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Teacher Professional Skills, Instructional Software and Reading Ability of Lower Basic School Pupils with Learning Disabilities in Calabar Education Zone, Cross River State, Nigeria.

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Abstract:- The study investigated teacher professional skills, instructional software and reading ability of lower basic (primary 1-3) school pupils with learning disabilities in Calabar Education Zone of Cross River State, Nigeria. To guide the study, learning theory and multimedia theory were used as the foundation of the study. Three research questions were raised and converted to three research hypotheses for the study. The design adopted for the study was the survey design. The population of the study covered all 105 lower basic school teachers in the study area. Purposive sampling technique was used to select a sample of 21 teachers for the study. The research instrument used was a four-point modified Likert scale. The statistical tool used for data collection was simple and multiple regression analyses at 0.05 level of significance while the reliability of the instrument was determined through Cronbach Alpha method. The findings rejected all the null hypotheses,that is, teachers' ability to adapt curriculum, application of tutorial software, and promotion of universal design for learning are highly positively correlated with reading ability of lower basic school pupils with learning disabilities. It was recommended that since all the three variables had positive influence on reading ability they be promoted by all education stakeholders.

Keywords:- *Teacher Professional Skills, Instructional Software, Reading Ability, Lower Basic School Pupils, Learning Disabilities.*

I. INTRODUCTION

Basic education is that aspect of education offered for children aged 6 to 11(Federal Government of Nigeria, 2015). It is made up of lower basic (Primary 1-3) and middle basic (Primary 4-6) levels. Basic education is the level of education that ensures the broad-based development of pupils. This means ensuring that all pupils are able to develop their cognitive, social, emotional, cultural and physical skills to the best of their abilities, preparing them for their further school career. It is the foundation of education, where children are prepared for post primary education and tertiary education. It is also at this level of education that pupils are expected to acquire the literacy skills that will prepare them for the next level of education.Indeed, a good basic school education underpins all the vocational and technical skills acquired in technical colleges, polytechnics and universities (Mba, 2019). Consequently, it is not just vital to the child, it is critical to the development of a country's economy. Thus, the basic education level is viewed as the key to success or failure of the whole education system.While many pupils have been able to read fluently or successfully at the completion of this level, some have not been successful on a comparative basis.

Poor reading situation among children in Nigerian public schools is commonly attributed to lack of foundational reading skills which causes them to struggle with reading that might in turn affect their academic performance negatively (World Bank, 2017). However, this crisis can also be attributed to schools' inability to meet the needs of increasing number of pupils for whom the mastery of printed text is difficult or impossible (Ikwen, 2015); poorly trained teachers, dilapidated infrastructures, unskilled and unmotivated teachers (Nigeria Union of Teachers, 2019); poor teacher-learner relationships, poor structure of the school day, pupils sitting on bare floors using their laps as tables, and learning under the trees subjected to the vicissitudes of inclement weather (Adesanya, 2019). Besides leaky roofs, the schools lack toilets, portable water, libraries and sick bays, while some classrooms, especially in urban cities, are overcrowded (Aina, Ogungbeni& Adigun, 2011; Asodike&Ikpitibo, 2014).

The consequence of the foregoing on pupils is lack of motivation which can inhibit progress in reading(Treiman, 2018).Pupils' failure in reading printed text causes them to build negative association with the printed material, get discouraged and lack the confidence that further effort will yield progress. These pupils undoubtedly lack the will to persist further and find printed text an unsupportive medium for academic progress. Consequently, these pupils can result in negative self-image and feelings, school drop-

out, absenteeism, and parents not motivated to pay school fees, and so on (Richek&McTague, 2018).

However, these pupils may flourish when provided with professional, skilful teachers;the building blocks of an effective primary school reading programme;instructional software and other expressive options. This is true because without the teacher, educational policies can never be implemented. Thus, effective implementation of educational policies depends on the quality of teachers in schools (Ikwen, 2014). A teacher is an experienced person who is capable of imparting knowledge and shaping the children to the wider scope of knowledge. Teachers have the ability of molding children such that the knowledge acquired is retained as they grow to determine the fate of the society (Hopman& MacDonald, 2018). Also, teachers are experts who are capable of imparting knowledge that will help learners to build, identify and to acquire skills that will be used to face the challenges in life (Bradea, 2009).

