	0.198	0.093	-0.109
Subtraction(S)	-0.091	0.035	0.128*	0.964	0.643
Multiplication(M)	0.224	0.080	-0.056	0.090*	0.654
Division(D)	-0.068	0.501	0.039	0.089	-0.199*

***Upper and lower matrices refer to male-female and female-male coefficients respectively.**

Table 3 described the pupils' genders knowledge of the four basic arithmetic operations and number system with the upper echelon matrices showing the male-female coefficients and lower matrices referring to the female-male coefficients.

By considering the upper matrices it was observed that there were weak relationships of genders' knowledge of number system (0.037), addition (0.014), subtraction (0.020), multiplication (0.019), and division (0.048). Apart from these, addition-subtraction was 0.198, addition-multiplication was 0.093, but strong relationship of genders' knowledge of subtraction-multiplication which stood at 0.964, subtraction-division was 0.643, multiplication-division was 0.654; and negative relationship of -0.109 for addition-division. The implication of these matrices' relationship showed that genders' influence on the knowledge of numbers and their application cannot be ruled out going by the negative found in the addition-division's genders knowledge.

On the other hand, lower matrices which explained female-male relationships revealed that there were varying degree of relationships among the number system and the four arithmetic operations across genders with weak relationships between number-addition (0.179), subtraction-addition (0.035), multiplication-addition (0.080), division-subtraction (0.039), division-multiplication (0.089) and negative relationship between multiplication-subtraction (-0.056), number system-subtraction (-0.091), number system-division (-0.068) but reverse order of relation between division-subtraction of 0.501 due to improved knowledge.

RQ .: What are the intra-relationships between genders' knowledge of numbers in the four basic arithmetic operations in the primary school Mathematics?

Table 4: Gender relationship between pupils' knowledge of four basic arithmetic operations

Knowledge of :	Addition(A)	Subtraction(S)	Multiplication(M)	Division(D)
Addition(A)	0.174*	0.198	0.019	0.048
Subtraction(S)	0.035	0.128*	0.964	0.643
Multiplication(M)	0.080	-0.056	0.090*	0.654
Division(D)	0.501	0.039	0:089	0.199*

***Upper and lower matrices refer to male-female and female-male coefficients respectively.**

Table 4 described the pupils' genders knowledge of the four basic arithmetic operations and number system with the upper echelon matrices showing the male-female coefficients and lower matrices referring to the female-male coefficients.

By considering the upper matrices it was observed that there were weak relationships of genders' knowledge of addition-subtraction (0.198) addition-multiplication (0.019), addition-division (0.048), but strong relationship of genders' knowledge of subtraction-multiplication (0.964) subtraction-division (0.643), and multiplication-division (0.654). The implication of these matrices' relationship showed that genders' influence on the knowledge of four arithmetic operations and their application cannot be ruled out going by varying coefficients of the pre-test and post-test knowledge cum genders of the pupils.

On the other hand, lower matrices which explained female-male relationships revealed that there were varying degree of relationships among the four arithmetic operations of numbers with weak relationships between subtraction-addition (0.035), multiplication-addition (0.080), division-subtraction (0.039), division-multiplication (0.089) and negative relationship between multiplication-subtraction (-0.056) but reverse order of relation between division-subtraction (0.501). The interpretation of these genders' relationship of the knowledge of the four arithmetic operations was that pupils seemed to be coping with lower level manipulation than the upper ones. For instance it was observed that pupils answered spontaneously the question 5-3 = 2 but when the reverse was set as 3-5 = ?, the response was impossible.

Based on the above stated questions the following hypotheses were generated for the study in order to substantiate the extent of generalization the findings.

Hypotheses

Ho: There are no significant relationships between pupils' knowledge of number system and four basic arithmetic operations in the primary school Mathematics.

Table 5: One way ANOVA on pupils' knowledge of number system and 4 basic arithmetic operations

Variations	Weighted	Sum of Squares	Mean Squares	df	f-cal	f-value	Significant
Btw group	Number System	7463.64	1865.91	4	3.212	2.370	P<0.05*
Within group		694263.79	580.97	1195			
Total		701727.43	-	1199			
Btw group	Additions	2097.49	524.37	4	4.770		P<0.05*
Within group		131370.23	109.93	1195			
Total		133467.72	-	1199			
Btw group	Subtractions	12917.62	3229.41	4	10.966		P<0.05*
Within group		351907.05	294.48	1195			
Total		364824.67	-	1199			
Btw group	Multiplications	3542.56	885.64	4	5.947		P<0.05*
Within group		177976.86	148.93	1195			
Total		181519.42	-	1199			
Btw group	Divisions	18760.55	4690.14	4	2.649		P<0.05*
Within group		2115801.00	1770.54	1195			
Total		2134561.55	-	1199			

