Analysing the Attitudes of Students towards Research making; using Logistic Binary Regression Analysis.

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Abstract: This paper presents a review that how the attitudes of Students towards making further research on what they are taught; through making findings and asking questions, in the Higher Level of Study contribute significantly to their Performance in the School. This attitude i.e. ''Students don't do further research on what they are taught'' which is the Dependent Variable in this study; influences the good or bad Performance of Students in their Academic pursuit. The foremost objective in the study of these attitudes is to enhance the major Characteristics/Features the Students are needed to assist or boost their performance in their Academic Pursuit. These attitudes are the instrumental to the Success and great achievement of Students in the higher level of Study. Some of the other attitudes studied which are the independent behaviors in this study are: ''Students don't prepare for the next lectures by reading ahead of the syllabus (SDPFNL), Students don't care to ask questions on the area they don't understand during lectures (SDCTAQ). Students don't revise their lectures notes thoroughly (SDRTLN). Students don't complain about the inadequate facilities for learning (SDCIFL,). Students don't make use of the ICT centre for research making, except for face book, twitter, whatsApp, 2go etc. (SDUIEFF). Students don't make use of the library for further findings and readings except for making friends (SDULFF), Students don't move closer to their lecturers to learn more (SDMCTL), Students don't study with their colleagues in the same level (SDSWTC)''. The method of Logistic Binary Regression explains the linear relationship between the variables under study. The data for these aforementioned attitudes were generated through the respond of some students from the questionnaire distributed among them. Only three independent factors contributed significantly to the poor attitudes; students exhibit in making further research on what they are taught.

Keywords: Students, Attitudes, Further research, Logistic binary regression, Publications, Nigeria.

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Introduction

The goal and objectives of the study are to identify and underline the interdependent that exists between Dependent and the independents variables from the point of view of the influence of the effects of Dependent variable upon the achievement of expected performance of Students in the higher level of study. The research is important from both theoretical and empirical points of view. Special attention is paid to the Dependent variable i.e. further research on what students are taught; that needs to be based on a forecast of the students performance and estimate how the forecast outcome is likely to be affected by the possible independent variables.

The fundamental concepts as transmission mechanism of Further research on what students are taught identifies and analyzes its channels to evaluate the functionality and efficiency of this mechanism. Tertiary Institutions objectives are to produce a sound and competent graduates. In this respect, a special attention is paid to the vision of the Tertiary Institutions of that was oriented to encourage and promote an efficient medium for research work, as well as to the maximum provisions for easy access for research work in order to produce competent graduates in their field of studies.

The formulated conclusions and recommendations determine the practical significance of this paper which may be used in the decision making process of how Tertiary Institutions Authorities would encourage students to do further research on what they are taught by making use of the ICT centre and Library effectively, also encourage the students to ask questions on the area they don't understand during Lectures. In fact, higher institutions of learning are established to give students sound and qualitative education so that they can become more productive, self-fulfilling and attain self actualization. This is why the National Policy on Education (2004) highlights the aims of higher education as:

(a) The acquisition, development and inculcation of the proper value – orientation for the survival of the Individual and society;

(b) The development of the intellectual capacities of individuals to understand and appreciate their environments;

(c) The acquisition of both physical and intellectual skills which will enable individuals to develop into careful members of the community; and

(d) The acquisition of an objective view of the local and external environment.

Statement of Problem

This looks appropriate to explain as to how different independent variables work and manipulate to affect the dependent variables. This will also study the relationship among these variables by measuring the level of significance in this study. Further research on what students are taught influence the interest of students in their area of studies affecting their GPA positively. Lack of further research undermines the good performance of Students and prompts failure or withdrawal of the Students from the School. Therefore, this study is basically focused on identifying the perceived attitudes of students in making further research on what they are taught in curbing the menace of students' failure in higher level of studies i.e. tertiary institutions.

