Availability of Intellectual Development Programmes in Primary School Libraries and Their Impact on Pupils' Academic Performance

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Abstract: **Intellectual development of children is initiated by education and library is one of the core aspects of education. Intellectual development is concerned with how various mental processes like attention span, reasoning, learning, remembering and problem-solving develop from birth until adulthood. Given this, there is a direct connection between the library resources and programmes and the ultimate development of the intellect of the child. This work understudied ten (10) selected private primary schools from South-East and South-South geopolitical zones of Nigeria to determine the available intellectual development programmes and resources of their libraries. The test scores of 300 pupils in six subjects were taken before and after intensive exposure to the intellectual development programmes to establish their effect on academic performance. The findings indicated the availability of such programmes as well as print resources for developing the pupils' intellect but very few electronic resources. The one-sample T-test was employed to test the positive significant effect of available intellectual development programmes in improving pupils' academic performance. The calculated value (24.28177) of the student t-test statistic is greater than the tabulated value (1.6715) at 0.05 level of significance and therefore rejected the null hypothesis that there's no positive significant effect of available programmes in improving pupils' academic performance cross all selected primary schools in the states. The findings of the study led to the conclusion that there is a significant positive impact of intellectual development programmes on pupils' academic performance.**

Keywords: **Intellectual development programmes, school libraries, school library resources, academic performance**

I. INTRODUCTION

Children are born with a varying degree of intelligence. Right from the onset of life, children develop their theory about life; how people and other living things move around in the world. In early childhood, children do not just glare and observe things around them, they apply their explanatory theories which enable them to explore such knowledge. Thus Children become inquisitive and start asking many questions thereby exhibiting the capability to understand, explore and experiment into new ground in early childhood [1]. Saffran [2] opines that infants and toddlers derive implicit theories to explain the actions of objects and behaviour of people around them and these theories form the foundation for causal learning and more sophisticated understanding of the physical and social worlds. Young children are keenly responsive to what they can learn from the actions and words directed to them by other people and such capacity for joint attention provides a setting for them to benefit from culturally transmitted knowledge [3]. Children's ability to exhibit these tendencies enable them to adapt and interact effectively with their environment. As they grow older, their thinking faculties undergo more advanced changes enabling them to develop the capacity to explore and learn much more, better things around them. The order in which children's thinking mature is the same for all, although the pace varies from child to child [4]. These sequential developments of a child's mind and thinking theories about life are seen as Intellectual development. Therefore, Intellectual development is the way a child's mind and brain functions, develops and their ability to communicate, think in creative and abstract terms, learn to solve problems, pay attention, make sense of the world around them, be able to make judgements and reach conclusions [5]

Discussions on Intellectual development in children commenced with a premier study by a biologist and psychologist, Piaget and Inhelder [4] who developed theories of cognitive development based on observation and experiments with children. Piaget's study outlined Assimilation and Accommodation processes as the two processes which children undergo to achieve a clear grasp of the world around them. These processes come into play whenever children discover something new within his environment. Intellectual development therefore is characterised by how various mental processes - attention span, understanding information, reasoning, learning, retentive ability, problem-solving and critical thinking develop from birth until adulthood.

1.1 Stages of Intellectual Development

The intellectual development of a child follows some recognizable patterns which Piaget and Inhelder [4] itemised as:

i. The sensory-motor stage covering from birth to two years. This stage is characterised by early mental developments observable in seeking, grasping, repetitive movements, walking and ability to solve simple activity-related problems in new ways.
ii. The pre-operational period covering from two years unto seven years of age. In this stage, language skills

are initiated, though illogical at first, and gradually become understandable. The child exhibits the ability to use simple logic to play simple games.

iii. Period of concrete operations covering from seven to twelve years. The child at this stage is seen to be able to understand and use logical patterns. The child now engages in simple problem-solving tasks and can make decisions logically and correctly.

iv. Period of formal operations covering from twelve years up to eighteen years which is the age of early adulthood. At this stage, the child can undergo abstract thinking and reasoning in solving complete complex logical problems.

