LEARNING STYLES AS CORRELATES OF STUDENTS' ACADEMIC ACHIEVEMENT IN SECONDARY SCHOOLS IN BAKORI LOCAL GOVERNMENT AREA, KATSINA STATE

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Abstract

This Paper examined learning styles as correlates to academic achievement of secondary school students. The study has three research objectives, and tested three null hypotheses. The study adopted a correlational research design. The simple random sampling technique through Hat and Draw Method (HDM) were used to select sample from the population of 2,200. Barsch Learning Styles Inventory (BLSI) and Academic Achievement Test (AAT) were adapted for data collection. The data were analysed using Pearson Product Moment Correlation. The findings revealed that There is significant relationship between auditory learning styles and academic achievement r (42) = -.336, p=.026, There is significant relationship between visual learning styles and academic achievement r(64)= .415, p,= -001. There is significant relationship between kinesthetic learning styles and academic achievement r (215) = .743, p= .000. It was recommended that, teacher should be encouraged to create conducive atmosphere for learning and used method of delivery that appeal the sense using clear objects, visual aids and the enough resources to improve learning among all categories of learners.

Keywords: Learning Styles, Auditory, Visual, Kinesthetic, Academic Achievement

Introduction

Learning style is an importance concept in the movement for improving educational practices. It helps to bring to the surface issues that can help students and teachers to think more deeply about their role in the educational business. Bada, (2021) viewed learning as a process whereby knowledge is created through the transformation of experience or relatively persistence change of an individual possible behavior as a result of experience. Also it is acquires after deliberate effort. Learning style in the other hand is defined as a mode or environment in which individual learn most effectively and efficiently (Bada, 2021). Grasha, (2016) has defined learning style as personal qualities that influence a student ability to acquire information to interact with peers and the teachers and participate in learning experience. Learning style "is the presence or disposition of an individual to perceive and process information in a particular way or a combination of ways (Saratin, 2008).

Khandai, (2017) sees learning styles as an approach to problem solving, which can lead to new experience, skill and behavior change, Individual differ in their ways to dealing with problems that confront them. Bello, (2013) viewed learning styles from the prospective of Visual (seeing) Auditory learning, Kinesthetic (moving or tactile (touching) way of learning. He further to explains that while the visual learner prefers learning by seeing, verbal style learners learn best when they are involved but the tactile learners use written and drawing as memory aids and as such learn well in hands on like projects.

Emmanuel, (2014) viewed leaning style from perspective of "innovative learner, analytic learner, common sense learners and dynamic learners

i. Innovative learners :- look for personal meaning while learning
ii. Analytic learners want develop intellectually while leaning
iii. Common sense leaners:- want find solution while leaning
iv. Dynamic leaners look for hidden possibilities in learning.

Types of Learning Styles

However, the rate of learning among people differs from person to person some individuals tend to understand and learn quickly where as others are slow to learn, learning style classified also by different scholars based on their understanding of the concept. In their identification of the four (4) stages of cognitive development, Emmanuel (2014) as quoted by Bada (2021) described how humans assimilate knowledge about the environment through three (3) sensory modalities visual, auditory, kinesthetic. Visual learners are adopted at performing the use of charts, diagrams graphs, modes and one good at spelling but forget names visual learners like colors and fashion and dreams in color, they think well but they forget. Emmanuel, (2014) group learners in to two categories according to their cognitive style that is field dependent and field independent. Field dependents: - are likely to succeed in the arts and social science or subjects that are descriptive in nature.

Field independent: - is the kind of cognitive style in which the learners approach a situation or problem by studying the entire stimulus critically in order to arrive at a better solution.
Bichi, (2008) identified thirteen categories to the study of learning style
(1) Reflective impulsive (2) Holistic analytic (3) Scanning focusing (4)Verbal imaginary (5) Global articulated (6) Levelers and sharpeners (7) Convergent divergent (8) Visual (9) Auditory (10) Kinesthetic learning style. (11) weak - strong (12) field independent (13) field dependent

Models of Learning Style

The mediation abilities model study of individual differences have an impact on the individual life. Dunn and Corbo learning style model the theory emphasizes the identification and use of four ability channels of concrete, sequential thinking, abstract sequential thinking and concrete random thinking.(Bada, 2021).

