

Association between Study and Exam Taking Habits among Graduate and Postgraduate Students

Rabia Bahoo*
Musarrat Jahan**

Abstract

Academic progress is a direct result of erudition. Conflicting variables have significant influence on students' academic performance such as their style of studying and learning. Therefore, this research focuses on to see the association between study and exam taking habits. A questionnaire was used for collecting the data from graduate and postgraduate students. Principal Component Analysis (PCA) with Varimax Rotation Method Extracted eight components. Among these extracted components six were about study habits whereas two about exam taking habits. An association model between study and exam habits along with CGPA was developed in SPSS and validated in PLS3. Composite reliability was between 0.77-0.88 and Average variance extracted (AVE) was between 0.51- 0.79. Values of Composite reliability and Average variance extracted (AVE) showed acceptance rang. The conclusion of the study elaborates that student's habit of note taking, organizing assignment, follow rules and study/reading extra material have significantly effects on exam taking habits.

Keywords. Study habits, exam taking habits, graduate and postgraduate students

Introduction

Examination is the primary component of every education system. Through the process of exams, the performances and learning ability of the students are assessed in an efficient way and giving the students marks or grades to illustrates the abilities or skills of students in a quantitative way (Ahmed, 1993). Therefore, examinations take hold of an essential and inescapable component in education system. Nolan (2014) depicts different views about exam according to the perspective of the students, by less interested students seems examination as unpleasant and unfavorable process while in front of the brilliant students this process is the best way to analyze the mental ability to be represent in the quantifiable way. Hence examination is the way to lead the students through a bright future with refined career.

*PhD Scholar, Department of Education, Islamia University of Bahawalpur Pakistan, rabia.bahoo@gscwu.edu.pk.

**PhD Scholar, Department of Education, Islamia University of Bahawalpur Pakistan, Email m.jahan99@yahoo.com.

In 1985, Mathews described that examination “tests the efficiency of the education provides, we shall need to test what it is, students can do, rather what he knows.” As Suresh (2015) illustrate that the quality is the indicator to judge the individual entire personal progress. Examinations performance is mean to mark the quality in any educational level. Hence, a foremost aim of the examinations is to measure students’ level of performance. Therefore, it is essential to observe how students perform in the examination.

As a teaching technique, to conduct formal examinations and general testing is not novel. Studies of Karpicke and Roediger (2008), McDaniel et al. (2007) have corroborated that evaluate the results of examination in learning is helpful to testing sessions of future. Several researchers have revealed that long term and greater information can be retained by retrieval practice and are achieved by repeated study (Roediger & Karpicke, 2006; Hogan & Kentsch, 1971).

Repeated study or habitual actions which students opt to learn subject matter are known as study habits. Well planned and deliberated study pattern along with student’s consistency to understand academic subject and pass the examination are called study habits (Bashir & Mattoo, 2012). According to Onubugwu (1990), “study habits is a technique, a student employs to go about his or her studies which are consistent and have become stereotypes as a result of long application or practice”.

Therefore, the quality of study habits is related to pass the examination. Study habits are long term technique which is good when it is consistent and practice oriented. According to Jato et al. (2014), Study habit is the regular and habitual performance and action of students to achieve the learning tasks such as reading, taking notes study in groups. While, Verma (2016) mentioned Study Habits as “Strategies of work” which have some common denomination activities as taking notes, using the library, improving reading ability, building vocabulary, writing term papers and taking examination.”

Thiyagu (2013) explained that efficient learning depends upon the management of time, learning ability of the study, level of concentration of study related lecture and study related material, taking the classes, sense of reviewing, revising the study material after understanding it first time and the ability of retaining the knowledge for a long period of time, Thiyagu further explained that these factors varies according to the different types of students that some students may contains all of these factors, some contain specific set of factors and Karpicke and Roediger (2008) considered that these type learning process is completed when a student is able describe the answer of asked question in correct way.

Exam taking habits of the candidate are the essence of the all the study habits and this help a person to handle and cope efficiently with. Many researches has been

made on student study habits and their performance level but researcher find the gap that is there any relation between study habits and their exam taking habits. So in the light of the above discussion the determination of the contemporary study was to examine the association between study habits and their exam taking habits of Graduate and Postgraduate students. In short the study habits are directly related to achieving the defined goal and attaining the success. For this purpose, good development of study habits is necessary because a small but consistent change in the study habit make the student organized and goal achiever. Gettinger and Seibert (2000) noted a connection between poor study habits and low academic achievement. They suggested that follow up the study habits may lead to the success if not then it definitely lead to failure in examination as well as the real life.

The Present Study

The real motivation behind this study was to analyze the association between study and exam taking habits among 258 students taking part in the current study. Following questions are answered by this accomplishment after the exploration.

