

## **Two Sensory Learning Styles as Predictors of Primary School Pupils' Academic Performance in Social Studies**

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### **Abstract**

This study investigated two sensory learning styles and pupils' academic performance in Social Studies in primary schools in Calabar Education Zone, Cross River State Nigeria. To guide the study, two research questions and hypotheses were formulated. The Ex-post-facto research design was adopted for the study. The population of the study was 2,596 primary six pupils, comprising of 1,318 male and 1,278 females pupils in public primary schools in Calabar education zone, Cross River State. Simple random technique was adopted in selecting the sample size of 1,491 primary six pupils comprising 757 male and 734 female. Structured questionnaire titled, Pupils Learning Style Questionnaire (PLSQ) and Academic Performance Test in Social Studies (APTSOS) were the instruments used for data collection. Data was analyzed using One-way Analysis of Variance. The result of the analysis revealed that visual and verbal learning styles significantly influence pupils' academic performance in social studies. Based on the findings, it was recommended among other things that Social studies teachers should often present information in charts, diagrams or pictures and write notes clearly on a chalkboard or whiteboard marker using different colours of chalks or whiteboard marker to encourage visual learners improve on their academic performance.

**Keywords:** Visual, Verbal, Learning styles, Social Studies, Academic performance.

### **1. Introduction**

Over the years, specific attention has been given to social studies perhaps due to its importance and the role it plays in pupils' lives and the society at large. Social studies encourages critical thinking skills

that help pupils succeed in their professional future careers. Also, it brings about cultural understanding in today's global economy and the world. Only being exposed to the immediate community is not ideal, through social studies education, pupils get to learn about the vast array of people and cultures that make up the global community and further learn how all levels of governments function and become familiar with the role that citizens play in shaping the legal political landscapes.

Social studies at the primary level help pupils to understand the interconnectedness and the world they live in and appreciate the complexities of the human experience. The learning of pupils starts at the primary level and is explored in greater depth at the secondary level. But if the pupils are not well grounded at this level, they will have problems in the next level of education.

According to the National Council for Social Studies (1992), social studies is the integrated study of the social sciences and humanities to promote civic competence. It is the study of people and it helps pupils to acquire knowledge, master the processes of learning and become active citizens. Also, the subject social studies has to do with man getting familiar with his immediate environment upon which the entire existence dwells (Park & Choe, 2005).

Academic performance has for the past decades been the centre of interest in educational research. Exploring the issue of performance has extended beyond simple issues of intelligence and prior academic achievement into how pupils interact with the learning material. The primary level of education plays a pivotal role in the educational status of every individual in the society (Jilardi, 2011).

However, observations have shown that academic performance of primary school pupils in social studies has declined for quite some times. A reflection of the poor academic performance of pupils in social studies for the past years is shown in table one. The situation responsible for the poor academic performance has been attributed to several factors such as lack of learning facilities, the teaching methods adopted by teachers, pupils study habit among others.

**Table 1:** Average performance of pupils in public primary schools in Calabar Education Zone in Social Studies 2012-2017

Year	Total of no. of schools	Total enrolment	No of passes	No of passes in percentage	No. of failures	No. of failures in percentage
2015	12	2197	1098	49.97%	1099	50.03%
2016	12	1974	894	43.00%	1125	57.0%
2017	12	1897	752	40.02%	1127	59.98%

Source: Ministry of Education and Certificate Unit 2015, 2016, 2017 Master List Result Summary.

Looking at the percentage of failure rate in table one, 50.03% was recorded in 2015, indicating that the failure rate was high in 2016, the percentage of failure was 57.0%, and in 2017, the percentage of failure rate was 59.98%. This is a clear indication that the failure rate of pupils in social studies has been on the increase in Calabar education zone

However, despite the decline in academic performance in Social Studies, adequate attention has not been given to the way pupils learn. Therefore, it is pertinent to take an in-depth study on pupils learning styles and their influence on academic performance of primary school pupils in Calabar Education zone, Cross River State. Learning styles have been viewed as a consistent way of functioning that reflects the underlying causes of learning behaviour (Keefe, 2007). Learning style is both a characteristic of how pupils learn and like to learn, as well as instructional strategy informing the cognition, context and content of learning.

Previous studies have reported that pupils learning achievement could be improved if proper learning style dimensions could be taken into consideration when developing any learning or instructional process (Graf, Liu, & Kinshuk, 2010). There is general acceptance that the manner in which individuals choose to or are inclined to approach a learning situation has an impact on performance and achievement of learning outcomes. Even as learning styles have continued to be the concern of such a vast number of research, which leads to variety of definitions, theoretical propositions, models, interpretations and measures of the construct. However, this scenario can be

considered a natural consequence of extensive empirical investigation and is to be expected with any continually developing concept which proves useful in gaining understanding of such a crucial and prevailing endeavour as learning. Utilizing awareness of learning style within the educational background promotes more effective learning and hence improved academic achievement (Gokalp, 2013).

As indicated by Peirce (2000) learning styles are various approaches or ways of learning. They involve educating methods, particular to an individual that are presumed to allow that individuals learn best. They are the conditions that enable learners to perceive process, store and recall the learning contents. It is necessary that teachers, school managers and other members of instructional team take into account differences in the learning styles of pupils. Research results revealed that paying attention to individual differences and learning characteristics of learners by teachers and others of instructional team had an important role in improving quality of learning and increase academic achievement of pupils (Safe, 2008; Tella & Adeniyi, 2009).

