INTERNATIONAL JOURNAL OF EDUCATIONAL AND SCIENTIFIC RESEARCH FINDINGS, MAY, 2025, ISSN: 2749-7481 VOL. 7 NO.1, GERMANY

INSTRUCTIONAL MEDIA AND PUPILS' INTELLECTUAL DEVELOPMENTS IN ITU LOCAL GOVERNMENT AREA

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ABSTRACT

This study investigated the relationship between instructional media and pupil's intellectual development in Itu Local Government Area. Three research questions and three null hypotheses were postulated to guide the study. Correlational survey research design was adopted and used for this study. Correlational survey research design was adopted and used for the study. The population of the study was 110 teachers and 2,654 ECC pupils in all the 38 public primary schools in Itu Local Government Areas. A sample size of 210 participants selected through multi - stage sampling technique was used to select the respondents for the study. Teachers' Utilization of Instructional Media Questionnaire (TUIMQ) and Pupils Intellectual Development Rating Scale (PIDRS) were used as the instruments for the study. The instruments which yielded reliability was determined. Cronbach's Alpha Statistic was used for instruments reliability coefficients indices of 0.88 and 0.79 respectively. Pearson Product Moment Correlation (PPMC) was used in anwsering the research questions, test the null hypotheses at 0.05 level of significance. The findings showed that there is a strong positive and significant relationship between print, visual and electronic instructional media and pupils' intellectual development in Itu Local Government Area. Based on the findings of the study, it was recommended among others that the government and stakeholders in the education system should give more attention to massive supply of diverse instructional media to all the schools in the federation and supervisors should be assigned to different schools to ensure that teachers are closely monitored to use instructional aid for each topic taught in order to improve pupils' intellectual development.

KEYWORDS: Instructional Media, Pupils Intellectual, Developments, Local Government Area

INTRODUCTION

Intellectual development is the construction of thought processes, including remembering, problem - solving, and decision making, from childhood through adolescence to adulthood. Intellectual development refers to functions of the brain such as thinking, learning, awareness, judgement and processing information (Ken, 2007). These are things healthy children do quite naturally as they learn and grow. The study on intellectual or cognitive

development according to Eneh and Nkang (2011) is characterized with the increasing ability to grasp relationships, solve difficult problems, use abstract reasoning, deal with abstract symbols in mathematics, remember events, use language effectively in communication and use past experiences to solve present and future problems. The Swiss philosopher Jean – Piaget (1896 – 1980) was the first to suggest that from birth, babies begin to actively learn. The gather, sort, and process information from around them, using the data to develop perception and thinking skills. According to Roode (2020) intellectual development refers to how a person perceives, thinks, and gains understanding of his or her world through the interaction of genetic and learned factors. The cognitive domain of learning involved knowledge and the development of intellectual skills. It includes the recognition of specific facts, procedural patterns and concepts that serve in the development of abilities and skills. Among the areas of intellectual development are information processing, intelligence, reasoning, language development and memory. Children's intellectual development, which includes creativity, discovery language skills, verbal judgement and reasoning, symbolic thought and the ability to focus and control behavior are all heavily influenced by so many factors including instructional media.

The place of instructional media in the teaching and learning process is undoubtedly essential if there is going to be improvement in pupils' intellectual development. They are indispensable in the teaching and learning process. In most Nigerian schools, modern instructional materials like language laboratories, computers, word processors and audio – visual aids are not provided because of their cost and personnel to run them. Not using these materials makes teaching and learning process difficult and burdensome.

The term "instructional media", according to Romiszowski (2017), refers to devices and materials employed in the teaching and learning. It includes hardware like blackboards, ratio, television, tape recorders, video tapes and recorders and projectors and soft wares like transparencies, films, slides teacher – made diagrams, real objects, cartoons, models, maps, and photographs (Opoku – Asare, 2014). Similarly, scanlan (2013) indicates that instructional media encompasses all the materials and physical means an instructor might use to implement instruction and facilitate pupils' achievement of instructional objectives. This may include traditional materials such as chalkboards, handouts, charts, slides, overheads, real objects and videotape or film, as well newer materials and methods such as computers, DVDs, CD – ROMs, the Internet and interactive video conferencing.