To achieve his/her teaching or professional responsibilities, teachers are expected to understandwhotheir pupils are, why they need specific attention, where the instruction will be provided, what should be the scope of teaching, how to assist the pupils and when to teach a particular topic (Patry,2012). The teacher is to teach and must understand himself or herself thoroughly –his or her strengths and weaknesses, strive to present a reasonably good model before the students. The teacher must have mastery over the subject he or she teaches; use new teaching and learning technology to make teaching effective and inspirational; and take appropriate steps to develop motivation of the pupils in the entire work (Kemamia, Ngugi&Thinguri, 2014).

Critical to the teacher's success in performing the role of teaching is his or her level of understanding learners' general and special needs which in the present study include reading skills, accessible printed text, use of instructional software and motivational needs that can enhance progress in reading,effective reading strategies and skilful teaching.

Therefore, teachers should be capable of preparing pupils to understand the essential components of reading which include: phonemic awareness, phonics instructions, reading fluency, vocabulary development, and comprehension and use these reading components to build their knowledge (Read Naturally, 2018). Phonemic awareness instruction helps children learn to segment speech into individual sounds (phonemes) and to blend sounds to form words. The ability to work with speech sounds in these ways is an essential foundation for phonics instruction. Phonics instruction helps in teaching children the relationships between sounds and letters while Phonics skills assist children to recognize words and decode new written words to their spoken forms. Fluency instruction prepares children to learn to read texts with speed, accuracy, and proper expression. It is a critical component of learning to comprehend texts. Vocabulary instruction on the other hand, helps to increase the numbers of words for which children know the meanings. This includes helping children understand that a given word can have different meanings depending upon the context. Finally, text comprehension instruction helps children develop purposeful and active strategies for understanding what they read. These strategies include monitoring children's understanding as they read, generating and answering questions about the text, and summarizing important ideas from the text (Oswalt, Reiss &Dombeck, 2011). These five components, according to Northeast and the Islands Regional Technology in EducationConsortium(NEIRTEC, 2004), need to be integrated as children learn to read.

When reading ability or literacy is measured by acquisition of these essential components, the reading and literacy crisis among Nigerian students is evident. For instance, the parents are worried about their children's constant failure, the teachers are concerned about the inconsistent and poor academic performance of students, while the research community laments about the paucity of print-rich environments both at school and home as well as lack of parental involvement. So, for effective application of these reading components,teacher professional skills is a requirement.

Teacher professional skills, also known as teaching skills, refer to a group of teaching acts, or behaviours intended to facilitate pupils' learning directly or indirectly (Schleicher, 2012; Cox, 2015). Teachers need a variety of professional skills in order to be effective in the management of different categories of learners in their class. Some of the skills include; information and communication technology literacy(instructional software) (Davis, 2013); adaptability (Collie & Martin, 2015);and application of universal design for learning (UDL)(Baumann &Melle,2019).

Adaptability as a professional skill implies a change in the teaching process materials and assignments or pupil products to assist a pupil to achieve the expected learning outcomes, that is, outcomes consistent with the curriculum (Monitoba Education Document, 2018). Teaching work involves novelty, change and uncertainty on a daily basis. These three features manifest as teachers try to adjust their thoughts, actions, and emotions in order to successfully respond to the diverse classroom situations or experiences. For instance, at work teachers regularly encounter a diverse range of learners to whom they must respond appropriately, integrate new and changing knowledge from professional learning into their teaching practices, and so on, (Martin, Nejad, Colmar &Liem, 2012). Situations such as these require the teacher to adapt in order to successfully navigate them. When teachers are more adaptable, they tend to report better well-being,and, in turn, greater job commitment (Collie, Martin, &Granziera, 2018). Collie & Martin (2015) reported that students had higher achievement when teachers were more adaptable, and so had better well-being. Being adaptable implies that the modern digital age needs teachers who are flexible and able to adapt to whatever is thrown their way. New technologies

are developed every day that can change the way students learn, and the way teachers teach.