1. To investigate study habits among Graduate and Postgraduate students
2. To identify exam taking habits among Graduate and Postgraduate students
3. To trace out the association between study habits and exam taking habits

Research Methodology

After reviewing literature, a questionnaire was developed and Principal Component Analysis (PCA) with Varimax rotation method extracted 8 factors in which 29 items were included and the rest was excluded from further analysis because their factor loading was low. All selected items showed more than 0.60 factors loading. From 29 items out of which 24 items (six factors) investigate about study habits and five items (two factors) were about exam taking habits. The eight factors of tool showed high Chronbach Alpha ranging from 0.73 to 0.80 of factors and 0.87 of whole scale. All items showed more than 0.670 factors loading as well. The range of Composite Reliability was between 0.77 to 0.88 and the value of Average Variance Extracted (AVE) was between 0.51 – 0.79, which was acceptable (Table 1).

Two fifty-eight students were identified as higher achievers enrolled under BS and Master programs in 14 different departments of a public sector female university of southern Punjab Pakistan were selected through purposive sampling. Out of 258 higher achievers 195 higher achievers returned completely filled research questionnaires with response rate of 76% were recorded in Statistical Package for Social Sciences (IBM-SPSS version 20) and Partial Least Square (Smart PLS3) for the analysis of data.

Table 1

Factor Loading, Internal Consistency and validity of Questionnaire of study habits and exam taking habits

	Factor Loading	Reliability (α)	Composite Reliability	Average Variance Extracted (AVE)
Focus on theme/main idea		0.741	0.778	0.539
summarize the main ideas and draw conclusions	.741			
Outline the material	.535			
Learning to achieve knowledge with enthusiasm.	.447			
Follow Rules		0.736	0.830	0.549
Making schedule on regular basis.	.787			
Follow fixed schedule.	.693			
Reviewing and revising the notes weekly.	.561			
Summarizing notes frequently.	.516			
Follow Timelines		0.732	0.801	0.575
Avoiding distraction while studying	.692			
Allowing time for working on special reports and term projects in my weekly schedule.	.586			
Start work promptly and avoid procrastinating.	.506			
Managing Exam writing		0.743	0.884	0.793
Make blueprint for distribution of exam time among questions at the beginning of test	.708			
Going through the entire test, carefully read and follow each question directions	.639			
Note Taking		0.807	0.862	0.510
Making an outline of the answer and then write preparation of Probably exam question with answers	.765			
always write key-notes of lecture	.645			
Distribution of study hours for preparing notes for each subject	.644			
write down possible test questions while reviewing my class notes.	.607			
During class, try to compare or relate ideas being presented in class to ideas from the textbook.	.581			
Organizing Assignments/material		0.771	0.845	0.522
write down class assignments clearly and keep them safely	.719			
organize study materials and review the assignment before going to start work	.708			
review class notes/assignments at home	.677			

Organize notes in outline style to show ideas and subordinate details.	.649			
giving proper attention to all subject assignments	.588			
Study/reading Extra Material		0.737	0.811	0.589
Using internet and online video lectures if a specific topic is difficult.	.763			
I question and evaluate the content of what I read, as I read.	.667			
Using the table of contents and the index.	.569			
Exam Preparation		0.739	0.814	0.595
Review notes before examination.	.754			
Do well on class test and other class activity.	.654			
Adjusting study methods for different subjects	.438			
Total		0.884		

Study Findings

Table 2

Mean score and stander deviation showing prevalence of Study habits and exam taking habits among higher achievers' students of female university (N = 195)

S. no.	Factors	Mean	SD
Study Habits			
1.1	Note Taking	4.00	.91553
1.2	Study/reading Extra Material	3.44	.75552
1.3	Organizing Assignments/material	3.35	.61096
1.4	Focus Main Idea	3.14	.69121
1.5	Follow Rules	2.83	.78025
1.6	Follow Timelines	3.56	.74671
Exam Taking Habits			
2.1	Exam Preparation	3.33	.65889
2.2	Managing Exam writing	3.97	1.1707

Data reveal that the attributes of note taking, study/reading extra material, organizing assignments/material, focus main idea, follow rules, follow timelines, exam preparation and managing exam writing (Table2). The pervasiveness of follow rules is comparatively lower ($M = 2.83$, $SD = .78025$) in sub factors of study habits however not taking among higher achievers' students is comparatively highest ($M=4.00$, $SD=.91553$) among other sub factors of study habits. Exploring the Exam taking habits, the results show that the prevalence of exam preparation and managing exam writing is high ($M = 3.33$, $SD=.65889$ and $M = 3.97$, $SD=1.1707$ respectively) among higher achiever's.

Results

Table 3
Pearson’s matrix of correlation showing relationship among Graduates and Postgraduates students’ study habits and exam habits

Correlations		Exam taking Habits	Note Taking	Study/reading Extra Material	Follow Timeline	Focus on theme/main idea	Organizing Assignments/material	Follow Rules
Exam taking habits	Pearson Correlation	1						
Note Taking	Pearson Correlation	.511**	1					
	Sig. (2-tailed)	.000						
Study/reading Extra Material	Pearson Correlation	.342**	.193**	1				
	Sig. (2-tailed)	.000	.007					
Follow Timeline	Pearson Correlation	.311**	.304**	.276**	1			
	Sig. (2-tailed)	.000	.000	.000				
Focus on theme/main idea	Pearson Correlation	.280**	.117	.405**	.246**	1		
	Sig. (2-tailed)	.000	.103	.000	.001			
Organizing Assignments/material	Pearson Correlation	.425**	.202**	.320**	.419**	.330**	1	
	Sig. (2-tailed)	.000	.005	.000	.000	.000		
Follow Rules	Pearson Correlation	.402**	.210**	.340**	.472**	.240**	.465**	1
	Sig. (2-tailed)	.000	.003	.000	.000	.001	.000	