However, more emphasis is placed on the first three stages which covers the ages of the participating group of children in this study. Young children rely so much on what they learn from others that they become astute in distinguishing between people who are likely to provide them with reliable information from those who are not [6, 7]. This connection of social interaction to how the brain develops and grows is of high relevance in this study, therefore, the role of the school librarian for children in these stages of intellectual development is to provide and ensure access to suitable resources for active learning and development. The Institute of Medicine and National Research Council (2015) is of the view that alternation of instructor-led teaching with activities is impactful and enables children to learn cooperatively with one another. For instance, the drama is vital for children's intellectual development because, at plays, children are solving problems, creating things, experimenting, thinking and learning all at the same time. The library, of a necessity, ensures that it has learning programmes that will equip the child with learning consciousness and information search skill for success in a constantly changing social, economic and technological world. Oberg [8] opined that processing information involves constructing meaning using such skills as integrating information from a variety of sources, making inferences, drawing conclusions, and building connections to prior knowledge. Through these skills, children develop an understanding of the information they have gathered, transforming the information gathered into their knowledge.

Intellectual development programmes in the context of this study encapsulate the activities, resources and exercises mapped out by schools to enhance the learning abilities of the school child. Various schools and their libraries engage in extra programmes outside the classrooms for entertainment, mental exercise and relaxation of children with the overall intent of developing the children's intellect. Intellectual development programmes are targeted at training the child to understand the relationship between ideas, to grasp the process of cause and effect and improve their analytical skills so that the child can function not only in the classroom but outside as well. This study aims to describe such programmes as available in each school studied and find out the impact of such a programme(s) on the pupil's academic performance.

1.2 Background of Primary Education in Nigeria and Statement of the Problem

Nigeria is a low-income country and this has reflected in low health standard and poverty in the country as well as low educational standard in the primary education sector. The current status of primary schools especially government-established ones falls short of what it should be in terms of teachers, facilities and resources. For instance, inadequate supervision of teaching practice of teachers result into poor training of teachers and this consequently, grossly affects the quality of learning children get from school [9].

School libraries are the foremost and undisputable facility that should be on the ground in every school considering its contribution to high impact learning and excellent academic performance in students. Ullah and Farooq [10] expressed that reading library materials correlates positively with improved comprehension, vocabulary, listening, reading, writing and overall intellectual development of children. Incidentally, most primary schools still operate under the chalk and talk practice without library resources and added programmes to complement and reinforce the class teachers' lessons. Thus, students turn out mediocre being restricted to the class teachers' knowledge perspectives.

This study desires to uncover the programmes and activities of school libraries designed to facilitate the intellectual development of school children in selected primary schools in Imo State (Zone A) and Rivers States (Zone B) and its resultant effect on academic performance. While describing the scenario regarding the concept under study, it is expected that this study will stress the need for such programmes where absent, as evident on how it has impacted on children's academic performances.

1.3 Research Objectives

The objectives that will guide the study include:

i. To ascertain available intellectual development programmes of the school libraries

ii. To find out the varieties of resources provided for the intellectual development of pupils by their school libraries

iii. To determine the effect of the available intellectual development programmes on the academic performance of the school pupils

1.4 Hypothesis

H_0: There is no positive significant effect of available intellectual development programmes in improving students' academic performance across all selected primary schools in Zone A and Zone B.

II. REVIEW OF LITERATURE

The School Library and its Roles in Intellectual Development

The school library is a school's physical and digital learning space where reading, inquiry, research, thinking, imagination, and creativity are central to students' information-to-knowledge journey, and to their personal, social and cultural growth [8]. For Ajegbomogun and Salaam [1], it is largely a collection of books and other learning materials selected and organized by professionals in librarianship and displayed in an allocated space in the school for the use of the pupils and teachers. The school library is found in primary and secondary schools. Catering for children of one year to eighteen years, the school library is saddled with the responsibility of enhancing the child's intellectual development from his formative years to early adulthood. With the school library as the heart of the educational programme, Gbadamosi [11] imputed that it reinforces classroom instruction by providing additional resources and information that expands pupils' reading horizons, upgrades the intellectual scope and depth of teachers, and provides conducive environments for pupils that are not found elsewhere in the school.