According to Deley (2009), every child follows own unique way to learn and process information. They learn material in different ways. Some learn by oral repetition, some may learn by writing it out, while others may learn through practical work. Learning style can be described as a set of factors, behaviours and attitudes that facilitate learning for an individual in a given situation. It is the ability of learners to perceive and process information in learning situations. Learning style is the characteristic cognitive, affective, social, and physiological behaviors that serve as relatively stable indicators of how learners perceive, interact with, and respond to the learning environment. Learning styles can be defined, classified, and identified in many different ways. Generally, they are overall patterns that provide direction to learning and teaching. Learning styles influence how pupils learn, how teachers teach, and how the two interact. Each person is born with certain tendencies toward particular styles, but these biological or inherited characteristics are influenced by culture, personal experiences, maturity level and development (Deley, 2009). Some of these learning styles are visual, aural, verbal and kinesthetic. This notion of individualized learning styles has gained widespread recognition in education theory and classroom management strategy. Individual learning styles depend on cognitive, emotional and environmental factors, as well as one's prior experience. In other words: everyone is different. It is important for educators to understand the differences in the pupils' learning styles, so that they can implement best practice strategies into their daily activities, curriculum and assessments which could compliment learners preferred learning styles (Yamazaki, 2005).

Visual learning style is a learning style where learners think in pictures and learn best in visual images. It is a learning style which a learner utilizes graphs, charts, maps and diagrams in the learning process (Abbas, 2012). As indicated by Seyedeh (2011) sometimes, visual learners favour sitting in the front of the classroom. They also take descriptive notes over the material being presented. Visual learners prefer using images, pictures, colours, and maps to organize information and communicate with others. Learners can easily visualize objects, plans and outcomes in their mind's eye. Visual learners also have a good spatial sense, which gives them a good sense of direction. When learning is devoid of pictures, graphs, diagrams and charts etc, it may hinder visual learner's outcomes.

Another learning style of interest is verbal learning style. Verbal learning style refers to a process where learners discover information through listening and interpreting information by the means of pitch, emphasis and speed. These individuals gain knowledge from reading out loud in the classroom and may not have a full understanding of information that is written (Jilardi, 2011). Verbal learners like playing on the meaning or sound of words, such as in tongue twisters, rhymes, limericks and the like. Verbal learners understand new information most through written and spoken words (Lockett & Harrell, 2003). As indicated by Onyeizugbo (2010), verbal learning style is where a pupil will learn most efficiently from listening to people and taking in information. It means an individual has an ability to solve complex problems, come to conclusions and learn overall using language alone. Hence, those who prefer verbal learning will be particularly talented from an early age when it comes to reading and writing. Verbal learners will be able to express themselves, their problems, and

solutions to problems through words. Oftentimes, also, they will have particularly good memories, as verbal learning involves taking in a lot of information in short periods of time and retaining it. It is important that teaching and learning be interactive where the learners participate in discussion in order to achieve academically.

### **1.1. Purpose of the Study**

The main purpose of the study was to examine pupils' learning styles and their academic performance in Social Studies in primary schools in Calabar Education Zone, Cross River State Nigeria. The specific purpose of the study includes:

1. To examine the influence of visual learning style on pupils' academic performance in Social studies
2. To ascertain the influence of verbal learning style on pupils' academic performance in Social studies

### **1.2. Research Questions**

The following research questions were stated to guide the study

1. What is the influence of visual learning style on pupils' academic performance in Social studies?
2. How does verbal learning style influence pupils' academic performance in Social studies?

### **1.3. Research Hypotheses**

The following null hypotheses were stated to direct this study

1. There is no significant influence of visual learning style and pupils' academic performance in social studies
2. Verbal learning style does not significantly influence pupils' academic performance in social studies.

## **2. Literaturereview**

### **2.1 Visual Learning Style and Pupils' Academic Performance in Social Studies**

Visual learning style is a leaning style where learners think in pictures and learn best in visual images. It is a learning style which a learner utilizes graphs, charts, maps and diagrams in the learning process (Abbas, 2012). It is one of the three basic types of learning styles in the Fleming VAK (1995) theory that also includes kinesthetic and auditory learning. As indicated by Seyedeh (2011) sometimes, visual learners favour sitting in the front of the classroom. Visual learners prefer using images, pictures, colours, and maps to organize information and communicate with others. Learners can easily visualize objects, plans and outcomes in their mind's eye. Visual learners also have a good spatial sense, which gives them a good sense of direction.

According to Coffield (2004) visual learning style means that people need to see information to learn it, and this "seeing" takes many forms from spatial awareness, photographic memory, color/tone, brightness/contrast and other visual information. Naturally, a classroom is a very good place for a visual learner to learn. Teachers use overheads, the chalkboard, pictures, graphs, maps and many other visual items to entice a visual learner into knowledge. Pupils learning styles have more influence on their learning than they may realize. Pupils preferred styles guide the way he or she learn. They also change the way in which the internally represent experiences, the way they recall information, and even the words they choose.

The visual learning style which is one of the VAK learning styles uses the three main sensory receivers. The visual learners prefer to see what the learnt and comprehend fast by seeing what the

learn (Reidam, 2007). According to ChanLin (2004) visual learners use different parts of the brain when learning and by involving more of the brain during learning, visual learners remember more of what they learn in class.

Learners use all three modalities to receive and learn new information and experiences. However, according to the VAK theory, one or two of these receiving styles is normally dominant. This dominant style defines the best way for a person to learn new information by filtering what is to be learned. This style may not always be the same for some tasks. The learner may prefer one style of learning for one task, and a combination of others for a different task (Gardner, 1991).