The 4 MAT system approach to the application of learning style emphasis the development and use of structure curriculum that is designed around the understanding of learning style. There are two main dimensions learning which are perception and processing which result in four (4) major learning style of imaginative learners, analytic leaner's, common sense learners and dynamic learners(Mc Cathy, 2011).

Kolb's Learning Style Model, the model gave rise to related terms such as Kolb's Experimental Learning Theory (ECT) the model outcomes related approaches toward grasping experience: concrete experience and abstract conceptualization, as well as two related approaches toward transforming experience; reflective observation and active experiment.

Learning Style and Academic Achievement

Every teacher and every parent hope that their students will succeed in school, the teachers and parents have the same final goals and objectives to promote and ensure that these children are enabled to perform academically (Yakasai, 2014). In another study, Cathy, (2011) conducted research to determine the relationship between learning styles and grade performance in principle of management, principle of economic intermediate, accounting and business law. His subjects included 64 second years Accounting student from North East Low a Community Colleges. The Kolb learning styles students' final grade average earned in principle management. Business law, intermediate Accounting and principle of Economic were used to measure academic performance. The relationship were exist between learning styles and students achievement.

Statement of the Problems

The study primarily centered on the learning styles as correlates of academic achievement of secondary school students in Bakori Local Government Katsina State. The National Policy on Education (FRN, 2012) which emphasized on equal opportunity for all citizen of the nation and also every school should help all the students to develop their potential as fully as possible in both academic and non-academic pursuits and still has been a trend of poor academic achievement in secondary school students in Bakori Local Government Area. There are many factors responsible for poor academic achievement like poor study habit, lack of reading culture among students, lack of motivational orientation, self-esteem, emotional problems, lack of study habits, lack of teacher consultation and poor interpersonal relationships. It is therefore necessary to get research work in education toward finding solutions to these problems responsible for students' poor academic achievement.

Objectives of the Study

The objectives of the study is to:

1. find out the relationship between auditory learning style and academic achievement of JSSIII students in Bakori Local Government.
2. find out the relationship between visual learning style and academic achievement of JSSIII students in Bakori Local Government.
3. find out the relationship between kinesthetic learning style and academic achievement of JSSIII students in Bakori Local Government.

Research Hypotheses

The following hypotheses were formulated and tested at 0.05 alpha level of significance.

Ho_1: There is no significant relationship between auditory learning styles and academic achievement of JSSIII students in Bakori Local Government

Ho_2: There is no significant relationship between visual learning styles and academic achievement of JSSIII students in Bakori Local Government

Ho_3: There is no significant relationship between kinesthetic learning styles and academic achievement of JSSIII students in Bakori Local Government

Methodology

The researchers adopted correlational research design. The population of the study comprises two thousand two hundred (2,200) Junior Secondary School Students year three (JSS 3) in Bakori Local Government, Katsina state, Nigeria.

Table 1: Study Population

SN	ZONE	NO. OF SEC. SCH.	BOYS	GIRLS	TOTAL
1	Bakori A	14	750	350	1,100
2	Bakori B	16	650	450	1,100
	TOTAL	**30**	**1400**	**800**	**2,200**

Source: Funtua Quality Assurance Department Katsina State:2021

The sample in this study is three hundred and twenty seven students (327) out of the population of two thousand two hundred (2,200) based on the recommendation of Kreycie and Morgan (2004) table of determining sample size.

Table 2: Sample Schools and students

S/N	NAMES OF SCHOOLS	JSS III STUDENTS	SAMPLE SIZE
1	Govt. Day Sec. Sch. Bakori	290	43
2	Govt. Day Sec. Sch. Guga	200	30
3	Govt. Day Sec. Sch. Kandarawa	150	22
4	Govt. Day Sec. Sch. Jargaba	263	39
5	Govt. Day Sec. Sch. Kurami	170	25
6	Govt. Day Sec. Sch. Tsiga	280	42
7	Comm. Day Sec. Sch. Kabomo	230	34
8	Comm. Day Sec. Sch. Makurdi	247	37
9	Comm. Day Sec. Sch. Yankwani	170	25
10	Comm. Day Sec. Sch. Bakori	200	30
	TOTAL	**2,200**	**327**

Source: Funtua Quality Assurance 2021

The sample was drawn from JSS 3 students, the researchers used purposive sample to select one mixed school from each political Ward, Hence, ten (10) Junior Secondary Schools were sampled and simple random sampling technique were used to select the students.