Rosenfeld [12] captured the words of the former Canadian Minister for education, Gerald Kennedy when he said that libraries have a powerful influence on stimulating interest in reading and strengthening research and critical-thinking skills of students. Together with the parents and teachers, the school library collaborates in the nurturing and socialization of the child, helping to sharpen the observation, reasoning, understanding, learning and problem-solving skill of the school child. From the perspectives of Fabunmi and Awoyemi [13], the library enables the primary school to develop children psychologically to be less dependent on their parents and have their brains coordinated for a higher degree of learning and other forms of intellectual work. Adomi [14] added that a well-equipped school library motivates students and prepares them to solve problems individually and obtain self-confidence. The school library activates the minds and muscles of children to perform actions essential for effective interaction with their immediate environment and engage in games that will dispose of them for the acquisition of skills for organized school learning. Suffice it to say that the school library upholds the cultural and social life of the school.

The model of the school library as a dynamic agent of learning developed by Todd and Kuhlthau [15] presents the school library as a dynamic learning agent and a centre for intellectual quality whose intellectual and physical structure and output revolve around informational, transformational and formational. The informational component refers to its information resource both the traditional print and technologically-mediated contents. Its transformational component is the programmes, activities and events which the library organises for reading promotion and instruction intervention. The formational component concerns itself with learning impacts and student outcomes after using the library. Todd and Kuhlthau [15] maintained that an effective school library, led by a credentialed school librarian, plays a critical role in facilitating student learning and knowledge building. Hay [16] corroborating them, added that school libraries are powerful agents of learning, central to engaging students in information processes that enable the transformation of information into deep knowledge and understanding, and providing them with life skills to continue living, learning and working in a piece of information and technology-intense world.

It is an avenue for instilling in children, skills for various levels of reading, access to information, knowledge building, deep thinking and lively discussion. Reading, knowing and doing [17] are multiple faces of the future global citizens and equally constitute the multiple faces of school libraries which combine to provide the best opportunities for pupils to learn to use their minds well. Recognizing the demands of the information age, the school library is the agent that will help create in the children, an interest in using technology to search, identify and access resources for learning. Todd [17] therefore, added that school librarians are bringing to the school community a unique set of capabilities related to accessing and using information technology not just for finding and evaluating resources, but for using technology tools to create innovative representations of knowledge. Specifically, school libraries' role in the intellectual development of the child includes: teaching them how to identify knowledge; improving attention span of the children; spur creative and critical thinking; develop problem-solving skills; develop an inquisitive and scientific ability and instilling a desire for academic excellence.

2.1 Resources for Developing the Child's Intellect

Library resources remain the gadgets which the school library uses to score its goal. Buttressing this, Gbadamosi [11]opined that these learning resources facilitate the acquisition of the physical and intellectual skills necessary to assist the individual to develop literacy for lifelong education. Funk and Funk [18] transported perception of children's literature from a mere peripheral activity to an integral component of the school curriculum. They maintained that children's literature not only enhances the teaching of reading skills but reflects changes in the general cognitive and social development of the child. Developing the child's intellect is the task of the librarian and as such, it makes imperative an active and steady collaboration with teachers and board of education to know the varied resources to be acquired for the school child. The librarian has to be cognizant of the age groups making up the library clientele and plan for resources that will address the age requirement and needs of children in such groups. In their words, Ajegbomogun and Salaam [1] suggested that school libraries should give individualized service, making sure that every library user gets information that meets his or her peculiar needs. The library needs to have resources in stock for children with exceptional intelligent quotients to meet up with their quick learning capacities. Each child has a particular interest and learning strategy that is unique. Therefore, consideration should be made for ambition and conscientiousness of each child. The resources that can

stimulate and develop attitudes and tools that will encourage children to make good use of their minds, need to be acquired such as building blocks, puzzle books, quiz books, video games, painting books, science fiction books, investigative books, educational CDs, etc. Akanwa [19] itemised ideal children's literature to include Fiction books, Folktales, African prose fiction, Adventure books, Historical fiction, Science fiction, Nonfiction books, Biographies, Picture books, Drama, Poetry, Informational books, Reference books, Textbooks and Supportive books. Keeping in mind what is taught, how students learn and what students want to know, the school librarian strives to adequately supply materials for the school community by developing a well-rounded collection of instructional materials [20]. In tandem with the trending technological platform of information search, retrieval and access, the school library has incorporated a parallel change in its pedagogy, design, strategies and resources whereby non-book resources in CD-ROMs, VCD and DVD are acquired and displayed using televisions/ ICT facilities [19]. Thus, Oberg [8] suggested that school libraries acquire resources in all formats, created both locally and internationally which reflect the national, ethnic and cultural identities of members of the school community. Some technology-mediated resources that are qualitative in their content for the school library are: -