According to Bankston and Zhou (2002), some pupils rely upon a visual learning style. Visual learners benefit from diagrams, charts, pictures, films, and written directions. These pupils will value to-do lists, assignment logs, and written notes. Many of these techniques, however, also benefit kinesthetic learners. Every child follows its own unique way to learn and process information. They learn material in different ways. Some learn by oral repetition, some may learn by writing it out, while others may learn through practical work. Individuals thus differ in the way they learn.

However, Barmeyer (2004) carried out a study on the influence of visual learning style on pupils' academic performance in Arabic studies in Cairo. The study adopted the survey research design. The population of the study was 700 pupils selected from 10 secondary schools in Cairo. Simple random sampling technique was used in selecting a sample size of 350 pupils for the study. Regression analysis was used in data analysis and test of hypotheses. The study found that visual learning style has significant influence on pupils' academic performance in Arabic study.

Again, Bernardo, Zhang and Callueng (2002) carried out a study on the relationship between visual learning style and pupils' academic achievement in Agriculture Sciences in Ajax. The study adopted the survey research design. The population of the study was 640 and a sample size of 230 was randomly selected for the study. Pearson Product Moment Correlation was used in data analysis. The study found that there is a significant positive relationship between visual learning style and pupils' academic performance in Agriculture Sciences in Ajax. Visual learners perform effectively in Agriculture Sciences because they learnt fast through seeing thereby enhancing their academic performance in Agriculture Sciences (Coakes, & Steed, 2003).

Study by Holliday (2009) on the relationship between visual learning style and academic success of pupils, using the survey research design and a population of 321 primary schools pupils, the study reveals that visual learning styles significantly enhance academic achievement of pupils at the primary level. However, dedicated teachers have made attempts to enhance their pupils' academic achievements in many ways. One of these ways according to Abidin (2011) is to identify each pupil's learning style to determine strengths for academic achievement. In a study conducted by Castro and Peck (2005) on the influence of visual learning style and learning difficulties of pupils in foreign language in Turkey; the study utilized the cross sectional survey design and a sample of 400 male and female learners from 40 primary schools. The study found that visual learning style significantly influences pupils' abilities to learn foreign language. Also, the preferred learning style of the pupil can be a help or a hindrance in the success of the pupil in the foreign language classroom.

Again, in a study conducted by Bailey and Garratt (2012) on the effect of visual learning style on academic success of learners in primary schools in Kenya. The study adopted the survey research design and used a sample size of 400 male and 400 female pupils in 80 primary schools to determine scientifically using the Taro Yamane formula. The study found that the pupils in their study possessed multiple learning styles or a combination of different learning styles, thus, they are able to learn effectively. Further findings from their study indicate that learners who adopt the visual learning styles most times perform higher than their peers since they learn most times with pictures which enable them to remember easily. They indicated that learning styles make an impact on the pupils' overall achievement. Also, Harvey and Murry (2013) carried out a study on the relationship between visual learning styles and pupils' academic performance in Jordan, using exploratory research design. The study found that visual learning style has a significant relationship with pupils' academic performance.

However if visual learning style is accommodated in the teaching process, it can result in improving the attitudes of visual learners toward learning and increase their thinking skills, academic achievement and creativity (Irvine & York, 2005).

Furthermore, Shindler and Yang (2011) carried a study on the effect of visual learning styles on learners understanding and performance in Malaysia. Survey research design was adopted with a population of 1800 pupils from 37 primary schools. The study found that visual learning style enables learners to reflect on how they learn best and to develop their meta-cognition. Further findings from the study indicates that pupil that adopt learning styles that are in line with their class room teaching style learn fast and understands better than their peer. The study emphasizes that learning style consideration in learning is therefore an approach that is directed at meta-learning, similar to setting goals, choosing appropriate strategies and monitoring progress which are more effective ways of improving learning outcomes and achievement than those which simply aim to engage learners at the level of presenting information or understanding and use (Hattie, Biggs, & Purdie, 2006).

Again, study carried out by Mills, Sweeney, De-Meo, Marino, and Clarkson, (2012) on the relationship between visual learning style and academic achievement in Western and Asian countries; using survey design with a population of 1065 respondents found that visual learning style has significant relationship with academic achievement of learners. Another study was carried out by Kopsovich (2001) on the relationship between visual learning styles of pupils and their Mathematics scores on the Texas assessment of academic skills test, using survey research method. The Pearson Product Moment Correlation coefficient and the Point-biserial correlation analysis was applied to the data collected from 500 randomly selected fifth grade pupils attending a North Texas Intermediate school. There was a significance relationship of 0.542 at the 0.05 level of significance. Part of the data was the pupil's responses to the learning style inventory. In summary, the study suggests that supplying the teachers with information concerning pupils learning style preferences will benefit pupil achievement.

However, Gappi (2013) conducted a study on pupils preferred learning styles and their academic achievements. The specific objectives of the study was to: describe the learning style preferences of the pupils; to find out whether learning style preferences of the pupils differed with age, gender and academic program; and determine the relationship between the learning style preferences and the pupil's academic performance. The participants of the study consisted of all 131 freshman pupils who were accepted during the first trimester of the academic year 2012-2013, composing of 118 national youth and 13 young adults. The Index of Learning Styles (ILS) questionnaire was utilized to carry out the rationale of the study. Permission to use the questionnaire was granted free of charge via internet, and the results demonstrated that generally the pupils are fairly well balanced in all four dimensions presented in the ILS questionnaire. Results showed that there was no significant effect of gender, age and academic program on the learning style preferences of the pupils ( $r = -0.056$ ). Based on the result, there was no significant statistical correlation between the academic achievement and the learning style preferences of the pupils.

