GOING BEYOND THE RECOMMENDED PRIMARY SCHOOL CURRICULUM AS DETERMINANT OF STUDENTS' LEARNING OUTCOMES AT THE JUNIOR SECONDARY SCHOOL ONE

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Abstract: *Nigerian educators are concerned about the need to improve learners' academic achievement in core subject areas (mathematics, English language, science, and social studies). Research, however, appears not to have focused on children who attended private primary schools in which other subjects are taught. This gap is what this study sought to examine by looking at how curriculum contents used by public and private primary schools affect learners' performance. The study adopted the survey design. The population comprised of Nigerian children in junior secondary school 1 (JS1) who attended private primary school and those who did not. A total of 34 proprietors from 17 public and 17 private primary schools, and 680 students participated. These students were traced to their new schools. Five research instruments were used. Results revealed that private primary schools in Nigeria expose learners to extra subjects which are not recommended by the government. Significant differences exist in scores of learners exposed to extra subjects: mathematics exposed ($\bar{x}$=75.3154, SD=12.98728) and not exposed ($\bar{x}$=46.1100, SD=18.1); English language ($\bar{x}$=74.11, SD=14.57) and not exposed ($\bar{x}$ =53.15, SD=18.56); integrated science exposed ($\bar{x}$=59.97, SD=15.1) and not exposed ($\bar{x}$=44.51, SD=171); and social studies exposed ($\bar{x}$=64.35, S.D=14.45) and not exposed ($\bar{x}$=56.53, SD=18.03). The implications of these findings to educational practice in Nigeria were discussed.*

Keywords: curriculum, type of school, academic achievement, primary education

Introduction

Educators are relentlessly concerned about the need to improve learners' academic achievement in core subject areas especially in mathematics, English language, science, and social studies in Nigerian educational system. The glut of research on students' academic achievement in these areas is a disposition to this concern (Adegoke, 2005; Okwilagwe & Falaye, 2005). This is not only because a higher achievement in these core subjects lays foundations for technical skills, social orientation, numerical skills, and skills in written and oral communication, which are in short supply, but also because higher achievement is particularly valued in a society which appears to set high premium on academic success as the panacea for entrance into more prestigious occupations. For instance, Obe (1996) reported that the importance of mathematics transcends all definitions and that the prosperity of any country depends on the volume and quality of mathematics offered in its system.

Further, Setidisho (2001) submitted that no other subject forms a strong binding force among various branches of science as mathematics, and without it, knowledge of the sciences often remain superficial. This, however, cannot be achieved if the learner is unable to interpret the materials which are often written in English language. It is maintained that, given the prevalent and ever increasing mutual suspicion of, and linguistic rivalry among the various Nigerian ethno-linguistic groups, English language will continue to assume the utilitarian role which it plays in the acquisition and transmission of knowledge from the upper primary through the tertiary levels of education in Nigeria. It is a well-known fact that success in learning and

teaching of other subjects tend to correlate positively with the mastery of the language (Ohia, 2009). This appears to be why it is recommended that no candidate can proceed to tertiary level without a credit pass in English language.

Exposing people to social studies helps them to cope with the complexities of life which arise primarily from serial confrontations with one's self, other people, social institutions and the environment (Federal Republic of Nigeria [FRN], 2004). The quest by researchers to find ways of improving academic achievement has led to research on a host of school related variables one of which is an ideal curriculum with respect to subjects to be taught at the different levels of education. Curriculum should be the crux of educational change. Curriculum process is the organization and sequences of learning experiences in view of achieving desired learning outcomes. The objective of any curriculum is geared towards inculcating in learners the ability to proffer solutions to societal needs. There should therefore be a link between school curriculum (subjects taught) and real life practices by people in any given society.