i. The kids should see this-a blog site that aggregates super kid-friendly videos revolving round science, art and technology.
ii. WatchKnowLearn – indexes several educational videos from YouTube and are available without registration or fees.
iii. YouTube for Schools – containing a large collection of educational materials for librarians, teachers and administrators to select and expose to children.
iv. National Geographic – provides facts, photos, videos and notes about countries around the world.
v. Schoolhouse Rock – an animated musical educational short film covering grammar, science, economics, mathematics.
vi. NeoK12 – labelled "a great site for kids" by the American Library Association, this site provides educational videos, lessons, quizzes and educational games in various subject areas as maths, health, social studies, English and science.
vii. French in Action – achieve French fluency through its collection of video series on French culture.
viii. Physics Comic Books – a website by the American Physical Society and has a series of exciting comic books about physics.
ix. International Children's Digital Library grants access to high-quality children's books all over the world and in different languages including English.
x. Free Audio Books – has about 450 audiobooks about children's classic. Interestingly, it is free of charge and easy to download straight to one's computer or mobile device.
xi. Audio-visual versions of children's fiction such as treasure island, the Mayor of Casterbridge, she stoops to conquer, etc. [19]

2.2 Intellectual Development Programmes of School Libraries

With knowledge of the goals of the school, curriculum, cultural, ethnic and national identities of the school, the school library designs programs and activities for the school children. According to Oberg [8], the services and activities must be in close cooperation with the principal or headteacher, heads of department, learning specialists in the school, classroom teachers, support staff and students, and should reflect the progression of curriculum expectations from grade to grade. These programmes should be tailored towards literacy and reading promotion; Media and information literacy (Information literacy, information skills, information competences, information fluency, media literacy, transliteracy or transmedia literacy); Inquiry-based learning (Problem-based learning, critical thinking); Technology integration; Appreciation of literature and culture.

As far back as 1977, Strickland [21] itemised some guidelines which school librarians can use to develop the intellect of their young users. These include; Encouraging creativity and innovative plays; Establish regular routines so that toddlers can learn what to expect; At reading exercises, ask leading questions about the characters, events and expected outcomes of stories; Encourage artistic expression and creation providing blank paper and other assorted supplies; Creating innovative learning spaces for children to play and learn how to solve problems and take decisions.

Intellectual development activities of school libraries may also include Book shows, Reading exercises, Book talks, Group camps, Debates on burning issues, Newspaper clippings, Counting exercises, Listening exercises, Games and Drama. For Oberg [8], new fiction and non-fiction materials should be promoted to both teachers and students through book talks, library displays, and information on the library's webpage. Special events to raise the profile of literacy and reading can be organized in the library or throughout the school such as exhibitions, author visits and international literacy days. The study of the intellectual development of school children has been on focus over the last twenty-five years (25) years from scores of different perspectives (Koenig and Doebel, 2013). This study takes its cue from school libraries and what programmes and activities are available for developing the children's intellect.

2.3 Effect of Intellectual Development Programmes of the School Libraries on Academic Performance

School libraries' programmes are planned to conform to the demands and requirements for learning in the new information landscape with its accompanying feature of technologically driven search, location and retrieval of information pattern. All efforts are aimed at exposing the child to varied chances of attaining the optimum level of success in education. Ayaz,

Ali, Khan, Ullah and Ullah [22] conducted a study on the impact of school libraries on students' academic achievements at secondary school level in Southern districts of Khyber Pakhtunkwa. In their study involving 700 respondents at a complete response rate of 100%, 77 % (383) views revealed positive response while 23 % (117) revealed a negative response regarding the impact of the school library on students' academic achievement. In other words, their study shows a positive relationship between the school library and students' academic achievement.

