

**SELF-ESTEEM AND LEARNING STYLES AS CORRELATES OF ACADEMIC
ACHIEVEMENT AMONG IN-SCHOOL ADOLESCENTS IN PORT HARCOURT, RIVERS
STATE**

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ABSTRACT

The present study investigated Self-Esteem and Learning Styles as Correlates of Academic Achievement among in-school adolescents in Port Harcourt, Rivers State. A sample of 363 secondary students from a population of 3,911 students was used for the study. This was obtained using the Taro Yamen's formula, three research questions were answered while three corresponding null hypotheses were tested at 0.05 level of significance. Instruments for data collection were titled Self-Esteem Scale (SES), Learning Styles Scale (LSS) and School Achievement Test Scale (SATS). The instruments were validated by the researcher's supervisor and two experts in measurement and Evaluation. The reliability of the instruments was estimated using Cronbach alpha reliability of internal consistency. A reliability coefficient of Self-Esteem 0.771, visual learning style 0.773, Auditory learning style 0.797, Read and Write learning style 0.605, Kinesthetic learning style 0.712 and achievement test for mathematics 0.767 and achievement test for English language is 0.609 respectively. Research questions 1-3 was answered using simple linear regression while hypotheses 1-3 was tested using ANOVA associated with simple linear regression. Findings revealed among others that there is a positive relationship between auditory learning style and academic achievement among secondary students in Port Harcourt. Based on the findings, it was recommended among others that students should have a strong confidence in themselves and work hard to achieve success. It was also recommended that government should provide public address system in schools with large class size for effective teaching and learning.

Keywords: *Self-Esteem, Learning Styles, Academic Achievement, in-school students*

1.1 Introduction

It is not surprising to observe or note that a lot of students who wrote the senior secondary certificate examination led by West African Examination Council (WAEC) in the past and even in the present were not able to gain admission into the higher institutions of learning or gain employment into the Nigerian labour market due to their poor academic performance in this examination.

This poor academic performance or academic achievement could be traced to some causative factors such as psychological, sociological and environmental factors. In order to have a better knowledge or comprehension of academic achievement and to ensure that this is actualized by senior secondary school students. It is important to note that this study will be hinged on not only finding out the nature of relationship between some psychological factors (self-esteem and learning styles) and academic achievement, but the extent to which these factors individually and collectively correlate with students' academic achievement.

Academic achievement of a student is the student level of performance in an examination. It could be high or low. Every student is encouraged to meet or exceed their grade level standards. This can be possible only through hard work, self-discipline, determination etc. However, there are several factors that affect the academic achievement of students such as self-esteem, learning styles, study habit, locus of control, attribution, intelligence, motivation etc. from these it can be deduced that students' academic achievement cannot be based on just one or two variables but a lot of them. But for the purpose of this study or investigation we shall look at just two of them which are self-esteem and learning styles basically.

Knowledge acquired through experiences is cumulative. Intensity, frequency and consistency of successes or failures experienced by an individual over time frame conspire to influence development of confidence in the person. Frequent and consistent failures can result to a drop in confidence while frequent and consistent successes result to increased level of confidence. A good measure of level of confidence of an individual is the self-esteem.

Self-esteem is the self-assessment, awareness and insight one has about himself (Hormuth, 2010). It is the aggregation of thoughts, beliefs and opinions an individual has about himself as a person, his skills, competence, appearance and personal achievement and acceptance. It comprises thoughts, feelings, attitudes and awareness of a person about himself/herself (Woolfolk, Hughes & Walkup, 2007). It is a function of age, experience, intelligence and education. Self-esteem of an individual is shaped by experience acquired over the years in social and academic settings. Those who are high on the intelligence quotient and level of education have a better understanding of themselves and hence form true self-esteem about themselves.

Self-esteem is important in the life of a person as it is a reflection of an individual's perception and understanding of himself as regards his capacity, physique and relationship with others. It offers a person a platform on which comparison is drawn among individuals within a social context. Positive self-esteem acquired at formative age can help to develop necessary skills to face life challenges. In other words, acquiring defeatist beliefs through negative self-esteem is detrimental to the development of competence needed for personal growth.

