

LEARNING STYLES AS PREDICTOR TO READING DISTRACTION AMONG STUDENTS IN UNIVERSITIES IN RIVERS STATE

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Abstract

This study investigated learning styles as predictors of reading distraction among students in universities in Rivers State. The design for the study was correlational design. Two research questions and two hypotheses guided the study. ANOVA in association with multiple regression were used to answer the research questions while the hypotheses were tested using ANOVA associated with t-test at 0.05 level of significance. A sample of 997 undergraduate students in their third year of study was used and this was gotten by using two-stage sampling technique via stratified random sampling and convenience/accidental sampling techniques. Two instruments Visual, Aural, Read/write and Kinaesthetic inventory (VARK) and Reading Distraction Assessment Scale (RDAS) were used for data collection. Two experts determined the validity of the instruments while their reliability was determined using cronbach alpha. The reliability coefficients are 0.81 and 0.83 respectively. The result showed that learning styles jointly predicted reading distraction significantly and the auditory learning style had the highest contribution. Based on the findings of this study it is recommended that students identify which styles of learning suit them most as to help them from being distracted during class activities.

Keywords: learning styles visual, auditory, read/write kinaesthetic and reading distraction.

Introduction

Reading is an important skill to the development of self and nation. The reason is that a literate individual is identified by his/her ability to read and

write. That is to say that good acquisition of reading and writing skills is an indication of an educated society. In the absence of sound reading and writing skills our nation's vision 2020 which is "education for all" cannot be achieved.

Therefore, for students to excel in their academics, they must be thoroughly involved in the reading of their lecture notes and textbooks which are their primary concern in the educational institution. In other words, the primary engagement of students is reading. In life, human beings are engaged in different activities to survive. In the course of doing this, it is observed that some are very focused on their activities at a given time while some others are not. Learning styles deal with the individual preferential method to utilize information that is taught. The best method for an individual in processing or utilizing information may be the worst method for another to process information. Hence there exist various concepts. No two individuals process information the same manner due to the fact that there are individual differences. Some people learn better through visual means, while others prefer audio. Some people may see both ways better while others may not even use any of them. Whichever method is used, learning is said to have taken place when there is a change in the behaviour of the learner. This means that learning can be arrived at in different ways by different individuals and they can also be distracted when the right thing is not being done thereby there is distraction.

Learners who are focused may be termed concentrating on what they are doing as at that time while learners who are not focused or concentrating may be as a result of distraction. In like manner in the classroom setting, when teachers are teaching some students do not pay attention to what the teachers are teaching, rather they get involved in other things outside the teaching at that point in time. For instance, some students might be engaged in copying biology note while mathematics or any other subject lesson is going on. These students found doing what they are not supposed to do at a given time/period are not concentrating and may be distracted due to one thing or the other. That means when one diverts the attention meant for an ongoing activity (primary focus) and places it on some other things that are not the primary focus, the individual is termed to have been distracted.

Distraction, according to Merriam-Webster Dictionary, (2005), is explained in several ways as “the act of distracting or the state of being distracted; especially: mental confusion”. That is an object that directs one’s attention away from the main focus. In other words, distraction is anything that prevents one from concentrating on the main focus. Distraction could be used as a strategic means of coping in an individual,

whereby an avenue is created to divert attention to things not related to current issues in order to avoid what is giving them stress. The diversion of the individual or group of individuals' current attention from what is ongoing to something else that is not the major concern with the task at hand is distraction.

The researcher sees distraction as any digression from the present action or event at hand or ongoing. That means distraction occurs when one's attention is shifted from what he or she supposed to do currently to some other things that do not matter most at that point in time. Observation and personal experience have shown that different people get distracted due to different reasons or factors. Some people are distracted due to psychological factors such as lack of interest, fatigue, preference, hunger, value and so on. Adesulu, Adebayo and Amos (2017) reported that both secondary and tertiary students have entirely lost interest in reading and that over 30 million Nigerians who graduated from secondary schools have poor reading skills. More seriously in many universities, most students do not read and have converted library as a centre for browsing non-academic information that is not academically inclined. On the other hand, some persons get distracted due to environmental factors such as noise,