There are multitudes of evidence affirming the positive relationship between the school library, school library specialist or librarian and school library programmes and academic learning or performance. Several studies have shown that school libraries staffed by qualified library media specialists make a measurable difference in student achievement whether such achievement is measured by standardized reading achievement scores or by global assessment of learning. The famous study and one of the earliest by Lance and his team found out that elementary school students with collaborative school librarians performed better by 21% on Colorado Student Assessment Programme (CSAP) reading scores than students with the least collaborative school librarian [23]. Earp [24] in his study found out that grade levels exposed to library programmes have higher Massachusetts Comprehension Assessment scores. Baxter and Smalley [25] discovered that student reading achievement in elementary and secondary schools is related to the increase in the school library programmes. In his study, Kachel [26] noticed that students who score higher on standardized tests tend to come from schools with more school library staff and more access to services and resources such as books, periodicals, and online material, regardless of other factors such as economic ones. In the review by Hughes [27], several studies from different countries typify a positive relationship between school library programs and student achievement. In the United States and Canada, over twenty studies between the year 2000 and 2008 found a positive relationship between school libraries and students' academic performance [26, 28]. Studies by Small, Shanahan and Stasak [29] and Smith [30] all reflect positive outcomes of school library programs on information literacy development. The assessment of fifty-four (54) studies on intellectual development by Maulik and Darmstadt [31], out of which sixteen (16) came from middle and low-income countries, where Nigeria undoubtedly falls showed that play and reading were two activities with a positive impact on the intellectual development of children.

III. METHOD

The design employed in this study is descriptive. The study population were made up of ten (10) school librarians, ten (10) primary six teachers and three hundred (300) primary six pupils, which were composed of thirty (30) pupils drawn using a stratified random sample with equal allocation, from five (5) primary schools in Owerri Municipal, Imo State, South-East of Nigeria and five (5) from Mgbuoba, Rivers State representing the South-South Geopolitical zone of Nigeria.

The study was carried out between September 2018 and July 2019. A visit was made to the schools selected for the study and the aim and procedure of the study was explained and approved by the head of the schools. Inquiries revealed that some of the schools had initiated some programmes for intellectual development without regular practice. As such, the teachers and librarians were highly instrumental to the actualisation of this research especially towards determining the effect of the programmes on academic performance. A test was administered in two phases to primary six pupils of the schools, as the focus group for the study.

Phase 1: In September 2018, the commencement of the term, the teacher administered the first test to 30 selected primary six pupils in Maths, English, Primary Science, Agriculture, Religion and PHE. The students were subsequently, at break time, exposed and supervised by the school librarian on the existing intellectual development programme of the library.

Phase 2: Towards the end of the session in June 2019, the teacher again administered tests in the same subjects to the same pupils and handed over the scores to the researcher. These scores were used to determine the impact of intellectual development programmes on academic performance.

Descriptive statistics consisting of tables was used to display the intellectual development programmes and resources available in the library while the one sample student t-test was employed to test the positive significant effect of utilization of available intellectual development programmes in improving pupil's academic performance across all selected primary schools in the zones.

IV. RESULTS AND DISCUSSION

Table one shows the list of participating schools while Table two displays the intellectual development available in each school libraries of the selected schools in Imo and Rivers State. Debates (DB) and Essay writing competition (ES) are common programmes that cut across all the school libraries (10/10), followed by Reading exercises (RE) and Quiz competition (QC), 9/10. Next comes Book talks (BT) and Listening exercises (LE), 8/10. Arts/painting (AP) and Drama (DR) has 5/10. Others are Games (GM) and Counting exercises (CE) 4/10; Bookfair (BF) 2/10. None of the school libraries conducts Author visits (AV) as an intellectual development programme.

Among all the primary schools in Zone A, Central School (CS) Library runs nine (9) intellectual development programmes, followed by Urban Primary School (UPS) Library which runs eight (8). Water-side Primary School (WPS) Library has seven (7) of the programmes; Samuel Njemanze Memorial School (SNMS) has six (6) while Mann Street Primary School (MSPS) Library has only five (5).

For Zone B, Holy Child School Library runs ten (10) Intellectual Development Programmes. A triad of Gate of Wisdom Academy (GWA), St. Johns Primary School and Ascenders Christian School (ACS) Libraries run eight (8) of the IDPs each while Child Educational Center (CEC) Library runs 7 out of the 13 Intellectual Development Programmes.

Table 3 displays the resources available in the school libraries for the intellectual development of pupils. Observable from the table is that the school libraries have more print materials than electronic materials. Notable among the resources are children's storybooks and painting books (10/10) each; subject texts and science fiction books (9/10) each; drawing books, quiz books and puzzles (8/10). There are very few electronic resources in the libraries studied. The school libraries in Imo State have no electronic resources in them. The libraries in Rivers State have very few which are mainly educational CDs available in four (4) libraries and which these libraries revealed to have retrieved as electronic copies of some textbooks in the libraries. The rests are Free Audio Books which is available in two (2) schools; Youtube for schools available only in Holy Child Primary school and Watchknowlearn available only in St Johns. National Geographic, Neok12 and physics comic books are completely unavailable in the school libraries.