Thus, to ensure that the education of children and youth reflects changes in society, the curriculum must be reviewed and developed to meet the societal needs. Defining the quality of curriculum primarily in terms of relevance to societal needs implies that the management of curricula change must have the capacity for continuous responsiveness to changing demands on education. Curriculum change aimed at ensuring relevance of learning processes and outcomes is thus becoming central to the discussion on the nature and role of knowledge. This development supports the idea of curriculum as the "hub of educational change." This view corroborates that of Vitikka, Krokfors, and Hurmerinta (2012) who stated that the change in society and its values will not be able to establish a constant position in schools if they do not permeate the curriculum. Many different views of theories influencing curriculum include those of Kliebard (2004) and Schiro (2007).

In a time of rapid change such as we are, academic programmes must experiment and evolve in order to keep pace with advances in knowledge, changes in professional practices, and shifting conditions in society. The need for malleable, responsive academic curriculum is of particular concern especially in fields of studies where the growth of knowledge is increasing. Education in every academic field as well as emerging fields of study must adapt to accommodate change in students' interests and needs. This accommodation could be achieved through constant review of the curriculum as it becomes increasingly accepted that curriculum change is an on-going process. From the rigid plan and syllabi that define learning content and the relative weight of subjects to be taught, the trend should move towards the development of more flexible curriculum frameworks that allows practitioners to triangulate resources, methods, broader academic coverage, and linkage such that learners may have a better foundation of knowledge.

Conceptually, curriculum should move from an organization of learning around categorized subjects to a more interdisciplinary approach around integrated learning areas. Thus, curriculum planners should jettison rigidly prescribed learning paths and consider greater options in the determination of learning experiences. This change was reiterated by (Alvior, 2015) by stressing that the fundamental purpose of curriculum development should be to ensure that students receive integrated, coherent learning experiences that contribute towards their personal, academic, and professional learning and development.

Omolewa and Sarunmi (2002) asserted that curriculum development can be with or without government involvement at various levels. This position might give credence to individuals or bodies who feel competent to add or remove from the existing curricular document. The problem arising from such practices seem topical, as curriculum has been an issue in development and progress from ancient Hellenistic period to the present age. As education is useful to the society so is curriculum to education. However, it not the case with the Nigerian curricula that appear to be highly centralized and not flexible, making their adaptability and influence very limited. Despite the call for flexibility in curriculum, the Ministry of Education depends exclusively on commissioning content-driven textbooks that teachers are expected to rely on for instructional guidance. Education under this circumstance is involved in a race to cover a predetermined list of facts in time for students to regurgitate them on cheap-to-grade tests that appear stereotyped in most cases.

Perhaps these issues, coupled with the daunting and assiduous task of curriculum review and the demands of an ever-changing human society, have compelled private school owners in Nigeria to resort to self-help on issues regarding curriculum review. They tend not to wait for those charged with the responsibility of curriculum development in Nigeria, like the National Education Research and Development Council (NERDC) which is characteristically slow (Oduolowu, 2004). Thus, it seems that regardless of government's efforts at giving the educational sector the most befitting curriculum, the implementation appears to be all theory and little practice. Schools (especially public schools) in Nigeria are encumbered with a myriad of rules and regulations that govern how they should operate. Frustrated by the government's irregular and inadequate review of curricula, some schools (private schools in most cases) circumvent the restrictions.

However, some private schools in Nigeria implement British and American curricula in their schools thereby leading to either outright introduction of new subjects outside the ones recommended by government or the addition of extra topics to recommended subjects. The result is the teaching of new subjects in such schools outside the ones recommended in government curricula. Basically, relationships tend to exist among the new subjects which can lead to learners' achievement in the related core subjects. The connections are illustrated in Figure 1.