events, phone ringing, and music. Schumm, (1997) is of the view that two factors are responsible for distraction vis-à-vis external and internal forces. External comes from the outside such as noise produced by visual and audio means like phones ringing, notifications, chatting, buzzing from messenger, texting, noise from music, television viewing, late coming into the class, blaring car horn from outside the class, social interactions as in talking, not coming to class with the necessary writing materials. From outside classroom environment like the home talking on the phone television volume and lots more too numerous to mention. When one's attention is distracted it takes time for that person to come back to course. Internal distraction is generated by the individual from within. That means the internal distractions is a psychological based such as Interest, thinking styles, emotions, feelings such as hunger pangs, chewing of gum, tiredness, ill health, talking, etc. Again, Tesch, Coelho and Drozdenko (2011), in their study on the relationship between learning style and various types of external and self-generated distractions, on some undergraduates of Business Western Connecticut State University, USA, using Modified Felder-Silverman 40 items instrument measure learning style, Sequential/Global concerned with learning

environment and Self-produce distraction external and self-produced classroom distractions. The findings showed significant differences between the perceived potencies of classroom distractions.

Neil Fleming and Collen Mills in 1987 developed the VARK model which is an abbreviation of Visual, Auditory, Read/writing and Kinesthetic learners. To them they believe that every person has a unique way of understanding what they are taught. The model entails a set of questions that give the individual an avenue to classify themselves into the group they belong. They also believe that learning can be inclined by one's age, cultural background and where the person is raised, educational history, physical and neurological health.

The model is seen to provide base for learning environment between teachers and students, shows that in learning there exist different forms and types of learners and finally how staff can develop themselves when it involves learning strategies.

VARK is as explained below:

Visual learners understand better when what is been taught is put in a pictorial forms. Their preference is for seeing so

they love visual aids such as charts, diagrams, handouts etc. provided they can see what they are learning.

Auditory learners learn better with sounds by listening, this group enjoys attending lectures, use of microphones and speakers, tape recorder, discussion provided sound is involve they learn and comprehend what is been taught.

Read/write learners are individuals who prefer to learn from things that are put down in words of writing. This group of learners love taking notes, reading of textbooks or writing material.

Kinesthetic/tactile learners are individuals who prefer to learn by experience and feeling of touch. They want to do it themselves. These group of learner benefit mostly since they are not only restricted to what they are provided with but explore to get more.

To the researcher, distraction is ones failure to focus on a given ongoing task by doing something else. Thus, when one who utilises the time he/she supposed to be reading (primary focus) for some other activities (secondary focus) such a one is termed to be experiencing reading distraction.

Acquisition of good reading skills has a lot of good benefits to the individual such as

self-improvement, relaxation, self-reliance, self-esteem and development of high achievement motivation. So for any serious-minded student to excel in the world of academics, reading which keeps them abreast of what is going on in the school cannot be disputable. However, despite the role of reading in the development of a literate nation, it is found that students whose primary duty in the school is to read their academic materials have diverted their time, interest and energy to some other things. This is evident in the level of students' performance in their cognitive, affective and psychomotor domains. For instance, the number of students who graduate with second class upper and first class grades are very few when compared with the number of students who graduate with 3rd and pass grades. Students are also involved deeply in some antisocial behaviours such as examination malpractice, school dropout, negative attitude towards attending lectures, writing of examinations, doing class and take home assignments, etc. It is also noticed in their high level of anxiety, low self-concept and so on. It is observed that generally many students in Nigeria do not like to read. This situation is detrimental to them and to the society as it will hinder the achievement of Vision 2020 "Education for All".

Learning styles came into being as a result of various theories competing to account for the differences that exist in individuals. (Wikipedia, 2018). Teaching style should be matched with wide range of learning styles when it comes to the learner's environment, methods etc. (Fleming, 2001).

Learners have different methods in information processing so the instructor should use different styles to accommodate their students' styles. (Fayomba, 2015). Vashnav, (2003). Claxton and Murell (2007), believe that students have been known to benefit and improve greatly with the various learning styles at their disposal. They explained that the height attained was due to the availability of a variety of learning styles. The use of different learning styles by the teacher is so important that this will bring every learner to gain and improve their learning. It will also lead to greater participation that will reduce distraction. The more variety of learning styles used the larger the participation, the less the distraction.