Two (2) instruments were used for data collection for this study which includes Barsch Learning Styles Inventory (BLSI) and Academic Achievement Test (AAT).

The researcher used both descriptive and inferential statistics to analyze the data collected for the study. Frequency and percentage are used to analyze the demographic information of the respondents In addition, the researcher used Pearson Product Moment Correction Coefficient to test hypothesis at 0.05 level of significance.

Results

The results of the analysis were presented as follow:

Ho$_1$: There is no significant relationship between auditory learning style and academic achievement among junior secondary school students in Bakori Local Government.

Table 3: Relationship between Auditory Learning Style and Academic Achievement.

VARIABLES	N	MEAN	STD	r-cal	r-crit	Devision
Auditory LS	44	6.68	1.116			
				.336	.026	Ho
Academic Achievement	44	21.82	14.559			Rejected

From the table 3 it can be inferred that student's academic achievement and their auditory learning style are related Pearson's r(42)= -.336, p=.026. This indicates a relationship between students' academic achievement and their auditory learning style. Therefore Ho$_1$ which stated that there is no significant relationship between auditory learning style students' and their academic achievement is rejected.

Ho$_2$: There is no significant relationship between visual learning style students and their academic achievement among junior secondary school students in Bakori Local Government.

Table 4: Relationship between Visual Learning style and Academic Achievement.

VARIABLES	N	MEAN	STD	r-cal	r-crit	Decision
Visual LS	66	15.70	5.865			
				.415	.001	Ho
Academic Achievement	66	22.59	8.913			Rejected

From the table 4 it can be inferred that students' academic achievement and their visual learning style are related Pearson's r(64)= .415, p=.001. This indicate a relationship between students' academic achievement and their visual learning style, therefore Ho$_2$ which stated that there is no significant relationship between visual learning style and academic achievement of such JSSIII students is rejected.

Ho$_3$: There is no significant relationship between kinesthetic learning style students and their academic achievement among junior secondary school students in Bakori local government.

Table 5: Relationship between Kinesthetic Learning style and Academic Achievement.

VARIABLES	N	MEAN	STD	r-cal	r-crit	Decision
Kinesthetic LS	217	261.05	7 .140			
				.743	.000	H
Academic Achiev	217	30.82	10.908			Rejected

From Table: 5 it can be inferred that student's academic achievement and their kinesthetic learning style are related Pearson's r(215) = .743, p= .000. This indicates a relationship between students' academic achievement and their kinesthetic learning style. Therefore Ho3 which stated that there is no significant relationship between kinesthetic and academic achievement of JSSIII students is rejected.

Discussion of Findings
From the table 8 and 9 the results obtained shows that there is existing a significant relationship between students' academic achievement and auditory learning style, there exist a significant relationship between students' academic achievement and their visual .learning style and there exist a significant relationship between students academic achievement and their kinesthetic learning style. This finding

is in agreement with the finding of Cathy, (2011) in which the relationship was confirmed between learning styles and students' achievement.

Conclusion

Based on the finding, the following conclusions were made in the study.

Most of the Junior Secondary School Students in Bakori Local Government Area are from low socio-economic status, Junior Secondary School Students in Bakori Local Government have specific learning styles which are mostly kinesthetic and visual learning. There is significant relationship between learning styles and academic achievement.

Recommendations

Based on findings of the present study, the following recommendations are offered;

1. Teachers should be encouraged to always create conducive atmosphere for learning and used method of delivery that appeal to the sense using concrete objects, visual aids, and physical materials to improve different learning styles of students.

2. Class activities that would improve visual, and auditory learning should be introduced in teaching and learning e.g effective use of instructional materials.

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