A different study conducted by Vaishnav and Chirayu (2013) on the analysis of visual learning styles prevalent among primary school pupils also tried to find out the relationship and effect of different learning styles on academic achievements of pupils. It was conducted on three learning styles-visual, auditory and kinesthetic (VAK). A sample of 200 pupils of class 9th, 10th and 11th standard of Maharashtra state was randomly selected for the study. After selecting the sample the Howard Gardner's VAK learning style brain box and VAK Learning Style Inventory by Victoria Chislett and Alan Chapman was used to identify the preferred learning style of pupils. The correlation between academic achievement and learning style was determined using Pearson's Product Moment Correlation Coefficient method. Also, to identify the effect of learning style on academic achievement, ANOVA F test was used. Findings of the study revealed that, visual learning style was more prevalent than kinesthetic and auditory learning styles among primary school pupils. There exist positive high correlation between visual learning style and academic achievement ( $r = 0.658$ ). The other two learning

styles have positive relationship but not strong one:  $r=0.287$  for auditory learning style and  $r = 0.129$  for kinesthetic learning style. The main effects of the three variables-visual, auditory and kinesthetic were significant on academic achievement (Vaishnav & Chirayu, 2013).

Again a study conducted by Gokalp (2013) evaluated the influence of visual learning style on pupils' in Jordan and determined the effect of their success and relationship between their learning styles and academic success. The population of the study comprised of the pupils from the two education zone in Jordan, and the sample included 140pupils. Depending on the results obtained from pre-test, it was aimed to improve pupils' knowledge and skills in studying. The study found a significant difference between the scores of pre-tests and post-tests. The significant relationship between the scores of post-test and the pupil success revealed that they learned how to study effectively. The study found out that statistically significant differences existed between the results of the first and final applications of the subtests on visual learning styles and academic success; those subtests covered the items as learning, planned study, effective reading, listening, writing, note taking, using the library, getting pre-prepared for and taking exams, class participation and motivation ( $r= -0.007$ ,  $r= -0.022$ ,  $r= -0.018$ ,  $r= -0.040$  respectively), the relationship between the scores of post-test and grades was reduced, which shows a weak negative correlation ( $r= -0.300$ ,  $r= -0.008$ ,  $r= -0.034$ ,  $r= -0.086$  respectively).

Abidin, Rezaee, Abdullah and Singh (2011) carried out a research to investigate the relationship between visual learning styles and academic achievement using a total of 317 pupils in an Islamic school in Malaysia and employed the survey research method. The Learning Styles Survey (LSS) instrument which is based on Joy Reid's Perceptual Learning-Style Preference Questionnaire (1987) was used. The statistical procedures employed in this study were one-way ANOVA, and multiple regression analysis. The analyses of the data indicated a significant relationship between overall academic achievement and visual learning styles. It was also found that the high, moderate and low achievers have a similar preference pattern of learning in all learning styles. Moreover, the learning styles framework does not change with subjects, where it actually plays an important role across all the subjects. Therefore, the results here suggest avenues of future research to understand this phenomenon.

A closely related study was the study of Jilardi, Damavandi, Mahyuddin, Elias, Daud, and Shabani (2011) on the impact of visual learning styles on the academic achievement of school pupils in Iran. Survey research method was used for the study; the Kolb Learning Style Inventory (1999) was administered in eight public schools in Tehran. The mean test scores in five subjects, namely English, science, mathematics, history and geography, was calculated for each pupil and used as a measure of academic achievement. A total of 285 Grade 10 pupils were randomly selected as sample of the study. The results of the analyses of variance showed that there is a statistically significant difference in the academic achievement of the Iranian pupils that correspond to the four learning styles of visual, verbal, aural and kinesthetic; in particular, the mean scores for the converging and assimilating groups are significantly higher than for the diverging and accommodating groups.

Also, Ismail (2010) carried out a study on the implication of visual learning styles on pupil academic success in Bilkent using survey research method. The study was conducted among 102pupils between the age of five and ten who responded to the Jeffrey Barsch's Learning Style Inventory and their test scores were used to calculate the statistical coefficient. The study showed that there is a weak positive statistical relationship between visual learning styles and achievement of pupils in foreign language. However a study carried out by Ukam (2015)on the influence of teaching methods on visual learners in primary school in Calabar; using survey design with a population of 1065 respondents selected from 30 primary schools in Cross River State found that teaching methods has significant effect on visual learners and influence their academic achievement.

## **2.2. Verbal Learning Style and Pupils' Academic Performance in Social Studies**

Verbal learning style refers to learners who discover information through listening and interpreting information by the means of pitch, emphasis and speed. These individuals gain knowledge from reading out loud in the classroom and may not have a full understanding of information that is written (Jilardi, 2011). The verbal learning style involves both the written and spoken word. If a learner uses this style, her/she finds it easy to express themselves, both in writing and verbally (Lane, Barton-Arwoo, Nelsonz, & Wehby, 2008). Verbal learners like playing on the meaning or sound of words, such as in tongue twisters, rhymes, limericks and the like. Verbal learners understand new information most through written and spoken words (Lockett & Harrell, 2003). As indicated by Onyeizugbo (2010), Verbal learning style is where a pupil will learn most efficiently from listening to people and taking in information. It means an individual has an ability to solve complex problems, come to conclusions and learn overall using language alone. Hence, those who prefer verbal learning will be particularly talented from an early age when it comes to reading and writing. Verbal learners will be able to express themselves, their problems, and solutions to problems through words. Oftentimes, also, they will have particularly good memories, as verbal learning involves taking in a lot of information in short periods of time and retaining it.