One aspect of technological development as aid to reading is the growth of instructional software. Explained loosely, instructional software refers to computer programmes designed to deliver instruction or to assist in the delivery of instruction on specific topic (Aslin, 2017). An example of instructional software is tutorial software (Information Delivery) (National Centre Technology Innovation, 2019).

Tutorial software is one of the most important software that can effectively address the reading problems of beginning readers (Treiman, 2018). It is one of reading software that has transformed instruction for struggling learners and students with disabilities (Bowers & Bowers, 2017). Tutorial software not only has the ability to read text aloud, they can do so while highlighting individual words or entire words or sentences. They also have features that help students organize their thoughts, while others offer activities that help students learn new concepts (Centre for Applied Special Technology,2018).

Just as students enjoy tutorial software because they enable them work independently, yet receive just-in time support when necessary, so do teachers enjoy the device because it provides targeted reading support that best meets the needs of students (Castles, Rastle& Nation, 2018). Similarly, parents enjoy the device because it offers ideal solutions to the learning difficulties faced by their children (National Centre for Technology Innovation, 2019).

Universal design for learning (UDL) refers to an educational framework based on research that guides the development of flexible learning environments that can accommodate individual learning differences (Coppola, Woodward & Vaughan, 2019). The application of UDL in the classroom enables the teacher to provide multiple means of representation to give learners various ways of acquiring information and knowledge; multiple means of expression to provide learners alternatives for demonstrating what they know; and multiple means of engagement to tap into learners' interests, challenge them appropriately, and motivate them to learn. The intention of UDL is to increase access to learning by removing physical, cognitive, intellectual, and organizational barriers, including other obstacles. Learners with a variety of needs find UDL helpful for their learning (Phuong & Berkeley, 2017), improvement in their grades even when several confounding variables were controlled for (Baumann &Melle, 2019), while the inclusion of UDL in teaching students with specific educational needs, enhanced both their performance and their enjoyment of the learning experience (Centre for Applied Special Technology, 2018).

A teacher who can apply UDL in his/her classroom will be able to know his/her students' strengths and weaknesses, use digital materials when possible, share contents in a variety of ways, offer choices for how students demonstrate their knowledge, take advantage of software supports, Low and No tech options exist, and learn from others (Centre for Applied Special Technology, 2018). For instance, UDL recognizes that if students can't access information, they can't learn it. So in a UDL classroom, materials are accessible to all types of learners. Students have many options for reading, including print, digital, text-to-speech and audio books. For digital texts, there are also options for text enlargement, along with choices for screen colour and contrast. Videos have captions, and there are transcripts for audio(Baumann &Melle,2019).

Therefore, the researchers were interested to examine if there are influences of teachers' professional skills and instructional software on reading ability of lower basic school pupils with learning disabilities in selected schools in Calabar Education Zone, Nigeria.

II. STATEMENT OF THE PROBLEM

The major skills inculcated on the part of the teacher in recent times, are the use of instructional software and effective implementation of teaching skills, especially, when teaching children in lower basic (primary 1-3) school level. Most children are faced with challenges of assimilating and deducing meaning from information received through their sense organs. For effective learning and understanding of concepts, children need to know how to read and understand whatever they read. Reading involves their ability to identify, pronounce, interpret and understand the meaning of letters and words in a sentence. Situations abound where some children even at the final middle basic class (primary 6) level cannot read simple English words. Sadly, though, some of them transit to upper basic level (junior secondary school) without knowing how to read. The alarming rate of this situation is of serious concern to all stakeholders in education sector in Nigeria.