Table 1 showing participating schools

	Zone A (Imo State, South-East)	No. of Pupils	Zone B (Rivers State, South-South)	No. of Pupils
1	Samuel Njemanze Memorial Primary School (SNMS)	30	Holy Child School (HCS)	30
2	Water-side Primary school (WPS)	30	Gate of Wisdom Academy (GWA)	30
3	Urban Primary School (UPS)	30	Child Educational Centre (CEC)	30
4	Mann Street Primary School 1 (MSPS)	30	St. Johns Nursery/Primary School (SJ)	30
5	Central School Owerri Municipal (CS)	30	Ascenders Christian School (ACS)	30
	Total	150	Total	150

*All schools are represented by their abbreviations in the tables.

Table 2: Primary Schools in Zone A and B and their Intellectual Development Programmes

		Zone A (Imo State, South-East)					Zone B (Rivers State, South-South)				
S/N	Intel. Dev. Programmes	SNMS	WPS	UPS	MSPS	CS	HCS	GWA	CEC	SJ	ACS
1	Bookfair					BF	BF				
2	Reading exercises		RE	RE	RE	RE	RE	RE	RE	RE	RE
3	Book talks	BT	BT	BT		BT	BT		BT	BT	BT
4	Debates	DB	DB	DB	DB	DB	DB	DB	DB	DB	DB
5	Counting exercises	CE					CE		CE		CE
6	Drama			DR		DR	DR	DR			DR
7	Games			GM				GM		GM	GM
8	Essay writing competition	ES	ES	ES	ES	ES	ES	ES	ES	ES	ES
9	Listening exercises	LE	LE	LE	LE	LE	LE		LE	LE	
10	Open days/ Cultural exhibition							OC		OC	
11	Author visits										
12	Quiz competition		QC	QC	QC	QC	QC	QC	QC	QC	QC
13	Arts and painting competitions	AP	AP			AP	AP	AP			

*Abbreviations of each intellectual development programme is noted under the school running such programme.

Table 3: Available resources in the school libraries

		Zone A (Imo State, South-East)					Zone B (Rivers State, South-South)				
S/N	Resources	SNMS	WPS	UPS	MSPS	CSI	HCS	GWA	CEC	SJ	ACS
1	Subject texts	*	*	*	*	*		*	*	*	*
2	Story books	*	*	*	*	*	*	*	*	*	*
3	Magazines	*	*				*				*
4	Science Fiction books	*	*	*	*	*	*	*		*	*
5	Puzzle books	*	*	*	*		*		*	*	*
6	Language books	*	*	*	*	*					

7	Painting books	*	*	*	*	*	*	*	*	*	*
8	Drawing books	*	*	*	*	*	*	*		*	*
9	Quiz books	*	*	*		*	*	*	*	*	*
10	Building blocks	*	*			*			*	*	
11	Educational Cds						*	*	*	*	
12	Watchknowlearn									*	
13	Youtube for schools						*				
14	National geographic										
15	Neok12										
16	Physics comic books										
17	Free audiobooks						*	*			

❖ Resources available in the school are indicated with asterisks (*)

Table 4a: Average academic performance scores of thirty selected pupils in each of the schools before exposure to intellectual development programmes (IDPs)

	Zone A (Imo State, South-East)					Zone B (Rivers State, South-South)				
Subjects	SNMS	WPS	UPS	MSPS	CSI	HCS	GWA	CEC	SJ	ACS
Maths	44.5	39.9	52.3	23.7	29	42.7	31.3	45.1	51.5	40.8
English	43.3	46	57.1	36.3	29.3	50.4	39.6	54.4	48.5	38.5
Pri. Sci.	42.6	35	52.3	46.3	28.6	49.8	34.3	46.2	46.9	38.9
Agric	42.0	38.3	43.3	34.7	28.1	51.1	34.5	45.9	61.9	42.9
Religion	40.9	52.8	44	34.7	30	47.3	38.5	50.5	45.9	44.1
PHE	44.2	34.6	52.2	33.7	32.4	46.0	34.3	43.4	46.0	39.8

Table 4b: Average academic performance scores of thirty selected pupils in each of the schools after exposure to intellectual development programmes (IDPs)