Literature review

Anastasi (1990) defined attitude as "a tendency to react favourably or unfavourably towards a designed class of stimuli". It is evident that attitude cannot be directly observed, but must be inferred from avert behaviour, both verbal and non verbal.

Validya (1989) explains attitude as a condition of readiness for a certain type of activity. Attitudes held by individuals may be simple or complex, stable or unstable, temporary or permanent and superficial or fundamental. Judgments based upon insufficient facts are likely to yield wrong results and, thereby, develop biased attitudes.

According to Crow and Crow (1979), a child's attitude towards his work affects his worth in his activity.

Ubom (2001) defined attitude as an individual perception and reaction to a task which is expected to be carried out or executed in a group, institution, school setting or an organisation. Attitude can be said to be positive or high when individual response to the task or programme is favourable and when they show commitment to their duties. It can be negative or low when the students express a nonchalant response, with regard to what is expected of them in the given situation.

Feng .R and Chen .H (2009) stated that: Learning process is an emotional process. It is affected by different emotional factors. The teacher and his students engage in various emotional activities in it and varied fruits of emotions are yield."

Choy S.C & Troudi .S (2006) stated that: Attitude can help the learners to express whether they like or dislike the objects or surrounding situations. It is agreed that the inner feelings and emotions of learners influence their perspectives and their attitudes towards the target language.

Kumar (2008) stated that: The field of reference service is vast and dynamic and many new developments have taken place in it during the last ten years or so. The rapid developments have occurred in computer technology, telecommunication (including satellite communication), printing, reprography, etc. These developments have important implications for the provision of information by libraries/ information centres and documentation centres to their user. The new trends of ICT in library and information science added reference materials and services as a concept. But there are needs to separate the two concepts- resources materials and services to enhance readers.

Kresh (2001) stated that: An explosion of information and the popularity of the Internet and commercial search engines have opened the way for new demands and expectation from users.

Auzmendi (1992) stated that: The construct of attitudes has been broadly defined as "not directly observable, inferred aspects, consisting of beliefs, feelings, and behavioral predispositions towards the object to which they are directed,(p. 17, cited in Mondejar-Jimenez & Vargas-Vargas, 2010).

Methodology

Survey method was adopted. A questionnaire was used to collect data from students. Two hundred Fifty (250) copies of questionnaires were administered in the institution. The questionnaires were distributed randomly to undergraduate students inside the Institution during the second semester of 2013/2014 academic sessions of individual school. Sampling technique was adopted by the researchers in distributing the instrument. A total of two hundred and thirty copies of questionnaire (92%) were returned. The data collected was analyzed using Logistic Binary Regression.

Theoretical background of Binary Logistic regression (Tarling, 2009) (Healy M, 2006)

Regression analysis is a multivariate statistical methodology to investigate cause and effect associations. Linear regression models are developed on the assumptions that the response variables are continuous in nature and also that the underlying distribution of the variable is Gaussian. Logistic regression resolves the inconsistencies associated with these assumptions and that of ordinary sum of squares regression methods. With logistic regression the response variable is an indicator of some (binary) characteristic. Based on the logit transformation of the dependent variable, the binary logistic regression model quantifies the 'odds' of the occurrence of an event. The outcome probabilities for each dependent variable value are the basis of the model. Let π be the probability of the occurrence of an event, then $1 - \pi$ is the probability of its non-occurrence. Thus the odds of its event is given by

$$odds = \frac{\pi}{1-\pi} \qquad (1)$$

The logic function based on a single predictor variable is defined as

$$\log\left(\frac{\pi}{1-\pi}\right) = \beta_o + \beta_1 x \qquad (2)$$

The general linear logistic model can be now written as

$$logit\pi_j = \log\left(\frac{\pi_j}{1-\pi_j}\right) = X_j^T B \qquad (3)$$

Where $\pi_j = \frac{e^{X_j^T \beta}}{1+e^{X_j^T \beta}} \qquad (4)$

And X_i is a Vector of measurements corresponding to covariates and dummy variables corresponding to factor levels. The independent variables may be dichotomous, categorical or continuous. The MLE of the Estimates of the parameters β and π_j consequently are obtained by maximizing the log-likelihood function. The use of binary logistic regression model here is the probability of a high index Students don't do further research on what they are taught based on a set of explanatory variables (all dichotomous in nature i.e. $P\left(Y = \frac{1}{\tilde{X}}\right) Where \tilde{X}$, is the known vector of explanatory variables).