According to Park and Choe (2005) verbal learners are Individuals who prefer verbal learning usually and also have a fascination with the arts, music and lyrics, legal documents, old-world writings, politics, screenplay and novels. These kind of learners will also enjoy using language creatively, through fiction and poetry and even through contemporary art in some cases. Verbal learners appreciate language to be complex and thoroughly interesting, and for any people, one language is not enough. Verbal learners often learn numerous other languages in an effort to increase their knowledge, their wisdom, and their ability to use words to communicate with a larger audience during their lifetime (Ray, 2010).

According to Oughton and Reed (2000), verbal learners will usually go on to study language, or performing arts, writing, law, politics and other paths concerning language, in order to satisfy their linguistic needs in life. There are various theories on the ways in which pupils learn. While these theories may vary somewhat, they are similar in the sense that they put forth a belief that people have preferred methods of receiving and interpreting information. Verbal learning styles can have great influence on pupils' academic life, as well as on their performance. Also Reasoner (2005) maintained that verbal learners prefer learning through spoken word, like reading aloud or through discussion and when verbal method are not adopted in teaching, it influence verbal learners academic performance negatively.

According to Rutz (2003), pupils learn best by seeing the value and importance of the information presented in the classroom. If the pupils are not interested in the method employed by the teacher in delivery lecture, they will not learn it. In order to achieve the ultimate goal of pupil learning it is important to use a combination of teaching styles that relates to those adopted by learners and to make the classroom environment as stimulating and interactive as possible. Pupils learn in many different ways and because of these different learning styles, it is important for teachers to incorporate in their curriculum activities related to each of these learning styles so that all pupils are able to succeed in their classes. While learners use all of their senses to take in information, some learners seem to have preferences in how they learn best. In order to help all pupils learn, teachers need to teach to as many of these preferences (learning styles) as possible (Cuaresma, 2008). As indicated by Schmidt and Padilla (2003), along with reading information, verbal learners like to ask questions and participate in discussions. Doing so provides them with the chance to clarify and form the big picture with regard to the subject matter.

According to Sternberg (1997) verbal learners prefer oral presentation in class room. However, a goal of instruction should be to equip pupils with the skills associated with every learning style category, regardless of the pupils' personal preferences, since they will need all of those skills to function effectively as professionals. With the shift from an instructional to a learning paradigm, there is growing acceptance



that understanding the way pupils learn and the learning style they adopt is the key to their educational improvement. To achieve a desired learning outcome, one should provide teaching interventions that are compatible with the pupils preferred learning styles. Thus, learning style is a concept that is important not only in shaping teaching practices, but also in highlighting issues that help school administrators think more deeply about their roles in facilitating pupil learning (Onyeizugbo, 2010).

However, Graf, Liu, and Kinshuk (2010) carried out a study on the impact of verbal learning style on pupil academic performance in Kenya. The study adopted the survey research design and used a sample size of 400. Multiple regression analysis was used in testing the entire hypotheses. The study found that verbal learning style have significant effect on pupils academic performance and emphasis that pupils learning performance could be improved if proper learning style dimensions could be taken into consideration when developing any learning or instructional process.

Again, Simon and Haley (2009) carried out a study on the implication of verbal learning style on pupils performance in mathematics in Pakistan, using survey research design and a sample of 750, comprise of male and female pupils in 22 primary schools in Pakistan. The study found that verbal learning style has positive effect on pupils' academic performance in mathematics in Pakistan. MacKeracher (2014) carry out a study on the impact of verbal learning style on pupil academic success in French Language in Kenya. The study adopted the cross sectional research design. The population of the study was 1097 pupils from 34 secondary schools in Kenyan. Ordinary Least Square regression was use to test the hypotheses of the study. The study found that verbal learning style has direct effect on pupils' academic performance in French language in Kenya. Further finding from the study indicated that instructors wishing to utilize a learning style approach must decide which of the many different learning style theories or approaches is to be adopted in the classroom in order to enhance pupil study habits on the subject.

Furthermore, Hawk and Shah (2014) carried out a study to investigate the relationship between verbal, visual and aural learning styles and pupils' academic performance in selected high schools in Turkey. The study adopted the survey research design and uses a sample size of 385 pupils in 17 schools in Turkey. Pearson Product Moment Correlation coefficient was used to test all the hypotheses. The study found that there was a positive relationship between verbal and pupils' academic performance in the selected schools in Turkey. Also, Sternberg (2013) carried out a study on the influence of verbal learning style on pupils' academic achievement in Kenya. The study adopted the survey research design and uses a sample of 1650 drawn from 38 public schools. Pearson Product Moment Correlation coefficient was used to test all the hypotheses. The study found that verbal learning style has significant positive influence on pupils' academic achievement in Kenya. The study emphasis that instructors need to adopts teaching style and teaching aids that enhances the pupil learning styles and as a result enhances their performance.

Again, Johnson (2016) carried out a study on verbal learners, teaching aid and academic performance in secondary school: A comparison of learning disabled, average, and talented pupils in Ondo State. The study adopted the survey research design and simple random sampling technique was used in selecting a sample size of 400 out of a population of 1378 pupils selected from 15 schools, One-Way Analysis of Variance ANOVA was use to test of hypotheses. The study found that teaching aids adopted by instructors have significant effect on verbal learner's academic performance.