Self-esteem does not always reflect reality (Yengimolki, Kalantarkousheh & Malekitabar, 2015). When there is dissonance between "actual self" and "real self" self-esteem is defective. For self-esteem to reflect reality, there must be congruence between "real self" and "actual self". Adolescents who have positive self-esteem possess a higher social and emotional compatibility that influences the potentiality to make progress (Nasir & Lin, 2012). Those who have negative perception about themselves often show a lower efficiency for interpersonal relationships. The result of the study conducted by Ybrandt (2008) showed that self-esteem is a main factor in social relationship, peer relationship and compatibility with life events. It is necessary in social context as positive self-esteem enhances adjustment making accommodation of people with diverse backgrounds and behaviors possible.

A study conducted by Wosu (2013) on self-esteem as a correlate of social adjustment using a sample of 847 students found that social self-esteem and academic self-esteem had a significant joint relationship with school adjustment.

Learning styles are a popular concept in psychology and education and are intended to identify how people learn best. The VARK model Fleming (1987) of learning styles suggests that there are four main types of learners. These four key types are: Visual learners, auditory learners, reading/ writing learners and kinesthetic learners.

It has long been a question as to whether students learn best when teaching methods and school activities match their learning style, learning strengths, and preferences. The popularity of this concept grew dramatically during the 1970s and 1980s, despite the evidence suggesting that personal learning preferences have little to no actual influence on learning results. While debate still

exist on the influence of matching teaching methods to learning styles on educational outcomes, the concept of learning styles remain extremely popular in educational research.

There are many different ways of categorizing learning styles including Kolb's model and the Jungian learning styles. Neil Fleming's VARK model is one of the most popular representations. Fleming (1987) developed an inventory designed to help students and others learn more about their individual learning preferences. In Fleming's model, which are often referred to as VARK learning styles, learners are identified by whether they have a preference for visual learning (pictures, movies, diagrams), auditory learning (music, discussion, lectures), reading and writing (making lists, reading textbooks, taking notes), or kinesthetic learning (movement, experiments, hands-on activities).

In order to identify which type of learner people are, Fleming developed a self-report inventory that posed a series of situations and respondents are asked to select the answers that best match their preferred approach to learning. A brief discussion of each learning style is discussed below.

Visual learners learn best by seeing. Graphic displays such as charts, diagrams, illustrations, handouts, and videos are all helpful learning tools for visual learners. People who prefer this type of learning would rather see information presented in a visual rather than in written form. For these individuals, they have to see information to remember it, they pay close attention to body language art, beauty and aesthetics are important to them. Also they have to visualize information to better remember them.

Aural (or auditory) learners learn best by hearing information. They tend to get a great deal out of lectures and are good at remembering things they are told.

Auditory learners prefer to listen to class lectures rather than reading their textbooks. They prefer to read out loud to remember information better. These set of persons enjoy listening to a recording of class lectures or a pod cast rather than going over their class notes. These individuals also create songs to remember or recollect information.

Reading and writing learners prefer to take in information displayed as words. Learning materials that are primarily or mainly text-based are strongly preferred by these learners. These set of persons like reading their textbooks and to them it's a great way to learn new information. They like to jot down notes during class and while reading textbooks. They have to make lists, read Kinesthetic (or tactile) learners learn best by touching and doing. Hands-on experience is important to kinesthetic learners. These set of learners enjoy performing tasks that involve manipulating objects and materials directly. These set of learners find it difficult to sit at a place for long period of time. They are good at applied activities such as painting, cooking mechanics, sports and woodworking. They learn more by practicing.

This model has been criticized from many angles despite the criticism and lack of empirical support, the VARK model remains fairly popular among both students and educators. Many students immediately recognize that they are drawn to a particular learning style. Others may find that their learning preferences lie somewhere in the middle. For example, a student might feel that both visual and auditory learning is the most appealing. While aligning teaching strategies to learning styles may or may not be effective, students might find that understanding their own learning preferences can be helpful. For example, if you know that visual learning appeals to you most, using visual study strategies in conjunction with other learning methods might help you better remember the information you are studying-or at the very least make studying more enjoyable. If no single learning preference calls out to you or you change preferences based on the situation or the type of information you are learning, you probably have what is known as a multimodal style. For example, you might rely on your reading and writing preferences when you are dealing with a class that requires a great deal of book reading and note-taking, such as a history of psychology course.