"Florez and Sammons in Orluwene, and Oddiri, (2016), opined that Assessment for Learning (AFL) has a formative purpose since it helps to shape what lies ahead rather than simply to gauge and record past achievement. Learning goes

beyond the immediate but deals with shaping the students' lives forever. It simply means that learning is life-long. Jaju and Kwale (2000), see learning styles as a method or approach an individual utilizes the information to gain knowledge at their disposal. The learner's own style must be respected by the teacher while encouraging them to know and use others as well. Teachers should use instructional materials and activities to bring alive what is been taught in the classroom to arouse the learners' full interest and participation.

Importance of learning styles to the instructor first and foremost is to acquire and process information to gain knowledge. Students should know their own learning styles by identifying the best way suitable. Secondly, teachers should let them understand the need for them to use their own preferred learning style and also understand the learning styles of others by providing them feedbacks with regards to the pros and cons of various styles.

Statement of the Problem

Education is the bedrock of every nation. That means a nation's lifestyle is greatly influenced by the number of its members that are educated. An educated individual is one that can read and write. Acquisition of good reading skills has a lot of good benefits to the individual such as self-

improvement, relaxation, self-reliance, self-esteem and development of high achievement motivation. So for any serious-minded student to excel in the world of academics, reading which keeps them abreast of what is going on in the school cannot be disputable. However, despite the role of reading in the development to a literate nation, it is found that students whose primary duty in the school is to read their academic material have diverted their time, interest and energy to some other things. This is evident in the level of student's performance in their cognitive, affective and psychomotor domains. For instance, the numbers of students who graduate with second class upper and first class grades are very few when compare to the numbers of students who graduate with 3rd and pass grades. Students are also involved deeply in some antisocial behaviours such as examination malpractice, school dropout, negative attitude towards attending lectures, writing of examinations, doing class and take home assignments, etc. It is also noticed in their high level of anxiety, low self-concept and so on. It is so observed that the general feeling is that many students in Nigeria do not like to read. This situation is detrimental to the self and to the society as it will hinder the achievement of Vision 2020 "Education for All". And even the actualisation of the

7 goals of education in Nigeria mostly to build a united strong and self-reliant nation

Aim and objectives of the study

The aim of the study is to investigate learning styles as predictor to reading distraction among undergraduate students in universities in River state. The objectives are:

1. Examine the joint relationship of learning styles (VARK - Visual, Aural, Read/write and Kinesthetic) and reading distractions among undergraduates in universities in Rivers State?
2. Examine the relative contribution of learning styles (VARK - Visual, Aural, Read/write and Kinesthetic) to reading distractions amongst undergraduates in universities in Rivers State?

Research Questions

The following research questions were used to guide the study:

1. What is the extent to which learning styles (Kinesthetic, read/write, visual and auditory) jointly predict reading distraction among undergraduate students of universities in Rivers state?
2. What are the relative contributions of visual, auditory, Read/write and Kinaesthetic learning styles in the

will not be possible for it is said “world that can read can succeed”.

prediction of reading distraction among undergraduate students of the universities in Rivers State?

Hypotheses

The following hypotheses were tested at 0.05 level of statistical significance:

1. Learning styles (VARK - Visual, Aural, Read/write and Kinesthetic) do not significantly have a joint relationship to reading distractions among undergraduates in universities in Rivers State.
2. Learning styles (VARK - Visual, Aural, Read/write and Kinesthetic) do not significantly have a relative contribution to reading distractions among undergraduates in universities in Rivers State.