### **3. Method**

The research design that was adopted for this research was ex-post facto design. This is because its major concern is the examination of facts, principles, knowledge and phenomenon that had already occurred and therefore not manipulated. The population of the study comprised the entire primary six pupils in all the public primary schools in Calabar Education Zone with 2,596 primary six pupils, comprising of 1,318 male and 1278 females pupils. A simple random sampling technique of random numbers was employed by the researcher to select 1,491 which represent 57% of the population of primary six pupils in the study

area. The sample showed that 757 which represent 51% were male while 734 which represent 49% were female from the 63 randomly selected public primary schools in Calabar Education Zone, Cross River State. Two instruments were used for this study. The first one was Pupils Learning Style Questionnaire (PLSQ) and a 20 item Academic Performance Test in Social Studies (APTSOS). Validity and reliability of the instruments were ascertained and the reliability ranged from 0.861-0.917. This indicated that the instrument was reliable for the study as shown in Table 2

**Table 2:** Cronbach alpha reliability coefficient (N = 50)

Variable	item	No of Items	$\bar{X}$	Variance	SD.	Rxy
Visual learning style	1-5	5	16.18	39.00	6.25	0.911
Verbal learning style	6-10	5	15.98	41.73	6.46	0.917
Pupils grades	1-20	20	16.14	34.20	5.85	0.861

Source: Field work, 2017.

## 4. Hypotheses Testing

### Hypothesis one

Visual learning style does not significantly predict pupil academic performance in social studies. The independent variable in this hypothesis is Visual learning style; while the dependent variable is pupil academic performance in social studies. Simple regression analysis was employed to test this hypothesis. The result of the analysis is presented in Table 3.

**Table 3:** Simple regression result of the prediction of Visual learning style on pupils’ academic performance in social studies

R	R Square	Adjusted R Square	Std. Error of the Estimate		
.504(a)	.254	.254	6.65857		
	Sum of Squares	Df	Mean Square	F	Sig.
Regression	22533.211	1	22533.211	508.231*	.000(a)
Residual	66017.116	1489	44.337		
<b>Total</b>	<b>88550.327</b>	<b>1490</b>			

a. Dependent Variable: pupil academic performance in social studies

b. Predictors: (Constant), Visual learning style

Source: SPSS output, 2017

The simple regression analysis of the prediction of Visual learning style on the pupils’ academic performance in social studies produced an adjusted  $R^2$  of .254. This indicated that the Visual learning style accounted for 25.4% of the determinant pupil academic performance in social studies in the study area. This finding is a critical indication that Visual learning style is relatively high in the area of the study. The F-value of the Analysis of Variance (ANOVA) obtained from the regression table was  $F = 508.231$  and the sig. value of .000 (or  $p < .05$ ) at the degree of freedom (df) 1 and 1489. The implication of this result is that Visual learning style is a significant predictor of pupil academic performance in social studies.

### Hypothesis Two

Hypothesis two stated that, verbal learning style does not significantly predict pupil academic performance in social studies. The independent variable in this hypothesis is Verbal learning style; while the dependent variable is pupils’ academic performance in social studies. Simple regression analysis was employed to test this hypothesis. The result of the analysis is presented in Table 4.

**Table 4:** Simple regression result of the prediction of Verbal learning style on pupils’ academic performance in social studies

<b>R</b>	<b>R Square</b>	<b>Adjusted R Square</b>	<b>Std. Error of the Estimate</b>		
.684(a)	.468	.468	5.62400		
Regression	Sum of Squares 41454.140	Df 1	Mean Square 41454.140	F 1310.620*	Sig. .000(a)
Residual	47096.187	1489	31.629		
<b>Total</b>	<b>88550.327</b>	<b>1490</b>			

a. Dependent Variable: pupils’ academic performance in social studies

b. Predictors: (Constant), Verbal learning style

Source: SPSS output, 2017.

The simple regression analysis of the prediction of Verbal learning style on the pupils’ academic performance in social studies produced an adjusted R<sup>2</sup> of .468. This indicated that the Verbal learning style accounted for 46.8% of the determinant of pupil academic performance in social studies in the study area. This finding is a critical indication that Verbal learning style is relatively high in the area of the study. The F-value of the Analysis of Variance (ANOVA) obtained from the regression table was F = 1310.620 and the sig. value of .000 (or p<.05) at the degree of freedom (df) 1 and 1489. The implication of this result is that Verbal learning style is a significant predictor of pupil academic performance in social studies.

## 5. Discussion of Findings

Research hypothesis one stated that visual learning style does not significantly influence pupil academic performance in social studies. From the analysis of hypotheses one, it was revealed that visual learning style significantly influence pupils academic performance in Social Studies in Calabar Educational Zone. It is clearly observed that this result is in consonance with the findings of Bailey and Garratt (2012) who found that visual learning style has significant positive influence on pupils’ academic performance. Further finding from their study indicates that learners who adopt the visual learning styles most times perform higher than their peers since they learn most times with pictures which enable them to remember easily. This result further corroborated the work of Harvey, and Murry, (2013) who found that visual learning styles have significant positive relationship on pupils’ academic performance. Also, the finding supported the finding of Gokalp (2013) who found that visual learning style have significant positive influence on pupils academic achievement.

Research hypothesis two stated that, verbal learning style does not significantly influence pupil academic performance in social studies. From the analysis of hypotheses two, it was revealed that verbal learning style significantly influence pupil academic performance in social studies in Calabar Education Zone.

This finding was in line with the result of the study conducted by Graf, Liu, and Kinshuk (2010) who found that verbal learning style have significant positive effect on pupils’ academic performance in primary schools. Further finding from their study indicated that verbal learners prefer learning through spoken word, like reading aloud or through discussion and when verbal method are not adopted in teaching such learners it influence their academic performance negatively. The finding of this study also corroborated Simon and Haley (2009) who found that visual leaning styles have positive effect on pupils’ academic performance in Pakistan. The finding indicated that visual learners most times learn visually by means of charts, graphs, and picture. The finding also supported the finding of Hawk and Shah (2014) who found that there was a positive relationship between visual learning styles and pupils’ academic performance in Social Studies. Again, the finding was further in line with the finding of Sternberg (2013) who found that verbal learning style has significant positive influence on pupils’ academic achievement in primary schools.