During an art class, you might depend more on your visual and kinesthetic preferences as you take in pictorial information and learn new techniques.

1.2 Statement of the Problem

There are reasons why certain things happen the way they do. These reasons could be psychological, sociological and environmental in nature especially as it has to do with the academic achievement of students. The psychological reasons or factors among others include self-esteem, learning styles of students, locus of control, personality, motivation, creativity, sociability, age, intelligence, determination, self-control etc.

All students in the senior secondary school level are driven by the desire to succeed academically not minding the means through which success is achieved. Some students indulge themselves in nefarious activities just to achieve academic success. They engage in activities such as examination malpractices for their test scores or for good grades in their tests and exams, some are very studious or work hard in their studies but do not achieve success in their academics, some are faced with examination anxiety, due to lack of preparedness and other factors. While some students accredit their successes and failures to external forces such as teachers, luck and other important personalities within their environment others bear total responsibility for their successes and failures for some students their academic achievement depends on the motivation they get from others whether directly or indirectly. There may be other factors like environmental and sociological that fights against students' academic achievement. This study is interested in finding out the magnitude and direction of the relationship between each of the psychological constructs (self-esteem and learning styles) and students academic achievement.

1.3 Aims and Objectives of the Study

The aim of this study is to determine the influence of self-esteem and learning styles as correlates of academic achievement, in Port Harcourt, Rivers State. Specifically, the objectives of this study are:

1. To ascertain the extent to which self-esteem is independently related to academic achievement of secondary school students in Port Harcourt.
2. To investigate the extent to which visual learning style relates with academic achievement of secondary school students in Port Harcourt.
3. To investigate the extent to which auditory learning style relates with academic achievement of secondary school students in Port Harcourt.

Research Questions

The following research questions will be formulated to guide the study.

1. To what extent is self-esteem related to academic achievement of secondary school students in Port Harcourt?
2. To what extent is visual learning style related to academic achievement of secondary school students in Port Harcourt?
3. To what extent is auditory learning style related to academic achievement of secondary school students in Port Harcourt?

Hypotheses

1. Self-esteem is not significantly related to academic achievement of secondary school students in Port Harcourt.
2. Visual learning style is not significantly related to academic achievement of secondary school students in Port Harcourt.

3. Auditory learning style is not significantly related to academic achievement of secondary school students in Port Harcourt.

METHODOLOGY

The study adopted the use of correlational research. Correlational research is hinged on the basic concept of correlation. Correlation is a coefficient that shows the extent and direction of relationship between two or more variables (Kpolovie, 2016). A sample of 363 secondary students from a population of 3911 students was used for the study, this was obtained using the Taro Yemen's formula. Three research questions were answered while three corresponding null hypotheses were tested at 0.05 level of significance. Instruments for data collection are Self-Esteem Scale (SES), learning Styles Scale (LSS) and School Achievement Test Scale (SATS). The instruments were validated by the researcher's supervisor and two experts in measurement and evaluation in Educational Psychology Department. A reliability coefficient of Self-Esteem 0.771, visual learning style 0.773, Auditory learning style 0.797, Read and Write learning style 0.605, Kinesthetic learning style 0.712 and achievement test for mathematics 0.767 and achievement test for English language is 0.609 respectively.

Research questions 1-3 were answered using simple linear regression while the corresponding hypotheses were answered using ANOVA associated with simple linear regression in testing the null hypotheses at 0.05 significant levels.

RESULT AND DISCUSSION

Research Question 1: To what extent is self-esteem related to academic achievement of secondary school students in Port Harcourt?

Table 1: Simple Regression analysis of self-esteem and academic achievement of secondary school students

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.001 ^a	.000	-.003	4.52523

a. Predictors: (Constant), SELFESTEEM

Table 1 revealed a simple correlation output of $r = .001$ which indicated that there is a very low positive linear relationship between self-esteem and academic achievement of students in Port Harcourt. The r^2 value of .000 showed that no variation in academic achievement of secondary school students was accounted for by self-esteem.

Research Question 2: To what extent is visual learning style related to academic achievement of secondary school students in Port Harcourt.