Methodology

Correlational design was used for this study. The population for the study consisted of 18,102 300 level students that made up in the three Universities in Rivers State namely, University of Port Harcourt (UNIPORT) with 7,052 students, Rivers State University (RSU) with 6,750 students, and Ignatius Ajuru University of Education (IAUE) with 4,300 300 level

students. (Source: Academic Planning Office, UNIPORT, RSU and IAUE). A sample of 1000 undergraduate students currently in their 300 level was used as the sample for the study. This sample size was determined based on the suggestion of Krejcie and Morgan (1970) who recommended sample size of 377 for a population above 10,000. VARK inventory was used to assess the preferred learning style of students and Reading Distraction Assessment Scale (RDAS) was used for reading distraction. The validity of the instrument for face and content validities was determined by giving by two lecturers in Educational Psychology and one psychometrician. These persons vetted the items of the instruments in terms of suitability of the level of grammar, the ambiguity of the statement of the items, relevance of content and the ability to measure what it is supposed to

measure. The reliabilities of the instruments were tested using 30 students in 300 level at Niger Delta University who are outside the population of the study, which comprised of 15 females and 15 males. The data obtained was subjected to the Cronbach Alpha method of reliability. The VARK had an alpha consistency of 0.81, while the RDAS yielded a value of 0.83. Copies of the instrument were administered to the respondents directly by the researcher and three research assistants who were provided with uniform guidelines on how to respond clearly and accurately to the instruments.

Multiple regression and beta values associated with multiple regression were used to answer the research questions were applicable. ANOVA and t-test associated with multiple regression were used to test of the null hypotheses at 0.05 alpha level of significance.

Research Question one: What is the extent to which learning styles (VARK - Visual, Aural, Read/write and Kinaesthetic) jointly predict reading distraction among undergraduate students of universities in Rivers State

Presentation of results

The data presented in table 1 were analysed and the empirical results were presented as follows:

Table 1: Prediction of reading distraction on learning styles.

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.135	0.018	0.014	4.28

Dependent variable: reading distraction predictors (constant), Kinaesthetic, read/write, visual, and auditory

In table 1, it is shown that the joint influence of visual, auditory, read/write and Kinaesthetic learning styles relationship with reading distraction yielded a correlation coefficient (R) of 0.135, a coefficient of multiple determinations (R^2) of 0.02 and an adjusted R^2 of 0.01. It is deduced that the

learning styles of Kinaesthetic, auditory, read/write and visual can jointly be used to explain 1.4% changes in the reading distraction level among the undergraduate students of the universities in Rivers State. On the other hand, they cannot be used to explain 98.6% changes in their reading distraction level.

Hypothesis One: Learning styles (VARK - Visual, Aural, Read/write and Kinaesthetic) do not significantly have a joint relationship to reading distractions among undergraduates in universities in Rivers State?

This null hypothesis was tested using analysis of variance in association with multiple regressions.

Table 2: Summary of analysis of variance associated with multiple regressions on the prediction of reading distraction on learning styles

Sources of variation	Sum of squares	Df	Mean square	F	p-value
Regression	338.470	4	84.618	4.615	0.001
Residual	18190.332	992	18.337		
Total	1852.806	996			

Dependent variable: Reading distraction

Predictors: (Constant), Kinaesthetic, Read/write, visual, Auditory.

In table 2, it is shown that F- value of 4.64 was obtained at the df of 4 and 992 at 0.001 level of probability ($p < 0.05$). Thus, it is deduced that the learning styles of visual, auditory, read/write and Kinaesthetic jointly predicts reading distraction significantly.

Research Question Two: Learning styles (VARK - Visual, Aural, Read/write and Kinaesthetic) do not significantly have relative contributions to reading distractions among undergraduates in universities in Rivers State?

Hypothesis Two: Learning styles (VARK - Visual, Aural, Read/write and Kinesthetic) do not significantly have relative contributions to reading distractions among undergraduates in universities in Rivers State?

For answering research question two, the beta values associated with multiple regression were used, while the corresponding null hypotheses were tested using the associated t-values. The results obtained are presented in table 3.

Table 3: Relative contributions of four learning styles on the prediction of reading distraction among undergraduates in universities in Rivers State.