## 6. Conclusion

It is evident from this research that visual and verbal, learning styles all have significant positive influence on pupils' academic performance in Social Studies. Learning styles adopted by pupils' in learning play a significant role on the level of their academic performance. A better knowledge and understanding of learning styles may become important as classroom sizes increase and as technological advances continue to mold the types of pupils in the primary education level. While research in this area continues to grow, teachers should make concerted efforts to teach in a multi-style fashion that both reaches the greatest extent of pupils' in a given class and challenges all pupils to grow as learners. It is very important to understand and explore each pupils learning style. Analyzing one's own particular learning style can be very helpful and beneficial to the pupils by aiding them in becoming more focused on an attentive learner, which ultimately will increase academic performance. Discovering this learning style will allow the pupils to determine their own personal strengths and weaknesses and learn from them thereby improving academic achievement.

## 7. Recommendations

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

1. Social studies teachers should often present information in chart, diagram or pictures and write notes clearly on a chalkboard or white board using markers of different colours in order to encourage visual learners to learn fast and improved their academic performance.
2. Teachers should encourage group discussion and encourage pupils to listen attentively in the class room so that verbal learners can participate and understand fast.

## Reference

- [1] Abbas, P. (2012). Visual, auditory, kinaesthetic learning styles and their impacts on English language teaching. *Journal of Studies in Education*, 2(1), 45-76.
- [2] Abidin, A, Rezaee, G., Abdullah, O., & Singh, H. (2011) (March 2009). The neural correlates of visual and verbal cognitive styles. *The Journal of Neuroscience*, 29 (12): 3792–3798.
- [3] Abidin, A. (2011). Implication of mind styles. London. Prentice Hall
- [4] Abidin, O., Rezaee, E., Abdullah, A., & Singh. (2011). Investigation of the relationship between learning styles and academic achievement Islamic school in Malaysia. *International Journal of education*, 45(6), 56-61.
- [5] Bailey, G., & Garratt, T. (2012). The effect of visual leaning style on academic success of learners in primary schools in Kenyan. *Journal of Educational Psychology*, 4,106-107.
- [6] Barmeyer, C. I. (2004). Learning styles and their impact on cross-cultural training: An international comparison in France, Germany and Quebec. *International Journal of Intercultural Relations*, 28, 577-594.
- [7] Bankston, C. L., & Zhou, M. (2002). Being well vs. doing well: Self-esteem and school performance among immigrant and non-immigrant racial and ethnic groups. *International Migration Review*, 36, 389-415.
- [8] Bernardo, A. B., Zhang, L. F., & Callueng, C. M. (2002). Thinking styles and academic achievement among Filipino pupils. *Journal of Genetic Psychology*, 163(2), 149–163
- [9] Castro, S., & Peck, H. (2005). Learning styles and learning difficulties of foreign language pupils in Turkey. *International Journal of Education*, 4(3), 76-83
- [10] ChanLin, O. (2004). *Learning style: Concept and application*. London: John Wiley & Sons.
- [11] Coakes, G., & Steed, D. (2003). What's the point of school?: rediscovering the heart of education. Richmond: One world Publications.
- [12] Coffield, F. (2004). *Learning styles and pedagogy in Post- 16 Learning. A systematic and critical review*. London: Learning and Skills Research Centre.

- [13] Cuaresma, J. (2008). Learning style preferences and academic performance of PHEM majors at the University of the Cordilleras. Unpublished Undergraduate Thesis. University of the Cordilleras, Baguio City.
- [14] Deley, F. (2009). Culture and learning: A study of the learning style preferences of Japanese pupils. *RELC Journal*, 24 (2), 69-91
- [15] Fleming, N. D. (1995). I'm different; not dumb: modes of presentation (VARK) in the tertiary classroom. Retrieved from [www.varkmodel.com/308-313](http://www.varkmodel.com/308-313).
- [16] Fleming S. (2014). Individual differences, hypermedia, navigation, and learning: An empirical study. *Journal of Educational Multimedia and Hypermedia*, 9, 281-311.
- [17] Gappi, K. (2013). Exploring pupils preferred learning styles and their academic achievements. *Education Review*, 5, 45-55
- [18] Gardner, H. (1991). *The unschooled mind: How children think, and how schools should teach*. New York: Basic Books
- [19] Gokalp, F. (2013). *Evaluating the learning styles of education faculty pupils of University of Jordan on pupils academic success*. London: McGraw Hill Publishing Company
- [20] Graf, B., Liu, U., & Kinshuk, F. (2010). The impact of verbal learning style on pupil academic performance in Kenya. *International Journal of Education*, 5(3), 176-184
- [21] Harvey, A., & Murry, N. (2013). The implications of learning styles on pupil academic performance in Jordan. *International Journal of Education*, 1(3), 26-33
- [22] Hattie, U., Biggs, A., & Purdie, V. (2006). Learning with style. Retrieved from [www.sciencedirect.com/77283](http://www.sciencedirect.com/77283)
- [23] Hawk, B., & Shah, C. (2014). Investigation of the relationship between verbal, visual and aural learning styles and pupils' academic performance in selected high schools in Turkey. *International Journal of Education Psychology*, 14(3), 76-83
- [24] Holliday, A. (2009). Understanding the implications self - concept and academic self - concept has on African Americans and Latino's. Retrieved from [www.knol.google.com/k/alon-holliday/understanding-the-implications-self/37qlgwid1fl4z/](http://www.knol.google.com/k/alon-holliday/understanding-the-implications-self/37qlgwid1fl4z/)
- [25] Irvine, R., & York, O. (2005). *Teaching with style: A practical guide to enhancing learning by understanding teaching and learning styles*. Pittsburgh: Alliance Publishers.
- [26] Ismail, R. (2010). *The implication of learning styles on pupil academic success in Bilkent University*. Bilkent: Bilkent University Press.
- [27] Jilardi Damavandi, U., Mahyuddin, R., Elias, I., Daud, A., & Shabani, D. (2011). The impact of learning styles on the academic achievement of secondary school pupils in Iran. *Iranian Journal of Education*, 6(3), 70-83
- [28] Jilardi, B. (2011). The implication of kinesthetic learning style on pupils score in English language in Paris. *International Journal of Education*, 7, 78-92.
- [29] Johnson, E. (2016). Verbal learners, teaching aid and academic performance in secondary school: A comparison of learning disabled, average, and talented pupils in Ondo State. *International Journal of Educational Research*, 43 (4), 39-54.
- [30] Keefe, M. (2007). Personalized instruction: The key to pupil achievement. Littlefield: mRowman & Littlefield Education.
- [31] Kopsovich, F. (2001). *The relationship between learning styles of pupils and their Mathematics scores on the Texas*. Texas: Wily & Sons
- [32] Lane, K. L., Barton-Arwoo, S. M., Nelsonz, J. R., & Wehby, J., (2008). Academic performance of pupils with emotional and behavioral disorders served in a self-contained setting. *Journal of Behavioral Education*, 17(1): 43-62.
- [33] Lockett, C. T., & Harrell, J. P. (2003). Racial Identity, self-esteem, and academic achievement: Too much interpretation, too little supporting data. *Journal of Black Psychology*, 29(3), 325-336.