Talabi (2011) asserts that instructional media are generally designed to provide realistic images and substitute experience to reach curriculum experiences. The media are considered the most efficient facilitators in the education set up. They are not substitutes for the teacher. Their use however, calls for an imaginative approach by the teacher who needs to constantly be on alert for new ideas and techniques to make the lessons prepared with different instructional media achieve effective outcomes. Talabi (2011) further said that some devices are designed to present information of a kind that would not be available in an ordinary school experience. Example include, films, television, sound recordings. Other types of instructional media have the function to help the pupil grasp the underlying structure of a phenomenon. Visual media are primarily for seeing, audio devices for hearing and multi – sensory materials for use via two or more senses.

According to Opoku – Asare (2011), instructional media refers to devices and materials employed in teaching and learning. It includes hardware like blackboards, radio, television, tape – recorders, videotapes and projectors, and software like transparencies, films, slides,

teacher – made diagrams, real objects, cartoons, models, maps and photographs. Scanlan (2003) states that instructional media includes all the materials and physical means an instructor might use to implement instruction and facilitate pupils' achievement instructional objectives. This may include traditional materials such as chalkboards, handouts, charts, slides, overheads, real object, videotapes or films as well as modern materials and methods such as computers, DVD's, CDROM's. The internet and interactive video – conferencing. Nyame – Kwarteng (2006) also holds the view that instructional media are the various materials that appeal to the five senses seeing, hearing, touching, feeling and tasting which enhance teaching and learning. They affect different senses that act as an integral part of the teaching and learning process and also help to bring about meaningful experiences. However, this research is to investigate the influence of instructional media on intellectual development pupils.

Print media are the literary forms of information preserved in autograph or transmitted format. They include exercise books, study guides, handouts, and other print materials. They are important because they provide imagery for both instructors and pupils. They also provide realistic details necessary for visual recognition of important subject material. With these materials teachers are able to often refer to the learning objective, terminologies, learning outcome, exercise on the introductory page in order to have a better picture of what the learner must know. During the lesson, printed materials offer at least one 'example' and one 'try this' to enable learners have hands – on experience in the learning process. They also provide reference materials to offer to at any time (Talabi, 2011 and Nyame – Kwarteng, 2016).

Accordingly, print media helps to enhance pupils' interest and broaden their perspectives towards global activities. Print media is a rather commonly used term referring to the medium that disseminates printed matter. In everyday life, we refer to print media as the industry associated with the printing and mostly with the distribution of news through a network of media, such as newspapers and journals. People also refer to print media simply with the term "press". It is an intermediate communicative channel aiming at reaching a large number of people. Print media include all printed forms of press: Newspapers, newsletters, booklets magazines and pamphlets as well as other printed publications that sell advertising space to raise revenue. Most print media, with the exception of magazines and journal are local or national, while many magazines are international. A complete catalog of print media should also include yearbooks and presentations of events and programmes. Nwike and Onyejegbu (2013) studied the effects of use of instructional material on student cognitive achievement in agricultural science in secondary schools or Orumba South Local Government Area. The findings revealed that students taught with instructional materials performed better than those taught without instructional materials.

Also, Salem (2021) investigated on impact of print media on student's academic performance of Varanasi City, India. The result of the study revealed that percent of the selected students; for the study were accessed print media sources by both public and private school students. The majority of the students from both schools were encouraged by print media to do new and innovate things with their academic projects and assignments and also the majority of the students stated that print media sources were helpful in their academic performance in most of the cases. So, it was concluded from the study that printed sources are useful in their academic because it covers so many educational and informative issues.

According to Okeke (2013) visual media are any visible materials or equipment employed while teaching to aid learning. Okeke further explains that visual aids such as

pictures and photographs facilitate learning by supplementing teacher's verbal information. This underlies a well – founded theoretical underpinning that pictures, images and other visible aids promote better understanding to students than words alone (Mayer, 2005). Over generations, different kinds of visual aids have been used by teachers to enable meaningful learning. Some new form constantly emerges as a result of improvements in educational science and technology (Krukru, 2015). Preference for visual media in educational is natural for human beings. Babies retain visual images long before they recall faces of close people such as parents and other siblings and associate things like fire with pain. As children grow up and mature cognitively, visuals become even more important. Jean Piaget's cognitive development theory describes the years between 2 to 7 as a pre – operational period where the child learns to use and represent objects by images, words, and drawings. Use of concrete objects visual aids such as drawings and illustrations are crucial in teaching children at this stage (Woolfolk, 2014).