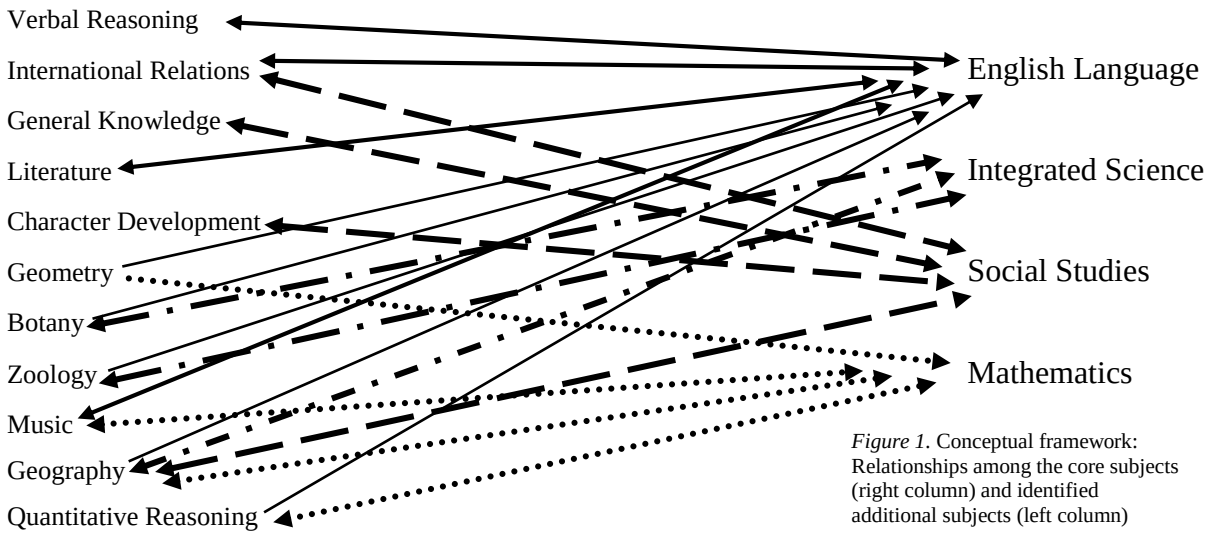

Figure 1. Conceptual framework: Relationships among the core subjects (right column) and identified additional subjects (left column)

Figure 1 reveals that relationships exist among the core subjects and the additional subjects used in some schools. For instance, it shows a link between mathematics and geometry, music, geography, and quantitative reasoning. Another relationship exists among social studies and geography, character development, general knowledge, and international relations. Further, English language studies has relationships in content with literature, music, international relations, verbal reasoning and with all subjects. This may be because the textbooks that are used in these subjects are written in English language. This argument is supported by the constructivist theory.

The constructivists (Baviskar, Hartle, & Whitney, 2009; Piaget, 1967; Sewell, 2002) assume that all knowledge is acquired in relation to prior knowledge. Learners construct knowledge out of experiences. This theory supports the fact that prior experiences encountered by learners could be important in understanding subsequent learning materials, thereby reiterating the interconnectedness of subjects, concepts, ideas, and events. Constructivists believe that there is need to rethink curriculum and classroom experiences so that a link is made about the strong connections between events and objects in the natural world. It stands to reason that practicing teachers who are the interpreters of the curriculum content should be creative enough to understand ways of presenting subject contents so that learners will understand the interconnectedness among subjects and to a wider variety of contents. Ensuring concepts are internalised through the process of accommodation target in an effort to aid mastery and improve learning outcomes.

Constructivists place high premium on meaning making that encompasses epistemology of knowledge building and make provision for heuristic and predictive power of teachers seeking to make rational decisions about curriculum and instruction (Novak, 1993). Teachers should use their wealth of experiences to organise their classroom activities not ignoring their linkages and use methods that will encourage active participation as well as thoughtful reflection by learners. According to Bransford, Brown, and Cocking (2001), teachers should assume the roles of facilitators as well as that of teachers.