* Significance

Table 5 described the academic performance of pupils in the classification of number system and the four arithmetic operations via the use One-Way ANOVA. It was found that though pupils had the knowledge of number system yet the level of their understanding of their classifications was quite inadequate as there was a significant relationship between pupils' knowledge of number system and their classifications in the primary school Mathematics {df =(4, 1195), f-cal > f-val; P<0.05}. Secondly, the finding reveals that even with the knowledge of number system which the pupils had there seemed to be significant relationships between pupils' knowledge of number system and addition which constitute one of the four basic arithmetic operations in the primary school Mathematics {(df =(4, 1195), f-cal > f-val; P<0.05}. Also, it was discovered that there is a significant relationships between pupils' knowledge of number system and subtractions in the primary school Mathematics {(df =(4, 1195), f-cal > f-val; P<0.05}, and the same trend was noticed in the finding of multiplication which showed a significant relationships between pupils' knowledge of number system and subtractions in the primary school Mathematics {(df = (4, 1195), f-cal > f-val; P<0.05}as well as that of Division where it was

found that there is a significant relationships between pupils' knowledge of number system and subtractions in the primary school Mathematics {(df =(4, 1195), f-cal > f-val; P<0.05}. The implication of these findings showed the importance of the knowledge of number system classification on the pupils' performances of the basic arithmetic operations that involved. What this mean is that there is one thing for the pupils to understand the number system but the main thrust is make them get good foundation in their classification so that the subsequent operations of the four arithmetic operations would have got concrete foundation to build on.

Ho: There are no significant intra-relationships between pupils' knowledge of numbers in the four basic arithmetic operations in the primary school Mathematics

Table 6: One way ANOVA on pupils' knowledge of four (4) basic arithmetic operations

Variations	Sum of Squares	Mean Squares	df	f-calculated	f-value	Significant
Btw group	34.68	11.56	3	0.080	2.370	P>0.05
Within group	172389.16	144.14	1196			
Total	172423.84	-	1199			
Btw group	180.06	60.02	3	0.161		P>0.05
Within group	444843.95	371.94	1196			
Total	445023.01	-	1199			
Btw group	84.36	28.12	3	0.149		P>0.05
Within group	225828.03	188.82	1196			
Total	225912.39	-	1199			
Btw group	5506.68	1835.56	3	0.930		P>0.05
Within group	2359890.30	1973.15	1196			
Total	2365396.98	-	1199			

Table 6 described the performance of pupils in the four arithmetic operations via the use One-Way ANOVA. Considering the addition it was found that there was no significant intra-relationships between pupils' knowledge of numbers in the primary school Mathematics {df =(3, 1196), f-cal < f-val; P>0.05}. Secondly, study showed that there was no significant intra-relationships between pupils' knowledge of numbers in the primary school Mathematics, considering the subtraction {df =(3, 1196), f-cal < f-val; P>0.05}, no significant intra-relationships between pupils' knowledge of numbers in the primary school Mathematics, considering the multiplication {df =(3, 1196), f-cal < f-val; P>0.05} and no significant intra-relationships between pupils' knowledge of numbers in the primary school Mathematics,

considering the division {df =(3, 1196), f-cal < f-val; P>0.05}. The implication of these findings showed that the knowledge of four arithmetic operations which pupils had could be based on regurgitation which could not be extrapolated when series of numbers are taken into consideration. Apart from that the study reveals the compartmentalized knowledge of these arithmetic operations within each operation, and that could not be juxtaposition with one another as shown in the earlier finding of table 5 where number system was taken as index.

Ho,: There are no significant gender relationships between pupils' knowledge of number system and four basic arithmetic operations in the primary school Mathematics

Table 7: t-test of pupils' knowledge of number system and four basic arithmetic operations

Variation	Gender	Count	Mean	Deviation	df	t-calculated	t-value	Significant
Number System(N)	Male	640	39.24	18.10	1198	-1.238	□1.960	P>0.05
	Female	560	40.67	17.45				
Additions(A)	Male	640	54.98	11.90		-0.487		P>0.05
	Female	560	55.35	12.50				
Subtractions(S)	Male	640	44.59	20.15		-0.673		P>0.05
	Female	560	45.47	19.40				
Multiplication(M)	Male	640	48.03	13.88		-0.669		P>0.05
	Female	560	48.60	13.37				
Divisions(D)	Male	640	43.55	29.86		-1.672		P>0.05
	Female	560	48.22	67.00				