Result and Discussion
Direct logistic regression was performed to assess the impact of a number of factors on the likelihood that respondents would report that ''Students don't do further research on what they are taught''.
The model contained eight independent variables (SDPFNL, SDCTAQ, SDRTLN, SDCIEL, SDSWTC, SDMCTL, SDUIEFF and SDULFF).
Table 1: shows the full model containing all predictors was statistically significant, X^2 **(8**, *N*= **229)** = **66.972**, p-values < α = **0.05**, indicating that the Model was able to distinguish between respondents who agreed and did not agreed ''Students don't do further research on what they are taught''.
Table 2: shows the model as a whole explained between **25.4**% (Cox and Snell R square) and **35.6%** (Nagelkerke R squared) of the variance in the students' further research status, and correctly classified **77.3** % of cases.
As shown in **Table 3,** only three of the independent variables made a unique statistically significant contribution to the model they are: 1. Students don't prepare for the next lecture, 2. Students don't revise their lecture notes and 3. Students don't make use of the library for further findings and readings except for making friends. The strongest predictor of reporting 'Students don't do further research on what they are taught was, ''Students don't make use of the library for further findings and readings except for making friends'' recording an odds ratio of **5.771**. This indicated that students who don't use the library for studies were **5** times more likely

to report students with poor further research on what they are taught than those who did use the library for further studies, controlling for other factors in the model. The odds ratio of **4.39** for 'Students don't prepare for the next lectures by reading ahead of the syllabus'**.** This indicated that students who don't prepare for the next lecture by reading ahead of the syllabus were over **4** times more likely to report students with poor further research on what they are taught than those who did prepare ahead of the lectures, controlling for all other factors in the model.
The odds ratio of **2.223** for Students don't revise their lectures notes thoroughly, indicating that students who don't revise their lectures notes thoroughly were **2** times more likely to report students with poor further research on what they are taught than those who did revise their lectures notes thoroughly, controlling for other factors in the model.

Table 1: Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	66.972	8	.000
	Block	66.972	8	.000
	Model	66.972	8	.000

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	218.172(a)	.254	.356

Table 2: Percentage of the Variance explained

Observed		Predicted		
		Students don't do further research on what they are taught		% Correct
		Disagreed	Agreed	Disagreed
Students don't do further research on what they are taught	Disagreed	34	38	47.2
	Agreed	14	143	91.1
Overall Percentage				77.3

Table 3: Variables in the Equation

	B	S.E	Sig.	Odd Ratio
SDPFNL(1)	1.490	.390	.000	4.439
SDCTAQ(1)	.387	.344	.261	1.473
SDRTLN(1)	.799	.363	.028	2.223
SDCIEL(1)	-.050	.364	.891	.951
SDSWTC(1)	.002	.366	.996	1.002
SDMCTL(1)	.183	.366	.616	1.201
SDUIEFF(1)	.615	.360	.087	1.851
SDULFF(1)	1.753	.599	.003	5.771
Constant	-1.606	.451	.000	.201

Conclusion and Recommendations

It is cleared that the poor attitude of the students towards research making is highly contributed to by; poor use of the library, poor preparation for the next lectures, poor reading of their lectures notes ahead of the normal lectures.

The finding suggests that FUK, Gombe state management should persuade its students in making proper use of the library through monitoring their activities in the library by the library staff involved, encourages the students to always prepare ahead of their normal lectures' time; also instigating the students to regularly revise their lectures' notes by committing them to always read for oral test in every lectures.

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