Purpose

The impact or effect of the added subjects through the self-induced changes in the standard curriculum is worth investigation to determine their power to predict learning outcomes. Specifically, the researcher sought answers to the following questions:

1. How conversant are school heads with subjects recommended for study in primary schools by the government in Nigeria?
2. What are the extra subjects offered in primary schools outside those recommended by the government?
3. Are there any significant differences in the mean scores in the core subjects tested (integrated science, social studies, mathematics and English language) for those who were exposed to extra subjects and for those who were not?

Methodology

Sampling Technique and Sample

The study adopted the survey design (Kerlinger & Lee, 2000). The population comprised of Nigerian children in junior secondary school 1 (JSS1) who attended private primary school and those who did not. Purposive sampling was used to select 680 students from 34 junior secondary schools and 34 proprietors/head-teachers (17 from private schools and 17 from public primary schools). All the students used were exposed to relatively homogeneous

Nigerian primary school curriculum on the subject areas tested. However, those from private schools were exposed additional curriculum contents which were outside the ones recommended. From the primary schools selected, lists of names of the pupils who graduated from these schools and the secondary schools where they were posted were collected. The students (M=11.37 years of age, SD=2.9) had completed 6.2 (SD=2.1) years of schooling in primary school (public, private) respectively. The selected students were traced to their new schools. In each school 20 junior secondary one students whose names were listed were selected. Because participants' demographic and school variables were unrelated (type of school, public/private; teacher qualification, only children taught by teachers who hold Nigerian National Certificate in Education (NCE); and the students graduated from primary school the same year), they were not considered in the analyses. In all, 34 proprietors from 34 schools and 680 students (20 students from each school) participated in the study.

Instrumentation

Five research instruments developed by the researcher were used to collect data for the study. The instruments include

1. Integrated Science Achievement Test (ISAT)
2. Social Studies Achievement Test (SSAT)
3. English Language Achievement Test (ELAT)
4. Mathematics Achievement Test (MAT)
5. Head-Teacher/Proprietors Questionnaire (HPQ)

ISAT, SSAT, ELAT, and MAT

The ISAT, SSAT, ELAT, and MAT were developed by the researcher. The instruments were designed to measure student achievement in social studies, integrated science, English language, and mathematics. Each instrument contains 20 multiple choice test items with four options, A to D. The 20 items for each instrument were selected from a pool of 36 multiple choice items with content made from the JSS 1 curriculum in the four subject areas tested. The test blue print used to develop these items took into cognizance the volume of learning experiences associated with each sub-topic in assigning percentages to the total number of items. Emphasis was, however, placed on aspects of the curriculum that relate with the content of what was covered in the extra subjects. Thirty-six items were generated on each subject area.

Head-Teacher/Proprietors Questionnaire (HPQ)

This questionnaire developed by the researcher to ascertain the extent to which the head teachers find out the subjects recommended by government for study in primary schools in Nigeria, those done by schools, and subjects outside the ones government recommended done by schools. The instrument has three parts: (a) subjects recommended by government for study in primary schools; (b) those recommended that were not done by schools in areas covered by the study; and (c) subjects not recommended by the government but were included in school curriculum.

Validity and Reliability of the Instruments

Draft copies of these instruments were reviewed by two subject teachers in each subject area under study. They were pilot tested on 50 students who were not part of the study sample but has similar characteristics. The reliability coefficient of these instruments was established using Kuder-Richardson (KR_{20}) at 0.81, 0.791, 0.767, and 0.821 for integrated science, social studies, English language, and mathematics respectively. Cronbach's alpha was used to establish the reliability

coefficient of the principals' (school heads') questionnaire at 0.87.

Data Collection and Analysis Procedure

These procedures were done in stages. At the preliminary stage, the researchers sought consent from the gatekeepers (Punch, 2000) in the schools that were selected to participate in the study. Six research assistants were trained on the technicalities of how to administer the instruments. Students who attended the primary schools selected were traced to the secondary schools where they were posted. Two research assistants were assigned to each LGA selected. The teachers of the four subject areas tested were very useful in selecting students from schools where the extra subjects investigated were done.