Table 2: Simple Regression analysis of visual learning style and academic achievement of secondary school students

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.043 ^a	.002	-.001	4.52100

a. Predictors: (Constant), VISUALLEARNING

Table 2 showed that visual learning style has a low positive relationship with academic achievement of secondary school students at $r = .043$. The r-square of .002, implies that the predictor had 0.2% contribution in the interaction between the coefficients with positive prediction of academic achievement of secondary school students in Port Harcourt.

Research Question 3: To what extent is auditory learning style related to academic achievement of secondary school students in Port Harcourt.

Table 3: Simple Regression analysis of auditory learning style related to academic achievement of secondary school students

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.156 ^a	.024	.021	4.47004

a. Predictors: (Constant), AUDITORYLEARNING

Table 3 showed the relationship between auditory learning style and academic achievement of secondary school students is .156. The coefficient correlation showed a low positive relationship between auditory learning style and academic achievement of students in Port Harcourt.

Test of Hypotheses

Ho1: Self-esteem is not significantly related to academic achievement of secondary school students in Port Harcourt.

Table 4: Simple regression analysis of self-esteem and secondary school students' academic achievement

		ANOVA			
Model 1	SS	df	MS	F	Sig, -
Regression	.003	1	.003	.000	.990 ^b
Residual	6081.876	297	20.478		
Total	6081.880	298			
Model	Unstandardized Coefficients	Standardized Coefficients	T	Sig.	
1	Beta (J3) Std. Error	Beta {p}			
(Constant)	14.985 2.860		5.239	.000	
Self Esteem	.001 .096	.001	.012	.990	

a. Dependent Variable: ACHIEVEMENTTEST

The result in table 4 showed the computed $F(1,297) = .000$, $p > .05$. Hypotheses 1 was therefore accepted, this indicated that self-esteem is not significantly related to academic achievement of secondary school students. The significant "constant t-value (14.985) showed that there are some other potent variables which were not included in the study. The Beta weight for self-esteem was found not significant, $Beta = .001$, $t = .012$, $p > .05$. The regression equation for model 1 is $Y^1 = 14.985 + .001 X_i$ where X_i is the score on self-esteem and Y^1 is the predicted students' academic achievement score. This indicates that at every unit increase in self-esteem, the students' academic achievement score is increased by .001. Whereas, at zero unit of X the criterion (Y_1) = 14.985.

Ho2: Visual learning style is not significantly related to academic achievement of secondary School students in Port Harcourt.

Table 5: Simple regression analysis of Visual learning style and secondary school students' academic achievement

		ANOVA			
Model 1	SS	Df	MS	F	Sig.
Regression	11.358	1	11.358	.556	.457
Residual	6070.521	297	20.478		
Total	6081.880	298			

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	Beta ((3)	Std. Error	Beta (ft)		
1					
(Constant)	16.351	1.805		9.060	.000
Visual Learning	-.053	.071	-.043	-.745	.457

a. Dependent Variable: ACHIEVEMENTTEST

The result in table 5 showed a computed $F(1,297) = .556$, $p > .05$. Hypotheses 2 was therefore accepted, this indicated that visual learning style is not significantly related to academic achievement of secondary school students. The Beta weight for visual learning variable was found not significant. $Beta = -.043$, $t = .745$, $p > .05$. The regression equation for model 2 is $Y^1 = 16.351 + (-0.053) X_2$ where X_2 is the score on visual learning and Y^1 is the predicted students' academic achievement score.

Ho3: Auditory learning style is not significantly related to academic achievement of secondary school students in Port Harcourt.

Table 6: Simple regression analysis of auditory learning style and secondary school students' academic achievement

		ANOVA			
Model 1	SS	Df	MS	F	... Sig.
Regression	150.117	1	150.117	7.569	.006 ^b
Residual	5890.621	297	19.834		
Total	6040.729	298			

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	Beta (/?)	Std. Error	Beta (ft)		
1					
(Constant)	10.015	1.841		5.441	.000
Auditory Learning	.195	.071	.158	2.751	.006

a. Dependent Variable: ACHIEVEMENTTEST

Table 6 shows that the F-ratio of 7.569 is significant at 0.05 level of significance $p < 0.05$. The beta value shows that auditory learning alone contributes 15.8% to the variation in students' academic achievement. Since the regression analysis show $t\text{-cal} = 2.751$, $p = 0.006$, the null hypothesis that auditory learning style is not significantly related to academic achievement of secondary school students in Port Harcourt is rejected. Therefore there is a significant relationship between auditory learning style and academic achievement of secondary schools in Port Harcourt.