	Zone A (Imo State, South-East)					Zone B (Rivers State, South-South)				
Subjects	SNMS	WPS	UPS	MSPS	CSI	HCS	GWA	CEC	SJ	ACS
Maths	73.7	75	69.7	55.3	77.3	61	68.8	54.8	76.3	63.9
English	73.9	74.5	71.5	72.3	77	69.4	73.8	69.4	77.	72.2
									6	
Pri. Sci.	79.5	74.9	67.1	66.6	73	68.8	70.4	71.3	78.6	70.4
Agric	74.2	78.0	69.6	67.6	79.3	67.9	77.9	72.3	77.9	74.8
Religion	76.1	85.9	71.3	72.6	74.6	72.2	80.9	74.6	76.2	81.9
PHE	73.9	79.2	67.4	57	73.6	74.5	76.5	70	71.2	70.6

Tables 4a and 4b show the average performance scores of thirty (30) pupils from each school in six subjects before and after exposure of the intellectual development programmes available in each school library in the two zones. The difference between the average performance scores of the pupils before and after exposure to the intellectual development programmes available in each school library are shown in Table 4c. The results show that there are positive differences between the average performance scores of the pupils before and after utilization of the intellectual development programmes available in each school library across all selected school but whose significance may be questionable. Hence, the calculated value of the mean, variance, standard deviation, standard error of the mean, student t-test statistic (T), student t-tabulated value (T-tab) of the differences between the average performance scores of the pupils before and after utilization of the intellectual development programmes available in each school library are shown in Table 4d. The calculated value of the student t-test statistic is 24.28177 while the tabulated value at 0.05 level of significance is 1.6715. The calculated value of the student t-test statistic is greater than the tabulated value at 0.05 level of significance. The result indicated that the null hypothesis that there is no positive significant effect of available intellectual development programmes in improving students' academic

performance across all selected primary schools in zone A and B is rejected. Similarly, the corresponding *p-value* equals 0.0000 is less than the 0.05 level of significance. The result further confirmed that the null hypothesis that there is no positive significant effect of available intellectual development programmes in improving students' academic performance across all selected primary schools in both zones is also rejected. These results confirmed surely that there is a positive significant effect of available intellectual development programmes in improving students' academic performance across all selected primary schools in Zone A and Zone B.

Table 4c Differences (diff), Average performance scores of the pupils before (pre-test) and after (post-test) intensive exposure to the intellectual development programmes available in each school library across the ten primary schools of the zones

School	Subjects	Pre-test	Post-test	Difference
SNMS	Maths	44.5	73.7	29.2
	English	43.3	73.9	30.6
	Primary Science	42.6	79.5	36.9
	Agric	42	74.2	32.2
	Religion	40.9	76.1	35.2
	PHE	44.2	73.9	29.7
WPS	Maths	39.9	75	35.1
	English	46	74.5	28.5
	Pri. Sci.	35	74.9	39.9
	Agric	38.3	78	39.7
	Religion	52.8	85.9	33.1
	PHE	34.6	79.2	44.6
UPS	Maths	52.3	69.7	17.4
	English	57.1	71.5	14.4
	Pri. Sci.	52.3	67.1	14.8
	Agric	43.3	69.6	26.3
	Religion	44	71.3	27.3
	PHE	52.2	67.4	15.2
MSPS	Maths	23.7	55.3	31.6
	English	36.3	72.3	36
	Primary Science	46.3	66.6	20.3
	Agric	34.7	67.6	32.9
	Religion	34.7	72.6	37.9
	PHE	33.7	57	23.3
CSI	Maths	29	77.3	48.3
	English	29.3	77	47.7
	Primary Science	28.6	73	44.4
	Agric	28.1	79.3	51.2
	Religion	30	74.6	44.6
	PHE	32.4	73.6	41.2
HCS	Maths	42.7	61	18.3
	English	50.4	69.4	19
	Pri. Sci.	49.8	68.8	19
	Agric	51.1	67.9	16.8
	Religion	47.3	72.2	24.9
	PHE	46	74.5	28.5
GWA	Maths	31.3	68.8	37.5
	English	39.6	73.8	34.2
	Pri. Sci.	34.3	70.4	36.1
	Agric	34.5	77.9	43.4
	Religion	38.5	80.9	42.4
	PHE	34.3	76.5	42.2
CEC	Maths	45.1	54.8	9.7
	English	54.4	69.4	15
	Pri. Sci.	46.2	71.3	25.1
	Agric	45.9	72.3	26.4
	Religion	50.5	74.6	24.1
	PHE	43.4	70	26.6
SJ	Maths	51.5	76.3	24.8
	English	48.5	77.6	29.1
	Pri. Sci.	46.9	78.6	31.7
	Agric	61.9	77.9	16
	Religion	45.9	76.2	30.3
	PHE	46	71.2	25.2
ACS	Maths	40.8	63.9	23.1
	English	38.5	72.2	33.7
	Pri. Sci.	38.9	70.4	31.5
	Agric	42.9	74.8	31.9
	Religion	44.1	81.9	37.8
	PHE	39.8	70.6	30.8