Each selected pupil responded to the four achievement tests. The researcher personally administered the HPQ on the head teachers. All the instruments were retrieved back immediately after they were attended to by the respondents. The data collected were analysed using descriptive (frequency and percentages) and inferential statistical procedures (independent t-test).

Results

Results were organized as follows. First, descriptive data presented on how conversant public and private school teachers are with government approved subjects for study at the primary level of education in Nigeria, the extra subjects offered in primary schools outside those recommended by Government while *t*-test was used for comparison scores obtained by the participants in core subject areas tested.

Table 1
Frequency Distribution of Subjects Identified by Teachers as Those Recommended for Study by Government in Primary Schools in Nigeria

Subjects	Private School		Public School	
	Yes *n* (%)	No *n* (%)	Yes *n* (%)	No *n* (%)
English Studies	17 (100)	0	17 (100)	0
Mathematics	17 (100)	0	17 (100)	0
Social Studies	17 (100)	0	15 (94.1)	2 (5.9)
Civic Education	16 (97.1)	1 (2.9)	14 (82.4)	3 (17.6)
Basic Science & Technology	17 (100)	0	16 (97.1)	1 (2.9)
Christian Religious Knowledge	15 (94.1)	2 (5.9)	16 (97.1)	1 (2.9)
Agricultural Science	17 (100)	0	17 (100)	0
Home Economics	15 (94.1)	2 (5.9)	17 (100)	0
Cultural & Creative Arts	17 (100)	0	10 (58.8)	7 (41.2)
Physical & Health Education	17 (100)	0	17 (100)	0
Computer Science	17 (100)	0	10 (58.8)	7 (41.2)
Non-verbal Reasoning	17 (100)	0	3 (17.6)	14 (82.4)
Verbal Reasoning	17 (100)	0	3 (17.6)	14 (82.4)
Hand Writing	16 (97.1)	1 (2.9)	15 (94.1)	2 (5.9)
Drawing	16 (97.1)	1 (2.9)	15 (94.1)	2 (5.9)
Vocational Aptitude	15 (94.1)	2 (5.9)	3 (17.6)	14 (82.4)
French	14 (82.4)	3 (17.6)	3 (17.6)	14 (82.4)
Music	15 (94.1)	2 (5.9)	2 (5.9)	15 (94.1)
Arabic Language	10 (58.8)	7 (41.2)	11 (64.7)	6 (35.3)

N = 34; 100% reported

Table 1 reveals the frequency distribution of government recommended subjects (percentage of responses are in parenthesis) as listed by head teachers/proprietors in the private and public schools used for this study. As it can be seen from Table 1,

respondents in both private and public schools (100%) listed mathematics, English language, agricultural science, and physical and health education as part of the recommended curriculum for the primary level of education in Rivers State. The table also shows that all the private schools listed social studies, basic science and technology, cultural and creative arts, and computer science while not all are taught in public schools. Ninety-four percent listed social studies as a recommended subject; whereas, 6% did not. Further, basic science and technology was listed by head-teachers in public schools at 97% as well as agricultural science at 97% as recommended subjects for children at the primary level. However, while all the head-teachers in public primary school (100%) as well as 94% of the proprietors in private schools listed home economics as recommended curriculum, 6% of private school head-teachers did not. With respect to cultural and creative arts and computer science, only 50% of the public school head teachers listed it as one of the recommended subjects; whereas, 42% did not. However, the recommended subjects according to the Federal Government of Nigeria as documented in the National Policy on Education (FRN, 2004) are as listed in Table 2.