Literature support that visual sense is a critical factor for learning. A study conducted by a psychologist and educator Jerome Brunner, cited by Lester (2012), showed that persons remember only 10 percent of what they read, but about 80 percent of what they see and do. According to Gould and Roffey – Barentsen (2018) 83% of our learning is achieved through the sense of sight. 11% comes from the sense of hearing, 3.5% through the sense of smell, 1.5% through the sense of touch and another 1% through the sense of taste. The pre-eminence of visual sense in learning further bears credence in famous Chinese proverbs "one sighted is worth, a hundred words".

In 2017, Harwood and Mc Mahon carried out a study to explore the effects of integrated video media on students' achievement in chemistry. Among the findings was that the treatment students who experienced chemistry course enhanced with structured chemistry video series showed significant higher achievement than control group. It was also found out that students enjoyed learning through videos. Bui and McDaniel (2015) investigated the influence of outlines and illustrative diagrams in enhancing learning, it was found out that illustrative diagrams were instrumental in bringing better performance among students. Likewise, Vaughn and Wang (2009) researched the influence of user – controlled visual aid for improving students' understanding in introductory statistics. Findings showed that the particular animated visual aid significantly improved student's academic performance and confidence in applying – level knowledge. Carpenter and Olson (2011) study examined the effect of teaching new vocabularies through pictures and it was found that there was significant advantage in the recall of Swahili words from pictures compared with English translations. Oladejo *et.al.,* (2011 investigated the effect of using improvised instructional materials on academic achievement of secondary school physics students in Oyo state, it was found out that students exposed to instructional materials with some elements of audio – visual aids achieved better than students taught with standard instructional materials.

Modern technology has expanded from use as technology for communication and online entertainment to tools in education for developing cognitive thinking and enriching academic activities. Among the categories of instructional materials, the electronic media have been described as the most powerful weapon of instruction both in schools and anywhere social knowledge is impacted. The reason is not far – fetched advances in technology have brought electronic media to the forefront as the most radical tools of globalization and social development. Such technological breakthroughs as networked and non – networked; projected and non – projected; visual, auditory, audio – visual electronic media are important landmarks

in knowledge transfer. With them both, teaching and learning become very pleasant experiences. Their power to teach and socialize has been varied as documented in literature.

Electronic instructional media as defined by Okwelle and Alagoa (2014) are the aid whose devices require electricity to produce clear image and give meaning to reality in teaching – learning process. Examples include, specimen slides, computer labs, power point slides, simulations, multimedia, video games, internet systems, overhead projectors, microforms, instructional television among others. The authors added that these materials can help pupils develop functional knowledge of their subject of study as they stimulate learners' interests in curiosity. They enrich the class, save time and overcome classroom barriers (Delma 2010). Okwelle and Alagoa (2014) believed that the modern electronic instructional materials can provide the teacher with meaningful and useful source of information, interesting and competitive platforms for conveying information, helps the teacher overcome physical difficulties in presentations of learners and save time. pupils as well develop functional knowledge, manipulative skills and understanding of their subject as the materials facilitate, stimulate curiosity and different learning styles. More so, Esu, Enukoha and Umoren (2009) found that skillful utilization of these media can transform a dull and difficult class into an exciting class producing effective learning.

Ofili (2012) researched on instructional television utilization for the enhancement of cognitive skills; implication for the challenges of science education in Niger State, Nigeria. The study used quasi experimental design. A sample of 80 students representing SS2 physics students in the research area was used for the study. Physics Achievement Test (PAT) was used as instrument for data collection. Data collected was analyzed using t – test statistics. The findings revealed among other that instructional television enhanced academic performance of physics students. In the same vein, Okworo (2010) reported that television and video – tape motivates and stimulates learners to learn materials, which may not be available in the real environment. Staylor (2010) earlier opined that the use of multimedia, which is the use of two or more instructional media in biology instruction can make difficult and abstract concepts to become real and interesting thereby resulting to meaningful learning.

Nweke, Dirisu and Umesi (2015) corroborating Staylor, examined the effect of synchronized multimedia (MM) on motivation and academic performance of 200 biology students. The study utilized questionnaire and achievement test to collect data. Findings showed a significant difference in the mean score of students taught biology with synchronized MM (M = 51) and students who received lesson without synchronized MM (M = 23). Yuvuv, Servet and Levent (2010) studied the predictors of academic achievement and attitude of secondary school students in Bilgi City of Turkey. Survey research design was used and questionnaire used for data collection. Data collected were analyzed using t – test and one – way analysis of variance. Findings revealed no significant relationship between web – based education and students' academic achievement.