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Explainable variables	B	Std. Error	Beta		
(Constant)	14.018	1.258		11.144	.0005
Visual	0.021	0.034	0.020	.617	.537
Auditory	0.104	0.028	0.121	3.763	.000
ReadWrite	0.063	0.028	0.071	2.233	.026
Kinaesthetic	-0.036	0.030	-0.039	-1.208	.227

a. Dependent Variable: RD

Table 3 shows that the standardized coefficients (B) obtained when the four learning styles visual, auditory, read/write and Kinaesthetic jointly predicted reading distraction are 14.02 for constant, 0.021 for visual, 0.10 for auditory, 0.06 for reading/write and -0.04 for Kinaesthetic. Thus the model regression equation to be used when predicting reading distraction

on learning styles is $Y^1 = 14.018 + 0.021 X_1 + 0.104 X_2 + 0.063 X_3 - 0.036 X_4$ where Y^1 is the predicted score on reading distraction while X_1, X_2, X_3 and X_4 are any given score on visual, auditory, read/write and Kinaesthetic respectively.

It is also shown in table 3 that standardized coefficients of Regression obtained for the predictor variables are 0.02 for visual,

0.12, for auditory, 0.07 for read/write and -0.04 for Kinaesthetic learning styles. On this basis, it is clear that auditory learning styles had the highest contribution on reading distraction among undergraduates of universities in Rivers State. This is followed by read/write, Kinaesthetic and then visual. Furthermore, when the significance of their contributions was tested using t-test associated with multiple regressions, it was found that only auditory and read/write that made significant contributions in the prediction of reading distraction. This is because their t-values of 3.76 and 2.23 respectively were obtained at 0.0005 and 0.026 levels of probability ($P < 0.05$). On the other hand, visual and Kinaesthetic learning styles did not contribute significantly to the prediction of reading distraction. This is because the beta and t-values were obtained at probability levels of 0.37 and 0.23 respectively higher than the chosen alpha level of 0.05.

Discussion of findings

Learning styles and Reading Distraction

From the result obtained, it was revealed that learning style accounted for about 1.4% variation in the reading distraction experienced by undergraduate students in Rivers State. This result further implies that the remaining 98.6% variation in

reading distractions is attributed to other factors beyond the scope of the present study. This result, however, was found to be a statistically significant predictor on the reading distraction of undergraduate students, therefore as a group learning styles had a significant influence on reading distraction of students. This result was not surprising but expected as student ability to concentrate is more a function of internal processes than external processes. Students who are able to realize this and utilize it for their advantage can improve their reading ability irrespective of the external challenges or distraction that attempt to distract them. Furthermore, this result can be explained by the fact that when students get a congruent understanding of their learning style, the possibility of being distracted by external factors is limited. Finally, the result might have been due to fact that students who are distracted might be distracted not due to their learning style, but more to their low level of understanding and comprehension which makes them easily distracted.

The finding from this result is similar to that obtained by Tesch, Coelho, and Drozdenko, (2011) they found out that learning significantly predicted various types of external and self-generated distractions among university students in the United State. Despite the similarity of

this finding to the current research, it is different to the extent that the present study is focused on reading distraction generally, with differentiating into internal or external unlike Tesch et al (2011). Furthermore, the samples used were drawn from different population.

Regarding the independent contributions of learning style to reading distraction, it was shown that auditory learning style had the highest independent prediction on distraction followed by read/write, kinaesthetic and lastly visual learning style. This result is not surprising to this researcher because it is easier to be distracted while listening than when there is a hand on experience. Furthermore, with visual learning style there is a higher engagement of more senses unlike auditory. This result is different from that obtained by Moayyeri (2015) who found out that reading/write learning style had the highest prediction on academic achievement than other learning styles.

Conclusion

It was shown from the study that students who aural learners are more likely to be influenced by reading distraction than their counterparts with kinaesthetic, read/write and visual learning style.

Recommendations

1. Institutions of learning, especially universities should develop a policy and enforce same which is against the usage of mobile phones during classes. This recommendation is in line with the finding that students are easily distracted by usage of their mobile phones.
2. Counsellors in schools should conduct an assessment of students to identify their learning styles and use such knowledge to provide educational and personal counselling for such students. With such development, it is easier to identify and assist students who are visual learners and more prone to reading distraction
3. The result that learning styles contribute little in influencing reading distraction entails that there are some other factors which are likely to influence students reading culture. It is incumbent on school authorities to identify such factors and provide mitigation strategies to help ameliorate the effect and promote a reading culture for all students, irrespective of their preferred learning style.

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