Reading skills facilitate transferring of acquired skills and concepts to alternative contexts; this transfer can only be tested and observed in settings other than those in which the reading skills were taught. Among the most prevalent learning difficulties children have are reading disorders. Children with low reading ability can easily become vulnerable learners, and lose their self-esteem, motivation and confidence, especially, when there have been no support from their teachers. These children see reading as a barrier rather than a tool for learning. Many children with reading difficulties actually have a learning difficulty that affects the skills required for accurate and fluent word reading and spelling. This is so because reading is used as a tool for learning.

Identifying children with reading disabilities seems a daunting task, hence it becomes difficult for non-professional teachers to achieve that task. Even professional teachers are faced with the challenge of adapting curriculum to assist these pupils. The non-availability of such tools and lack of knowledge about some technological tools, couple with the inability to use the available ones make it an issue for teachers to live up to their teaching assignment. It becomes most worrisome when teachers' are not professionally trained to have the interest of these children at heart.

Nonetheless, lack of professional development as well as the inability to make use of available instructional software, such as tutorial software, may wreak havoc on the entire school system, especially, at the basic education level. It is also worthy to note that teachers' inability to apply universal design for learning's (UDL) instructional techniques may pose a serious problem to pupils at this level. The problem of this study is stated thus:to what extent do teacher professional skills and instructional software influence reading ability of pupils with learning disabilities in lower basic schools?This study aims at answering the problem question as stated above.

III. PURPOSE OF THE STUDY

The study was aimed at determining the influence of teacher professional skills and instructional software on reading ability of pupils with learning disabilities in lower basic schools in Calabar Education Zone of Cross River State. The study specifically examined if:

1. Teachers' ability to adapt curriculum has influence on reading ability of lower basic school pupils with learning disabilities.
2. Tutorial software has influence on reading ability of lower basic school pupils with learning disabilities.
3. Promotion of universal design for learning influences reading ability of lower basic school pupils with learning disabilities.

- *Research Questions*

1. How does teachers' ability to adapt curriculum and instructional strategies influence reading ability of lower basic school pupils with learning disabilities?
2. How does tutorial software influence reading ability of lower basic school pupils with learning disabilities?
3. To what extent does promotion of universal design for learning influence reading ability of lower basic school pupils with learning disabilities?

- *Statement of Hypotheses*

1. Teachers' ability to adapt curriculum and instructional strategies has no significant influence on reading ability of lower basic school pupils with learning disabilities.
2. Tutorial software does not significantly influence reading ability of lower basic school pupils with learning disabilities.
3. There is no significant influence of promotion of universal design for learning on reading ability of lower basic school pupils with learning disabilities.

IV. METHODOLOGY

The research design adopted for the study was descriptive survey design. A survey design is a non-experimental design in which the researcher studies a community or a group of people to bring out findings from samples collected from the population through questionnaire, interviews and observation (Isangedighi, 2012). Survey research is a type of research that the researcher does not manipulate the variables under study. The variables of the study are already in existenc at the time of study. The aim of the researchers here is to study the existing effect and relationship of the phenomena as they present themselves during the time of study.

The researchers believe that teachers' professional skills were acquired long before entering into the teaching profession; and that instructional (tutorial) software are available for use by all teachers. However, the use of these variables by teachers with pupils and the relationship of the variables with pupils' reading ability is uncertain. This was what informed the choice of the research design for this study.

The population of this study comprised all the seven thousand, two hundred and eighty-two (7,282) lower basic level two pupils and one hundred and five (105) lower basic level two teachers in the two hundred and seventy-five (275) public basic schools in the study area. All the pupils were in their second year of schooling. None of the pupils had access to pre-basic/nursery education before starting lower basic level one in their present schools. The sample for the study consisted of eight schools made up of twenty-one (21) teachers with more than five years teaching experience for teaching children with reading disabilities and twenty-two (22) pupils who were identified by the school authorities as having reading disabilities, thus, being persons with learning disabilities.

Purposive sampling technique was used in selecting the sample for this study. The small number of the population made the technique most appropriate for this study.

Table 1 below shows the population for the study.