- [34] MacKeracher, K., (2014). *Attempted validation of the scores of the VARK: learning styles inventory with multi trait–multi method confirmatory factor analysis models. Educational and Psychological Measurement, 70 (2): 323–339.*
- [35] Mills, O., Sweeney, U., De-Meo, A., Marino, S., & Clarkson, G. (2012). The relationship between learning style preference and academic achievement in Western and Asian countries. *International of Education and Science, 15*, 98-121
- [36] Ministry of Education Cross Rivers State (2017). List of primary schools and primary six pupils. Calabar: Cross River State Ministry of Education
- [37] Onyeizugbo, E. U. (2010). Self-efficacy and test anxiety as correlates of academic performance. *Educational Research, 1*(10): 477-480.
- [38] Oughton, J. M., & Reed, W. M. (2000). The effect of hypermedia knowledge and learning styles on pupil-centered concept maps about hypermedia. *Journal of Research on Computing in Education, 32* (3): 366– 383.
- [39] Park, S. K., & Choe, H. S. (2005). Relationship between thinking styles and scientific giftedness in Korea. *Journal of Secondary Gifted Education, 16* (2–3), 87–97
- [40] Peirce, A. (2000). *Learning styles. Ways of learning: learning theories and learning styles in the classroom (3rd ed.)*. New York: Routledge
- [41] Ray, D. (2010). Academic achievement and demographic traits of home school pupils: A nationwide study. *Academic Leadership, 8* (1), 56-67.
- [42] Reasoner, R. (2005). *The true meaning of self-esteem*. Retrieved from www.self-esteem-nase.org/whatisself esteem, shtml. 28/2/2017.
- [43] Reidam, M. (2007). The learning style preferences of pupils. *TESOL Quarterly, 21* (1), 87-111.
- [44] Rutz, K. (2003). *An examination of the factor structure and construct validity of the Gregorc Style Delineator. Educational and Psychological Measurement, 66 (3): 489–501.*
- [45] Safe, R. (2008). *Exploring the relation between visualizer–verbalizer cognitive styles and performance with visual or verbal learning material. Computers and Education. 58* (2): 697–706.
- [46] Schmidt, A., & Padilla, K. (2003) (2010). *Pupils learn best when teaching styles are matched to their learning styles*. Blackwell: Wiley Press.
- [47] Seyedeh (2011). *Rethinking the multiplicity of cognitive resources and curricular representations: Alternatives to learning styles' and 'multiple intelligences. Journal of Curriculum Studies. 35* (1): 45–81
- [48] Shindler, A., & Yang, H. (2011) .The effect of learning styles on learners understanding and performance in Malaysia. *Educational Journal of Malaysia, 78*, 108-123
- [49] Simon, D., & Haley, O. (2009). Kolb's learning style inventory: issues of reliability and validity. *Research on Social Work Practice, 12* (2): 293–303
- [50] Sternberg, J. (2013). Assessing experiential learning styles: A methodological reconstruction and validation of the Kolb learning style inventory. *Learning and Individual Differences, 23*: 44–52.
- [51] Sternberg, R. J. (1997). *Thinking styles*. Cambridge, Cambridge University Press.
- [52] Ukam, M. (2015). Teaching methods and pupil learning styles in primary school Cross River State. *International Journal of Educational Management, 14*(5), 224-237.
- [53] Universal Basic Education (2016). *Chairman UBE presentation on pupils' performance in Social Studies in Cross River State*. Calabar: UBE
- [54] Vaishnav, T., & Chirayu, G. (2013). The analysis of learning styles prevalent among secondary school pupils in Maharashtra. *Journal of Youth and Adolescence, 32*, 37-46.
- [55] Yamazaki, Y. (2005). Learning styles and typologies of cultural differences: A theoretical and empirical comparison. *International Journal of Intercultural Relations, 29*, 521–548.