Speaking on the availability and usability of modern electronic instructional media in classrooms and laboratories. Adams (2011) and Udeani (2012) lamented that most public schools in Nigeria may be lacking or not have access to these materials, thus teaching subjects concepts in abstract, the outcome may be poor performance of students in both internal and external examination. Therefore, this study examines the relationship between instructional media and pupils' intellectual development.

STATEMENT OF PROBLEM

Education is a continuous, lifelong process, which starts as soon as one is born. Early childhood is the most important period in the intellectual development of the child. Since preschool education is the basics of formal learning, special attention must be given its implementation and in determining how it can help children to develop. The sad truth of many school buildings is dilapidated and learning facilities are far from being adequate. With these large class sizes, one wonders the frequency at which teachers apply the use of instructional media that facilitate learning. Also, the use of instructional media in primary schools is not encouraging. As a result, it delays pupils' intellectual development. This is because teachers adopt the verbalistic and theoretical method as a way of teaching and learning subjects, mainly due to non – availability of instructional media in schools. The problem of this study therefore put in question from is: what is the relationship between instructional media and pupils' intellectual development in Itu Local Government?

PURPOSE OF THE STUDY

The study investigated the relationship between instructional media and pupils' intellectual development in Itu Local Government Area. Specifically, the study sought to:

i. Ascertain the relationship between print instructional media and pupils' intellectual development.
ii. Determine the relationship between visual instructional media and pupils' intellectual development.
iii. Determine the relationship between electronic interactive instructional media and pupils' intellectual development.

SIGNIFICANCE OF THE STUDY

This study would be useful to classroom teachers, curriculum planners, students, researchers and parents. For teachers, they would be better informed on how to help and guide their pupils to do some of the illustrations during the instructions.

This study would help to develop problem solving skill in pupils and would also help pupils to be more resourceful during lessons. The study could be beneficial to curriculum planners who would design functional curriculum by taking into considerations teacher improvised instructional materials. The findings of this study, if discussed in workshops and seminars would guide the choice of improvised instructional media used in the teaching/learning process in any subject areas. The results of the study could provide information to researchers interested in working on instructional media in any subject areas. This may help them to get more information on the efficacy of instructional media, especially researchers in the area of science and technology.

Parents would be better informed on to encourage and help their wards to produce improvised materials. This may be in form of sourcing local materials and provide fund for those that cannot be found in their environment.

RESEARCH QUESTIONS

The following research questions were formulated to guide the study;

i. What is the relationship between print instructional media and pupils' intellectual development?

ii. What is the relationship between visual instructional media and pupils' intellectual development?
iii. What is the relationship between electronic interactive instructional media and pupils' intellectual development?

NULL HYPOTHESES

The following null hypotheses were formulated and tested at 0.05 level of significance:

i. There is no significant relationship between print media and pupils' intellectual development.
ii. There is no significant relationship between visual instructional media and pupils' intellectual development.
iii. There is no significant relationship between electronic interactive instructional media and pupils' intellectual development.

SCOPE OF THE STUDY

The geographical scope covered the public primary schools in Itu Local Government Area. The present study focused on the instructional media and pupils' intellectual development. The study was delimited to teachers and pupils' in ECC II. The independent variable in the instructional media to include print, visual and electronic while the dependent variable is pupils intellectual development.

RESEARCH METHOD

Research Design

The correlational survey research design was adopted for the study. The study was conducted in Itu Local Government Area of Akwa Ibom State, Nigeria. The population of the study comprised all the 110 teachers and 2,654 ECC pupils in all the 38 primary schools in Itu Local Government Areas (Akwa Ibom State Ministry of Education, 2021). A sample size of 210 participants selected through multi-stage sampling technique was used to select the respondents for the study. For the purpose of this study, two researcher – made instruments were used for data collection known as: Teachers' Utilization of Instructional Media Questionnaire (TUIMQ) and Pupils' Intellectual Development Rating Scale (PIDRS). Face and content validity were established for Teachers' Utilization of Instructional Media Questionnaire' (TUIMQ) and Pupils' Intellectual Development Rating Scale (PIDRS) were given to three experts, one from Educational Technology, one from Early Childhood Education and one from Measurement and Evaluation, Faculty of Education, University of Uyo, who independently assessed the various items to ascertain their relevance to the research questions, hypotheses and language used in developing the items. However, the scored obtained from the validated instruments were used to compute the reliability coefficient using Cronbach's Alpha Statistics that yielded the reliability indices of 0.88 and 0.79 respectively. These high reliability coefficients confirmed that these variables were internally consistent. Pearson Product Moment Correlation (PPMC) was used for answering the research questions by comparing the values with the extent scale of correlation also used for testing the hypotheses by comparing it with the critical – r –value. The entire hypotheses formulated were tested at .05 level of significance.