Table 2
Recommended Subjects for Primary Education by the Nigerian Government

Core Subjects	Electives
English Studies	Agriculture
Nigerian Language (Hausa, Igbo or Yoruba)	Home Economics
Mathematics	Arabic Language
Basic Science and Technology	
Social Studies	
Cultural and Creative Arts	
Christian Religious Studies/Islamic Studies	
Physical and Health Education	
French Language	
Computer Studies	
Civic Education	

Source: Federal Republic of Nigeria (FRN, 2004)

Information on the extra subjects offered in primary schools outside those recommended by the Government was analysed using frequency and percentage. The result is presented in Table 3. The table reveals that apart from the subjects recommended by the government most of the private primary schools (88% and above) indicated that they have extra subjects which are offered in their schools. The subjects are literature in English, vocational, verbal reasoning, quantitative reasoning, calligraphy, general knowledge, speech training/phonetics, geography, music, character development, handwriting/calligraphy, non-verbal reasoning, geometry, international relations, botany, and zoology.

Table 3
Subjects Offered in Schools outside Those Recommended by the Government

Subjects	Private School		Public School	
	Yes *n* (%)	No *n* (%)	Yes *n* (%)	No *n* (%)
Literature in English	12 (70.6)	5 (29.4)	3 (17.6)	14 (82.4)
Vocational Aptitude	17 (100)	0	3 (17.6)	14 (82.4)
Verbal Reasoning	17 (100)	0	2 (11.8)	15 (88.2)
Quantitative Reasoning	17 (100)	0	2 (11.8)	15 (88.2)
Calligraphy	16 (94.1)	1 (5.9)	1 (5.9)	16 (94.1)
General Knowledge	16 (94.1)	1 (5.9)	1 (5.9)	16 (94.1)
Speech Training/Phonetics	12 (70.6)	3 (17.6)	2 (11.8)	15 (88.2)
Geography	12 (70.6)	5 (29.4)	4 (23.5)	13 (76.5)
Music	16 (94.1)	1 (5.9)	5 (29.4)	12 (70.6)
Character Development	14 (82.4)	3 (17.6)	1 (5.9)	16 (94.1)
Phonics	14 (82.4)	3 (17.6)	0	17 (100)
Handwriting/Calligraphy	17 (100)	0	1 (5.9)	16 (94.1)
Non-verbal Reasoning	16 (94.1)	1 (5.9)	2 (11.8)	15 (88.2)
Geometry	15 (88.2)	2 (11.8)	0	17 (100)
International Relation	15 (88.2)	2 (11.8)	0	17 (100)
Botany	10 (58.8)	7 (41.2)	0	17 (100)
Zoology	9 (52.3)	8 (47.1)	0	17 (100)

N = 34: 100% reported

The data in Table 4 correspond to the third research question: Is there any significant difference in mean scores of the pupils exposed to extra subjects at the primary level and those who were not in the core subjects tested?

Table 4
Comparison of Mean Scores in Core Subject Areas by Exposure to Extra Subjects and Non-Exposure

Core Subject	Group	*N*	Mean	*SD*	*t*	Sig. two-tail	Eta Value
Mathematics	Exposed	368	75.32	12.99	23.93	.000	0.458
	Not Exposed	312	46.11	18.41			
English Lang.	Exposed	368	74.11	14.57	16.38	.000	0.280
	Not Exposed	312	53.16	18.56			
Integrated Sc.	Exposed	368	59.97	15.10	12.55	.000	0.188
	Not Exposed	312	44.51	17.00			
Social Studies	Exposed	368	64.35	14.45	6.24	.000	0.054
	Not Exposed	312	56.53	18.03			

* $p < 0.05$

An independent-samples *t*-test was conducted to compare the learning outcomes of Junior Secondary 1 students in River States who were exposed to extra subjects beyond the ones recommended by the government and those who did not. There was significant difference in scores for those who were exposed to extra subjects in the core subjects: mathematics exposed ($\bar{x}$ = 75.3154, *SD* =12.98728) and not exposed ($\bar{x}$ = 46.1100, *SD* = 18.1); *t* (679) = 23.93, *p* = .05. The magnitude of the difference in the means was high for mathematics with Cohen's value of (eta squared = 0.458). When expressed in percentage, it means that 45 percent of the variance in learning outcome between the two groups is explained by exposure of

learners to extra subjects beyond those recommended by the government.