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S/N	Schools	Teachers Male	Teachers Female	Pupils Male	Pupils Female
1	Tender hearts Schools Calabar	0	3	2	2
2	University of Calabar Staff Schools	1	1	0	2
3	Impact Nursery and Primary Schools	0	2	2	2
4	Hillcrest Schools	2	2	2	2
5	Aunty Samas International Nursery and Primary	1	2	1	2
6	Best Christian Schools	0	2	0	2
7	Sweet Kiddies Schools	0	2	0	1
8	Greenland Schools (Special Education)	1	1	1	1
	TOTAL	5	16	8	14

Table 1:- The Accessible Population in the Study Area.
Source: School Records

Instruments for data collection in this study were two: (a) Teachers Professional Variables Questionnaire (TPVQ) and (b) Reading Test (RT). The questionnaire instrument was divided into two (2) parts. Part 1measured the demographic variables of the respondents while part 2 measured the variables under consideration. The questionnaire instrument was designed based on four-point Likert scale thus: very often, often, rarely, never; low, moderately adequate, highly adequate; and strongly agree, agree, disagree and strongly disagree. The test items were set to measure the reading ability of the pupils with reading disabilities. The test measured four skills believed to constitute good reading ability. These were: identification, pronunciation, interpretation, and understanding. The test instruments were administered to the children by the researchers with the aid of their class teachers.

In this study, content and face validity of the instruments were determined. All the instruments were subjected to four experts' judgment- one professional each in the area of reading and educational evaluation, test and measurement, and two special educators. The reliability of the instruments was determined through Cronbach Alpha method using forty-two (42) respondents (21 teachers and 21 pupils). The coefficients of stability obtained for each instrument were as presented in table two.

S/No	Variables	No of items	$\overline{X}$	SD	$\dot{\alpha}$
1	Teacher's ability to adapt curriculum	6	16.000	2.449	.69
2	Tutorial software	6	19.400	3.209	.76
3	Universal design for learning	6	15.400	2.408	.69
4	Reading ability	25	25.33	10.67	.71

Table 2:- Cronbach Alpha Coefficient Reliability Estimate for Teachers Professional skills and Instructional (Tutorial) Software respectively.

The researchers prepared a letter of introduction and presented to the headteachers and/or proprietors of the schools for permission and cooperation to carry out the study. Copies of the questionnaire which was the main instrument for data collection were administered to the teachers who were the sole respondents in the study in each of the sampled schools. The researchers then,with the assistance of the class teachers,administered the test to only pupils with reading disability in their schools. The researchers ensured that reading test was administered on pupils who were actually identified as having difficulties in reading. All the completed copies were collected by the researchers immediately to avoid loss of questionnaire.

A coding schedule designed to score the positive responses of the respondents (teachers) was 4 (very often), 3 (often) 2 (rarely), and 1 (never) while for negatively worded items the scoring was done in a reverse order, thus: 1 (low/strongly agree), 2 (agree/moderately agree), 3 (adequate/disagree), and 4 (highly adequate/strongly disagree). For the reading test, all the four test instruments (identification, pronunciation, interpretation, and understanding) had 25 items. Each correct response attracted two marks while each wrong answer earned zero mark.

Simple regression analysis was used to analyse data for the three hypotheses at.05 level of significance, the composite influence of teachers' professional skills and instructional software on reading ability of the pupils was analysed using multiple regression, while Beta weights were used to compare the differential weights of the sub-variables of teacher professional skills and instructional software on the reading ability of pupils. The study was conducted in eight schools.

Variables	Mean	Std. Deviation	N
Reading ability	30.7143	8.38536	21
Curriculum adaptation	18.9524	2.67350	21
Tutorial software	18.3333	4.46468	21
Universal design	18.7143	5.	21

Table 3:- Descriptive analysis of mean and standard deviation of the variables

- *Hypothesis One*

Teachers' ability to adapt curriculum and instructional strategies has no significant influence on reading ability of lower basic school pupils with learning disabilities in Calabar education zone, Cross River State.