RESULTS

Answering of Research Questions

Research Question One

What is the relationship between print instructional media and pupils' intellectual development?

Table 1: Pearson's Product Moment Correlation Analysis of the relationship between print instructional media and pupils' intellectual development. (n = 210)

Variables	ΣX ΣY	ΣX² ΣY²	ΣXY		r	R²
Print Instructions media	2376	43366				
			40712	0.72	0.52	
Pupils' Intellectual Development	2241	38735				

$\dot{\alpha}$ = 0.05, R^2 = coefficient of determination.

Results on Table 1 is correlation coefficients of the relationship between print instructional media and pupils' intellectual development. Results showed that the correlation between print and instructional media and pupils' intellectual development was 0.72. This means that there was a strong positive relationship between print instructional media and pupils' intellectual development. The coefficient of determination associated with 0.72 is 0.52. the coefficient of determination (0.52) also known as the predictive value means that 52% of print instructional media accounted for the variation in pupils' intellectual development. This is an indication that 48% of variation in pupils' intellectual development is attributed to other factors other than print instructional media.

Research Question Two

What is the relationship between visual instructional media and pupils' intellectual development?

Table 2: Pearson's Product Moment Correlation Analysis of the relationship between visual instructional media and pupils' intellectual development. (n = 210)

Variables	ΣX ΣY	ΣX² ΣY²	ΣXY		r	R²
Visual Instructional media	2376	43366				
			40737	0.69	0.48	
Pupils' Intellectual Development	2243	38835				

$\dot{\alpha}$ = 0.05, R^2 = coefficient of determination.

Result on Table 2 is a correlation coefficient of the relationship between visual instructional media and pupils' intellectual development. Results showed that the correlation between visual instructional media and pupils intellectual development was 0.69. This means that there was a strong positive relationship between visual instructional media and pupil' intellectual development. The coefficient of determination associated with 0.69 is 0.48. The coefficient of determination (0.48) also known as the predictive value means that 48% of visual instructional media accounted for the variation in pupils' intellectual development. This is an

indication that 52% of variation in pupils' intellectual development is attributed to other factors other than visual instructional media.

Research Question Three

What is the relationship between electronic instructional media and pupils' intellectual development?

Table 3: Pearson's Product Moment Correlation Analysis of the relationship between electronic interactive instructional media and pupils' intellectual development. (n = 210)

Variables	ΣX ΣY	ΣX^2 ΣY^2	ΣXY	r	R^2
Visual Instructional media	2376	43366	43472	0.95	0.90
Pupils' Intellectual Development	2280	43472			

$\dot{\alpha}$ = 0.05, R^2 = coefficient of determination.

Result on Table 3 is a correlation coefficient of the relationship between electronic interactive instructional media and pupils' intellectual development. Results showed that the correlation between electronic interactive instructional media and pupils intellectual development was 0.95. This means that there was a strong positive relationship between electro

nic interactive instructional media and pupils' intellectual development. The coefficient of determination (90) associated with 0.95 is 0.90. The coefficient of determination also known as the predictive value means that 90% of electronic interactive instructional media accounted for the variation in pupils' intellectual development. This is an indication that 10% of variation in pupils' intellectual development is attributed to other factors other than electronic interactive instructional media.

TESTING OF HYPOTHESES

Hypothesis One

There is no significant relationship between print media and pupils' intellectual development.

Table 4: Pearson's Product Moment Correlation Analysis of the significant relationship between
print media and pupils' intellectual development. (n = 210)

Variables	ΣX	ΣX^2 ΣY^2	ΣXY	r-cal.	r – crit.
Visual Instructional media	2376	43366	40712	0.72	0.178
Pupils' Intellectual Development	2241	38735			

$\dot{\alpha}$ = 0.05

The result presented in Table 4 revealed that the calculated r – value of 0.72 is greater than the critical r – value of 0.178 at 0.05 level of significance with 208 degrees of freedom. With this result, the null hypothesis one is rejected. This implies that there is a significant relationship between print instructional media and pupils' intellectual development.

Hypothesis Two

There is no significant relationship between visual instructional media and pupils' intellectual development.