Further, there was significant difference in scores for those who were exposed to extra subjects for English language ($\bar{x}$ = 74.11, *SD* = 14.57) and not exposed ($\bar{x}$ = 53.15, *SD* = 18.56); *t* (677)16.38, *p* = 0.05. The magnitude of the difference was not too high with Cohen's value (eta squared=.280). With respect to integrated science, there was also difference in the mean scores of those who were exposed ($\bar{x}$ = 59.97, *SD* = 15.1; and not exposed ($\bar{x}$ = 44.51, *SD* = 171); *t* (679) 12.55. Lastly, the scores for social studies show ($\bar{x}$ = 64.35, *SD* = 14.45) for those exposed, while the mean score for those not exposed was ($\bar{x}$ = 56.53, *SD* = 18.03), *t* (678) 6.24. The *p* was at 0.05 two tailed.

The magnitude of the difference in the means for mathematics was high (45%) while the magnitude of the difference in the means was moderately high for English language and integrated science with Cohen's value of eta squared was 0.28 for English and 0.188 for integrated science, and rather very low for social studies which produced an eta square of 0.054. When expressed in percentage, it means that 28% (English language), 19% (integrated science), and 5% (social studies) were the variances in learning outcomes between the two groups as explained by exposure of learners to extra subjects in combination with the recommended curriculum by the government.

Discussion

In December 2005 the National Council of Education (NCE), which is the highest policy making body in the education sector in Nigeria, directed the Nigerian Educational and Research Development Commission (NERDC), a parastatal under the Federal Ministry of Education, to develop a Basic Education Curriculum to cover the first nine years of schooling while compulsorily offer one or two elective subjects to students. The subjects offered at the middle basic (grades 4-6) are the same with those of the lower basic except for the inclusion of the French language. The school system is expected to expose learners to all the compulsory subjects.

Findings from the present study revealed that most of the schools used for this study do not have complete knowledge of the total number of subjects presently recommended for study in primary schools in Nigeria, nor the elective status of some of the subjects and the changes in their names. For example, English language is now called English studies; Christian religious knowledge (CRK) is now called religious studies; computer science is now computer studies; and basic science is now called basic science and technology. Further, according to the result, 19 subjects were listed as the number of subjects recommended by the government as against 14 subjects. This is not appropriate given that UBE curriculum has been in use for over five years. The Punch Newspaper of July 24, 2011 (Olugbile & Akosike, 2011) reported that most teachers in the nation's school system are not familiar with the new curriculum adopted by the federal government since 2008. This lack of teachers' knowledge led to the workshop organized by the Rivers State Ministry of Education to expose the teachers to the new document, equip them with a working knowledge of the curriculum, and how to use it in teaching and learning as reported in the same edition of the paper. This kind of exercise should have come even before the document was put to work in 2008. One wonders how many states of the federation like Rivers State had undertaken such exercise.

It was further observed that while French was offered in all the private schools under the study, even in their lower basic classrooms contrary to government recommendations, none of the public schools used in the study taught French. All

the schools (both private and public) do not teach any of the three major Nigerian languages in their schools. As revealed in Table 3, the incidence and occurrence of extra subjects is almost limited to private schools as most of the public schools in River State are not offering the extra subjects. This discrepancy may be due to the fact that the subjects are not government-approved, or that the public schools do not have teachers and/or curriculum to teach those subjects. Ordinarily teachers sourcing for extra materials to teach their pupils would have been considered creative and resourceful, but the magnitude of extra materials used by way of extra subjects in private schools as revealed in this study could be very impactful. It could also suggest a yawning gap which curriculum planners need to fill.