The simple regression analysis was used in the data analysis and the result was as shown in table 4.

R	R Square	Adjusted R Square	Std. Error of the Estimate		
.635	.403	.372	6.64604		
	Sum of Squares	Df	Mean Square	F-ratio	p-value.
Regression	567.058	1	567.058	12.838	.002[b]
Residual	839.228	19	44.170		
Total	1406.286	20			

a. Predictors: (Constant), teachers' ability to adapt curriculum and instructional strategies

b. Dependent Variable: reading ability

Table 4:- Simple Regression Result of the Influence of Teachers' Ability to Adapt Curriculum and Instructional Strategies on Reading Ability of Lower Basic School Pupils with Learning Disabilities in Calabar Education Zone, Cross River State, Nigeria.

Table 4 shows the result of the simple regression analysis of the influence of teachers' ability to adapt curriculum and instructional strategies on reading ability of lower basic school pupils with learning disabilities in the study area. The regression model produced an R = .635. This indicates that the teachers' ability to adapt curriculum and instructional strategies is strongly positively correlated with reading ability. That is the more the teachers are able to adapt curriculum and instructional strategies the more the reading ability of the pupils. The R^2 of .403 implies that teachers' ability to adapt curriculum and instructional strategies accounted for 40.3% of the variance of reading ability of the pupils with learning disabilities in the study area. This finding is a critical indication that the teachers' ability to adapt curriculum and instructional strategies is a relative predictor of reading ability among pupils with learning disabilities in the State. The F-value of the Analysis of Variance (ANOVA) obtained from the regression table was F =12.84 to 2 decimal places and the p-value of .002 (or p<.05) at the degree of freedom (df) 1 and 19. The implication of this result is that the null hypothesis is rejected and the finding drawn from the result is that there is significant influence of teachers' ability to adapt curriculum and instructional strategies on the reading ability of lower basic school pupils with learning disabilities.

- *Hypothesis Two*

Tutorial software does not significantly influence reading ability of lower basic school pupils with learning disabilities in CalabarEducation Zone, Cross River State.

The simple regression analysis was used in the data analysis and the result was given in table 5.

R	R Square	Adjusted R Square	Std. Error of the Estimate		
.813[a]	.662	.644	5.00517		
	Sum of Squares	Df	Mean Square	F-ratio	p-value
Regression	930.304	1	930.304	37.135	.000[b]
Residual	475.982	19	25.052		
Total	1406.286	20			

a. Predictors: (Constant), tutorial software

b. Dependent Variable: reading ability

Table 5: Simple Regression Result of the Influence of Tutorial Software on Reading Ability of Lower Basic School Pupils with Learning Disabilities in Calabar Education Zone, Cross River State, Nigeria.

Table 5 shows the result of the simple regression analysis of the influence of tutorial software on reading ability of lower basic school pupils with learning disabilities. The regression model produced an R = .813[a].This implies that tutorial software is highly positively correlated with reading ability. That is the more the application of tutorial software during reading instruction the more the reading ability of the pupils. The R^2 of .662 implies that tutorial software accounted for 66.2% of the variance of reading ability of the pupils with learning disabilities. This finding is a critical indication that tutorial software is a strong predictor of reading ability among pupils with learning disabilities in the State. The F-value of the Analysis of Variance (ANOVA) obtained from the regression table was F =37.14to 2 decimal places and the p-value of .000or p<.05) at the degree of freedom (df) 1 and 19. The implication of this result is that the null hypothesis is rejected and the finding drawn from the result is that there is significant influence of tutorial software on the reading ability of lower basic school pupils with learning disabilities.

- *Hypothesis Three:*

There is no significant influence of promotion of universal design for learning on reading ability of lower basic school pupils with learning disabilities in Calabar Education Zone of Cross River State.

The simple regression analysis was used in the data analysis and the result was given in table 6.