Table 5: Pearson's Product Moment Correlation Analysis of the significant relationship between visual instructional media and pupils' intellectual development. (n = 210)

Variables	ΣX	ΣX^2 ΣY^2	ΣXY	r-cal.	r – crit.
Visual Instructional media	2376	43366	40737	0.69	0.178
Pupils' Intellectual Development	2243	38835			

$\dot{\alpha}$ = 0.05

The result presented in Table 5 revealed that the calculated r – value of 0.69 is greater than the critical r – value of 0.178 at 0.05 level of significance with 208 degrees of freedom. With this result, the null hypothesis two is rejected. This implies that there is a significant relationship between visual instructional media and pupils' intellectual development.

Hypothesis Three

There is no significant relationship between electronic interactive instructional media and pupils' intellectual development.

Table 6: Pearson's Product Moment Correlation Analysis of the significant relationship between visual instructional media and pupils' intellectual development. (n = 210)

Variables	ΣX	ΣX^2 ΣY^2	ΣXY	r-cal.	r – crit.
Visual Instructional media	2376	43366	40737	0.69	0.178
Pupils' Intellectual Development	2243	38835			

$\dot{\alpha}$= 0.05

The result presented in Table 5 revealed that the calculated r – value of 0.95 is greater than the critical r – value of 0.178 at 0.05 level of significance with 208 degrees of freedom. With this result, the null hypothesis three is rejected. This implies that there is a significant relationship between electronic interactive instructional media and pupils' intellectual development.

DISCUSSION OF FINDINGS

The result in Table 1 and 4 revealed a strong positive and significant relationship between print instructional media and pupils intellectual development. This result is based on the fact that during that lesson, printed materials offer at least one 'example' and one 'try this' to enable learners have hands – on experience in the learning process. This was supported by Nwike and Onyejegbu (2013) who studied the effects of use of instructional material on students cognitive achievement in agricultural science in secondary schools. The findings revealed that students taught with instructional materials performed better than those taught without instructional materials. Salem (2021) found the percentage of the selected students' for the study were accessed print media sources by both public and private school students. The

majority of the students from both schools were encouraged by print media to do new and innovative things with their academic projects and assignments and also the majority of the student stated that print media sources were helpful in their academic performance in most of the cases.

The result in Table 2 and 4 also revealed a strong positive relationship between visual instructional media and pupils' intellectual development. This findings is possible that different kinds of visual aids have been used by teachers to enable meaningful learning. The findings of the study was supported by Harwood and McMahon (2017) who found that treatment students who experienced chemistry course enhanced with structured chemistry video series showed significant higher achievement than control group. It was also found out that students enjoyed learning through videos. Bui and McDaniel (2015) also agree with the finding of this study and found that illustrative diagrams were instrumental in bringing better performance among students. Carpenter and Olson (2011) found that there was significant advantage in the recall of Swahili words from pictures compared with English translations.

The results in Table 3 and 6 revealed a strong positive and significant relationship between electronic interactive instructional media and pupils' intellectual development. This finding is in consistent with the earlier findings of Ofili (2012) found that among others that instructional television enhanced academic performance of physics students. In the same vein, Okworo (2010) reported that television and video – tape motivates and stimulates learners to learn material, which may not be available in the real environment. Staylor (2010) earlier opined that the use of multimedia, which is the use of two or more instructional media in biology instruction can make difficult and abstract concepts to become real and interesting thereby resulting to meaningful learning. However, the finding of this study is not in consonance with Nweke, Dirisu and Umesi (2015) who found no significant relationship between web – based education and students' academic achievement.

CONCLUSION

This study has shown a strong positive and significant relationship between electronic instructional media and pupils' intellectual development. There is a significant relationship between print, visual and electronic instructional media and pupils' intellectual development.

RECOMMENDATIONS

Based on the findings of this study, the following recommendations were made:

i. Therefore, teachers should utilize media in classroom instruction. Using instructional media in classroom instruction helps pupils to retain and remember what they had learnt as those media appeal to the five sensory organs.
ii. The government and stakeholders in the education system should give more attention to massive supply of diverse instructional media to all the schools in the federation and supervisors should be assigned to different schools to ensure that teachers are closely monitored to use appropriate instructional aid for each topic taught in order to improve pupils' intellectual development.
iii. Visual and electronic interactive instructional media should be made available in schools, help the learners understand lessons. Similarly, teachers' should be able improvised supplementary texts such as newspapers and magazines for lessons since instructional materials help to motivate and improve pupils' attitude towards learning.
iv. Teaching should endeavor to upgrade their skills to make them more competent in the delivery of their jobs. They should also evolve effective and more innovative strategies for teaching so as to develop positive attitude towards the subject amongst the pupils.

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