Further, a closer look at the core subjects studied and the listed extra subjects will reveal a relationship between them (see Figure 1). Thus, deeper understanding of these extra subjects by the pupils who are so exposed may lead to increases in the academic achievement of such learners. For instance, there is relationship between literature in English, verbal reasoning, phonetics, and English studies. Children who study English language alongside the above extra four subjects are more likely to understand the subject better than those who study just English language. Also subjects such as quantitative reasoning, geometry, and using music (recitation of multiplication tables and other songs and rhymes used in teaching numbers) can positively affect performance in mathematics. While general knowledge, geography, character development, international relations might positively affect performance in social studies. Further, music can also influence academic performance in cultural and creative arts, while botany and zoology can influence understanding of integrated science.

The performance of those students exposed to extra subjects in English language would have been enhanced by the teaching of extra subjects such as literature in English, verbal reasoning, speech training/phonetics, and calligraphy/handwriting. Also, incorporating literature methods (using quality plays, rhymes/poetry, and stories) might be very effective when teaching learners at the primary level of education. Further, reading good story books, rhymes, and singing songs that are linked to the subject areas, could help arouse and sustain the interest of the learners, thus, encouraging them to respond and participate actively. Research has shown that children respond enthusiastically to songs and rhymes and tend to welcome it (Klein, 2005). Şevik (2011) noted that the repetitive nature of poems and songs coupled with the joy songs add to learning activity and the associated power of melody and content of the word may reinforce learning. To buttress this assertion, studies confirmed the efficacy of using literature in teaching reading, listening, and communication skills which aid language learning (Machado, 1999). As a school subject, literature in English has the ability of inculcating in learners critical thinking skills and experiences needed for independent assessment of different issues in life. Literature can aid character formation and inculcate values and positive attitudes for survival. Verbal ability can also be used to predict learners' performance in language skills.

Mathematics, on the other hand, can also be greatly enhanced by previous knowledge that students acquired from taking extra subjects such as quantitative reasoning, non-verbal reasoning, and geometry. What was taught in extra subjects such as geography, character development, general knowledge, international relations, and music would contain aspects of social studies. Knowledge gained from botany, zoology and aspects of vocational aptitude may sharpen the aspects of integrated

science. Students who have taken such subjects will leverage the knowledge attained from such exposure to have an edge over those who did not take such subjects, as the findings from this study revealed. Apart from adding to the vocabulary of learners, which has its own contribution to learning, these extra subjects are capable of helping students become test-wise, and this could be a positive factor in passing examinations.

Conclusion and Professional Relevance

The present findings will assist those saddled with the responsibility of developing school curricula for Nigeria primary schools by contributing concrete information to the continuing struggle of deciding what should be taught in schools. Parents will also find this work useful in securing their position about extra subjects taught in schools where their children and wards attend. Evaluators working for primary schools will also find this study useful or relevant because the basic rationale for evaluation is to provide relevant and objective information for decision-making.

Another set of people who may benefit from this study are career guidance counselors who may use the findings of the study to counsel parents and students on school choice. Furthermore, career guidance counselors may find this work useful when giving counsel on links among subjects. Government and private school owners might discover the importance of, and what constitutes, an ideal academic environment. Educational bodies at the three tiers of government will also find this work useful especially those working in the inspectorate division of this parastatal. Findings from the study may enable inspectors from ministry of education to set proper limitations on what should be taught in schools or give advice to relevant government agencies on what should constitute the content of the primary school curriculum. Findings from this study may help to ventilate the views of those who hold very traditional opinions on what should constitute the content of a curriculum at this level of education to either continue to hold such views or be more flexible with their views.

The implication of these findings to teacher educators is that teachers should endeavour to be creative interacting with learners. This creative tendency could be reflected in the planning a teacher puts in with respect to materials used both recommended and related materials which have links with the subjects taught. When teacher educators are creative, teacher trainees imbibe the culture, and this culture will be reflected in the way they would plan their teaching activities once they are employed.

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