Discussion of Findings

i. Self-esteem and academic achievement of secondary schools in Port Harcourt

Self-esteem has a low significant relationship with academic achievement of students in Port Harcourt. This finding is in agreement with the views of Pullmann and Allik (2008) who asserts that self-esteem and academic achievement have close relationship and have a lasting impact on each other. He further opined that high self-esteem plays a highly important role not only in academic achievements of students but also in social and personal development as well.

The findings also agree with the view of Grantham and Ford (2003) which elaborate that students with high self-esteem set higher goals in life and strive to achieve them with determination, commitment and steadfastness. Such students do not lose hope even in the face of failures, because such students have never ceased belief and the will to attain the goal and they achieve it ultimately. However, Pullmann and Allik (2008) explain that a positively high self-esteem among students leads to success academically and socially. This also can potentially harm a student in his/her social life.

ii. Visual learning style and academic achievement of secondary school students in Port Harcourt

Visual learning style has a low positive significant relationship with academic achievement of students in Port Harcourt. This finding is in fine with or consistent with the findings of Yilmazsoylee and Akkoyunlu (2009). Lu and Yang (2016) also found no effects between learning styles and concentration in mobile learning. When learning conceptual knowledge with graphical course ware,

the participants with different learning styles (visual verbal) in m-learning had different performances under the three states of learning concentration. The visual learners Generally, students often achieve better performance when they focus highly on the learning contents and activities. However, this situation is different between visual and verbal learners who are learning conceptual knowledge with graphical course ware.

iii. Auditory learning style and academic achievement of secondary school students in Port Harcourt

Auditory learning style has a strong positive relationship or correlation with academic achievement of students in Port Harcourt. This finding is in line with Tabanhoglu (2003) who argues that auditory learners are good at arranging words in order, making associations and reviewing them in order to facilitate their retrieval in terms of vocabulary learning. The results in this study show that auditory learners know how to manipulate and achieve the target language effectively. It is also in line with Cohen and Wolvin (2011), storytelling is argued to be very important for auditory learning. They emphasized the importance of stories for auditory learners and reported that stories both provide much more than entertainment and help us understand ourselves and the world around us. The study states that stories are central to communication and trained story listeners are more cognitively focused. Story telling is important, but Cohen and Wolvin emphasized the need to refocus on story telling. Accordingly, great potential for creating classroom education around the stories can be provided to improve the listening skills of students and their general understanding skills. This finding is also in line or agreement with Karakus (2002) who found that one of the ways of making use of experience, acquiring and enhancing knowledge is through listening.

CONCLUSION

The study investigated self-esteem and learning styles as correlates of academic achievement among secondary students in Port Harcourt, Rivers State. The researcher thought about the idea of carrying out this study due to the high rate of failure among secondary students in internal and external examination. The researcher observed that certain factors such as lack of preparedness by students, examination anxiety, poor study habit lack of parental support, inability of students to identify their learning style preference among others were responsible for poor academic achievement of secondary students in Port Harcourt. They also lacked self confidence in themselves because they were called derogatory names by their parents and teachers. Finally it was proven that there is a strong positive relationship between auditory learning style and academic achievement among secondary students in Port Harcourt and the relationship is significant. From the findings of this study, it was concluded that visual learning, read and write, kinesthetic learning styles and self-esteem variables did not significantly predict students' academic achievement but auditory learning style significantly predict students' academic achievement. From the above statement it can be deduced that listening is a powerful tool in academic achievement or school performance.

RECOMMENDATIONS

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

1. Teachers should help their students build a high self-esteem about themselves by using the right words that build their self-confidence and self-worth of their students and not use derogatory words on them thereby making them think low of themselves or see themselves as failures.
2. Parents should also help their children to achieve high academic performance by providing their basic needs in life.

3. Government should provide public address system in the schools for large class size so as to help the teacher communicate effectively with the students.

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