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R	R Square	Adjusted R Square	Std. Error of the Estimate		
.975[a]	.951	.948	1.91022		
	Sum of Squares	Df	Mean Square	F-ratio	p-value
Regression	1336.956	1	1336.956	366.396	.000[b]
Residual	69.330	19	3.649		
Total	1406.286	20			
a. Predictors: (Constant), universal design					
b. Dependent Variable: reading ability					

Table 6: Simple Regression Result of the Influence of Universal Design on Reading Ability of Lower Basic School Pupils with Learning Disabilities in Calabar Education Zone, Cross River State, Nigeria.

Table 6 shows the result of the simple regression analysis of the influence of universal design for learning on reading ability of lower basic school pupils with learning disabilities in the study area. The regression model produced an R = .975[a].This implies that universal design for learning is highly positively correlated with reading ability. That is, the more the teacher applies the universal design for learning the more the reading ability of the pupils. The R^2 of .951 implies that universal design for learning accounted for 95.1% of the variance of reading ability of the pupils with learning disabilities. This finding is an indication that the universal design for learning is a strong predictor of reading ability among pupils with learning disabilities in the State. The F-value of the Analysis of Variance (ANOVA) obtained from the regression table was F =366.39 to 2 decimal places and the p-value of .000or p<.05) at the degree of freedom (df) 1 and 19. The implication of this result is that the null hypothesis is rejected and the finding drawn from the result is that there is significant influence of universal design for learning on the reading ability of lower basic school pupils with learning disabilities.

- *Hypothesis Four*

There is no significant composite influence of teacher professional skills and instructional software on reading ability of pupils with learning disabilities in lower basic schools in Calabar Education Zone of Cross River State.

The result of the composite influence of the teacher professional skills and instructional software on reading ability of pupils with learning disabilities in lower basic schools is presented in table 7.

R	R Square	Adjusted R Square	Std. Error of the Estimate		
.980[a]	.960	.943	1.99706		
	Sum of Squares	Df	Mean Square	F-ratio	p-value
Regression	1350.450	6	225.075	56.435	.000[b]
Residual	55.835	14	3.988		
Total	1406.286	20			
A. Dependent variable: reading ability					
B. Predictors: (constant), teachers' ability to adapt, tutorial software, universal design					

Table 7:- Multiple Regression of the Influence of Teacher Professional Skills and Instructional Software on Reading Ability of Pupils with Learning Disabilities in Lower Basic Schools in Calabar Education Zone of Cross River State, Nigeria.

Table 7 shows that the selected teacher professional skills and instructional software put together contributed 96.0% (R^2 = .960) of the total variance reading ability of pupils with learning disabilities in lower basic schools in the study area. This implies that teachers' professional skills and instructional software considered in this study compositely covered a high percentage of the factors that influenced the reading ability of pupils with learning disabilities in lower basic schools in the study area. Again, from the ANOVA table of regression, the result obtained for F-value = 56.44, p<.05 at df of 6 and 14 indicated that the composite influence of the factors that influence reading ability was significant. Therefore the null hypothesis is rejected; hence there was significant influence of the composite effect of the teacher professional skills and instructional software on reading ability of pupils with learning disabilities in lower basic schools in the study area.

Meanwhile, comparing the differential weights of the sub-variables of teacher professional skills and instructional software on the reading ability of pupils with learning disabilities in lower basic schools in the study area presented in table 8, revealed that there are variations in the standardized coefficient beta values. The universal design for learning (Beta = .862) has the highest influence followed by the tutorial software (Beta = .173), and curriculum adaptation (Beta = .029).The beta weight indicated the weight of the impact of the teachers' professional skills and instructional software on the reading ability of the pupils. In order words, the universal design for learning is the most critical contributor to reading ability of lower basic school pupils with learning disabilities in CalabarEducation Zone, Cross River State.

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Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	1.386	3.785		.366	.720
Tutorial software	.326	.276	.173	1.182	.257
Curriculum adaptation	.090	.316	.029	.285	.780
Universal design	1.308	.161	.862	8.139	.000
Dependent Variable: Reading ability					

Table 8: Coefficient of the Beta Weights of the Teachers' Professional Skills and Instructional Software on Reading Ability of Pupils with Learning Disabilities in Lower Basic Primary Schools in Calabar Education Zone of Cross River State, Nigeria.