Table 7 described the genders' performance of pupils in number system and the four arithmetic operations via the t-test. At the classification of number system finding showed that there no significant gender (male and female) relationships between pupils' knowledge of number system(df= 1198, -t cal> -t val; P>0.05), there no significant gender (male and female) relationships between pupils' knowledge of addition (df= 1198, -t cal> -t val; P>0.05), there is no significant gender (male and female) relationships between pupils' knowledge of subtraction (df= 1198, -t cal> -t val; P>0.05), there is no significant gender (male and female) relationships between pupils' knowledge of multiplication (df= 1198, -t cal> -t val; P>0.05), and no significant gender (male and female) relationships between pupils' knowledge of divisions (df= 1198, -t cal> -t val; P>0.05). The main

inference to derive here is that while pupils could solve one problem or tl other in the number system cum four arithmetic operations one cannot s precisely the effect of male or female to have a significant effect on the academic performance neither could one say explicit that female or male d perform better than the other. By further inference, both genders have wea knowledge background in number system and this could account for r significant difference of their performance gender-wise in all arithmet operation tested.

Discussions

Most researches conducted over the dismal performances of pupils ha advanced one reasons or the other to have responsible (Wharto MacDonald, Pressley & Hampston, 1998; Adamolekun, 2002; Olowojaiy 2004 and Adegoke, 2004). The present one is a added evidence that thing have not been well on the part of pupils' knowledge of the number syste which is the foundation to the understanding of the Mathematics as a whol This might be partly due to the nature of upbringing of pupils wi mathematical concepts and application of numbers which teachers tried hide under the guise of 'impossible' when it is possible in practical ter One observed in classroom teaching of a teacher who had solved problem (4-2 = 2) for the pupils only to come up some other time that (2-4 impossible). This early knowledge dissemination goes a long way to mal pupils believe that something could be impossible in some cases Mathematics when the situation demands practical explanation for th pupils to understand.

In another direction of a classroom teacher asking the pupils to count th real number system but incidentally the pupils got stalk at a point only come to answer of 'infinity' when in a real sense it is what they do n understand is what they call 'infinity'. This call for proper orientation on th part of the pupils that nothing like impossible save what one does n understand at present.

Furthermore it would be quite wrong to place too much blame on th threshold of the pupils for not understanding the applications of the fo basic arithmetic operations in a situation where teachers themselv patterned teaching towards passing of a prescribed examination at th expense of knowledge gained and extrapolation. Most of the time pupils a requested to count the number system via the principle of 'regurgitatio without identification are often used on one hand, and at other en knowledge of these number systems are not transferred to solve th

immediate problem within the pupils' environment. This method tends to isolate what the pupils have learnt to a practical situation, and at the same time learn to forget. Much havocs that appear later in life in the classroom setting of Mathematics seemed to have been an accumulated ones from the foundation where knowledge of number system dominates. These were evidence in the pupils' performance of the four basic arithmetic operations that were found to be greatly dismal though worst in the last two operations of multiplication and division.

Implications

There is no longer a contention over the importance of Mathematics in making science and technology a reality as mode of comprehension is applicable. Now that pupils are not good in number system which is domicile in Mathematics the much development in the 21st century might remain a slogan without actualization. This is to say that foundation of Mathematics among the pupils in the present dispensation and as corroborated in the study could not substantiate the much technological development which Mathematics plays pivotal role. Furthermore, the trend if not attended to at this most critical period when virtually all nations worldwide are clamouring for sustainability which is domicile in science and technology, and anchored by Mathematics one should not be surprised to see that Mathematics classrooms would turn to empty spaces with no pupils to learn the subject. Disastrous aspect of the thing is search for the means of livelihood for the teachers who might not find clients to relate with any longer.

Conclusion

Major problem confronting the learning of Mathematics at the primary school level lies in the proper understanding of the various components of the number system and not the basic arithmetic operations involved. This was shown in the findings that not until when pupils get a clear picture of the knowledge of number system they might find their application tougher, since the knowledge precede the application.

Recommendation

Problem in some cases provide lee way for the solution, and the only problem without solution is when a man refuses to address the problem at sight. One of the immediate solutions to the lingering problems of dismal performances of pupils in Mathematics is explore discovery approach of teaching and learning in the classroom. Whatever one discovers by oneself

tends to last longer than what one was informed to take as it was. Apart from that learning of basic things like number system and classification should not be seen as trivial for the pupils as if they would adapt to it in future application by the teachers, instead quite a considerable period should be given to its teaching and learning in the classroom. And in some cases whereby the classroom teachers found it difficult to explain because some trivial issues might confuse an expert, at times, to break down into simple unit to the understanding of the pupils the concerted efforts should be taken among the group of experts on the possible way of demystifying such problems to the pupils, rather than allowing its accumulation that bring about insurmountable negative impact on the learning system, as the case of perennial dismal performance of pupils in Mathematics.

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