Table 4d: Mean, Variance, Standard Deviation, Standard error of Mean, Student t-test statistic (T), student T tabulated value (T-tab) of the differences

Variable	N1	Mean1	Variance1	StDev1	SEMean1	T	T-tab	P
Diff	60	30.41	94.10736	9.700895	1.25238	24.28177	1.67115	0.0000

V. DISCUSSION

The results above throw light on the nature of resources and programmes for developing the intellect of children in primary school libraries. The intellectual development programmes prevalent in all the schools are debates, essay writing competitions, book talks, listening exercises, open/cultural days and painting exercises. These programmes expose the pupils to learning skills such as reading, information search competencies, information fluency,

communication and innovative skills. The school through the provision of these me becomes a dynamic learning agent and a centre for intellectual quality with excellence in the transformational outcomes in children [17]. Children acquire the capabilities of seeking and using information that gets transformed into deep knowledge and understanding to adapt to a technology-savvy world. The findings on the intellectual development programmes of the school libraries have justified the transformational quest of the research as pupils are found to have adequate programmes that transform them into researchers and knowledge makers of the future. Except for the studies by Earp [24] and Baxter and Smalley [25] which are foreign in geographical scope, no study at the time of carrying out this research has elucidated the intellectual development programmes run in school libraries from the Nigerian context.

The findings on the resources for intellectual development available in the school libraries reveal the availability of more print than electronic resources. All schools by a large extent have children's storybooks, paintings books, and textbooks for different subjects, science fiction books, drawing books, quiz books and puzzles. In zone A, none of the schools has electronic resources. This reveals that there are no information and communication technologies in the zone. For the schools in zone B, there are more educational CDs which most current books come along with. This absence of electronic resources in the school libraries reveals that at contemporary times when all sectors are submerged into the virtual world, school libraries have yet to install and access electronic knowledge resources.

Finally, the difference obtained in average scores of pupils' Pre-test and Post-test denotes a significant positive effect of intellectual development programmes on academic performance. This stands in conformity with findings of Ayaz, Ali, Khan, Ullah and Ullah [22], Earp [24], Baxter and Smalley [25], and Kachel [26].

VI. CONCLUSION

This study has joined the large body of evidence showing the impact of the school library on student achievement with a particular emphasis on intellectual development programmes of the school libraries and its effect on academic performance of pupils in Nigerian Primary Schools.

The library remains the singular entity that complements the teacher's pedagogy and sharpens students reasoning, understanding, learning and problem-solving skills. The findings of the study show that school library intellectual development programmes and resources contribute in rich and diverse ways to the intellectual life of the school, and to the development of children who can learn and function in a rich, complex, and increasingly digital information society.

When armed with adequate resources and programmes, the library plays a vital role in stimulating interests and inquisitiveness for knowledge, facilitates understanding and learning and improves the academic performance of users.

VII. RECOMMENDATION

The scarce electronic resources in the libraries for intellectual development is discouraging and leaves much to be desired basically because pupils are not benefitting from the rich and diversified content of electronic resources as a result of limited availability of ICT facilities in the schools. There should be the establishment of a strong technological presence in the libraries of primary schools as part of a broader learning approach for the development of information and digital literacies and inquiry-based learning.

The school librarians yet have work to do towards intensive adoption and integration of technology into the classes and libraries of the schools and adjustment of teachers' pedagogy to reflect the demands of the instructional patterns of the 21st Century learning. This recommendation is underpinned by a steady and almost complete takeover of information and communication technology infrastructure in education today.

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