V. DISCUSSION OF FINDINGS

The main objective of this study was to investigate the influence of teacher professional skills and instructional software on reading ability of lower basic level school pupils with learning disabilities. The pilot study revealed that teacher professional skills and instructional software are vital to lower basic level two pupils' acquisition of reading ability. This is because the result of the analysis revealed thattutorial software, teachers' ability to adapt curriculum, and promotion of universal design for learning showed significant influence on pupils' reading ability. The importance of teacher professional skills and instructional software to lower basic pupils' reading ability is further confirmed by the result of the composite influence of the teacher professional skills and instructional software on reading ability of the pupils which together contributed 96.0% (R^2 = .960) of the total variance reading of the pupils involved in the study (see table 7). Again, a comparison of differential weights of the sub-variables of teacher professional skills and instructional software on the reading ability of the pupils revealed variations with high influence in the standardized coefficient beta values (see table 8).

For pupils to learn, teachers have to teach effectively, but the situation in the Nigerian public school system has always been that her education system pays little attention to what teachers know or what they do in the classroom. The Nigerian government acts as if teacher skills do not matter. The study showed that equipped and motivated teachers are the most fundamental ingredients of learning that can guarantee prepared and motivated learners. The goal of equipping teachers with professional skills is to ensure student success which can be accomplished through individualized instruction with a focus on students' strengths, learning style, and unique needs in order to develop skills and independence.

Again, the study showed that teachers equipped with professional skills are capable of responding to students by adjusting lesson pacing, adapting activities, or seek out new resources to better illustrate main points; responding to unexpected classroom management situations by keeping in check emotions that may arise (such as frustration) and thinking of alternative ways to solve problems etc. Reflecting and applying these methods indicate the teachers' ability to adapt curriculum and instructional strategies to help with pupils' reading ability.

Further, the result of the study showed that teachers' ability to apply tutorial software in the classroom has the potential to enhance lower basic pupils' reading ability. Some tutorial software are aimed at very young learners who may find clever ways to explain and demonstrate concepts with graphics, succinct phrases or sentences, or audio directions coupled with screen displays. Tutorial software provides lower basic level learners with independent learning opportunity, thus helping reading disabled pupils to practice reading at their own pace.

Additionally, the result of the findings of the study exposed teachers to the understanding that their ability to apply universal design for learning (UDL) in the classroom has the potential to remove barriers to learning and give all lower basic pupils equal opportunity to succeed. With UDL, teachers can build in flexibility that can be adjusted for every pupil's strengths and needs and pupils will have opportunity to demonstrate their knowledge.

The findings of this study have implications for positively enhancing teachers' knowledge of teacher professional skills and instructional software they can employ to improve their classroom reading instruction and/or pupils' reading ability. Teachers' desire for a variety of professional development skills along with knowledge of their subject matter and experience in order to be effective in reading instruction will be influenced positively. A further implication of the result of the findings of the study for teachers is their realization that being a teacher can also be extremely demanding. Irrespective of the age of their pupils, teachers must constantly develop their skills and adapt their pedagogy to meet every pupil's needs. And in this changing technological world, as modern teachers, they must work harder than ever to keep up.

VI. CONCLUSION

The result of this study revealed a significant influence of teacher professional skills and instructional software on reading ability of lower basic level school pupils.The result of this study revealed that teachers' ability to adapt curriculum and instructional strategies, use tutorial software, and apply universal design for learning during classroom instruction significantly influence reading ability of lower basic school pupils as shown by the combined result of teacher professional skills and instructional software which produced 96.0% (R^2=.960).

Similarly, comparison of differential weights of the sub-variables of teacher professional skills and instructional software on reading ability of the pupils covered by this study showed variations with high influence in the standardized coefficient beta values. In this modern, digital age, teachers need to be flexible and be able to adapt to whatever they face in the classroom.

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