** . Correlation is significant at the 0.01 level (2-tailed).

Table 3 articulates the results of matrix of Pearson’s correlation which reveals that exam habits of higher achievers among students in Pakistan is significantly allied with note taking ($r = 0.511$) study/reading extra material ($r = 0.342$), follow timeline ($r = 0.311$), focus on theme/main idea ($r = 0.2580$), organizing assignments/material ($r = 0.425$) and follow rules ($r = 0.402$). Note taking among higher achievers have insignificant correlation with focus on theme/main idea ($r = .117$, $p = .103$) however note taking has significantly aligned with study extra material ($r = 0.193$), follow timeline ($r = 0.304$), organizing assignments ($r = 0.202$) and follow rules ($r = 0.210$) by students. Study extra material significantly correlates with follow timeline ($r = 0.276$), focus on main idea ($r = 0.405$), organizing assignments ($r = 0.320$) and follow rules ($r = 0.340$). Follow the timelines by higher achiever’s students have significantly concomitant with focusing on main idea ($r = 0.246$) and organizing assignments ($r = 0.419$) and follow rules ($r = .472$). Focusing on main idea by higher achievers have

significantly associated with Organizing Assignments ($r = 0.330$) and Follow Rules ($r = 0.240$).in the same way organizing assignments and follow the rules among higher achievers is significantly associated with each other ($r=.465$)

Table 4
Stepwise multiple regression to investigative the effects of study habits on exam taking habits

Model	Standardized Coefficients Beta	t	Sig.	F	R	R ²
1				68.137	.511	.261
(Constant)		10.782	.000			
Note Taking	.511	8.254	.000			
2				56.147	.607	.369
(Constant)		3.866	.000			
Note Taking	.443	7.570	.000			
Organizing Assignments/material	.336	5.736	.000			
3				42.337	.632	.399
(Constant)		3.556	.000			
Note Taking	.419	7.252	.000			
Organizing Assignments/ material	.248	3.888	.000			
Follow Rules	.199	3.107	.002			
4				33.697	.644	.415
(Constant)		2.952	.004			
Note Taking	.404	7.030	.000			
Organizing Assignments/ material	.222	3.455	.001			
Follow Rules	.168	2.588	.010			
Study Extra Material	.136	2.252	.025			

Stepwise multiple regression is presented in table no.4 Instep one analysis reveals that note taking separately, has significantly influence ($R^2 = 0.280$, $b = .511$) on exam habit, however, adding of organizing assignments/material, follow rules and study/reading extra material in step 2,3 and 4 establishes organizing assignments/material as a major predictor on exam habits among higher achievers. study findings show that all four models are significant, but the fourth model carrying four factors note taking, organizing assignments/ material, follow rules and study/reading extra material is the paramount model. It also shows that in model 2,3,4 units are change in note taking (.443, .419, .404) organizing assignments/material (.248, .222) and follow rules predict (.168) units change respectively in exam taking habits.

Third and major concern of the study was trace out the association between study habits and exam taking habits among students. The description of student CGPA is flashed in table 5 and table 6 illustrates about coefficient values, R Square and SRMR.

Table 5
Difference in the scores with (CGPA) among graduate and post graduate students

CGPA	Frequency	Percentage
3.00 to 3.10	1	.5
3.11 to 3.20	1	.5
3.21 to 3.30	10	5.1
3.31 to 3.40	6	3.1
3.41 to 3.50	13	6.7
3.51 to 3.60	20	10.3
3.61 to 3.70	21	10.8
3.71 to 3.80	38	19.5
3.81 to 3.90	38	19.5
3.91 to 4.00	47	24.1
Total	195	100.0

Table 5 shed light on student's levels of CGPA along with percentage and frequency. Statistics depicts that 24% of the respondents attained CGPA between 3.91 to 4.00, 19.5% of the respondents attained CGPA between 3.81 to 3.90, 19.5% of the respondents attained CGPA between 3.71 to 3.80, 11% of the respondents attained CGPA between 3.61 to 3.70, 10% of the respondents attained CGPA between 3.51 to 3.60, 7% of the respondents attained CGPA between 3.41 to 3.50, 3% of the respondents attained CGPA between 3.31 to 3.40, 5% of the respondents attained CGPA between 3.21 to 3.30 and only 1% of the respondents attained CGPA between 3.20 to 3.00.

Table 6
Association between study habits and exam taking habits on CGPA

	Path Coefficient ^a	P value	R Square	R Square Adjusted	SRMR
Study /reading extra material	0.273	.011*			
Focus on Main Idea	-0.255	.026*			
Follow Rules	0.437	.000**			
Follow Time Lines	-0.275	.015**			
Managing Exam writing	-0.287	.012**	0.397	0.283	.07
Note Taking	0.577	.000*			
Organizing assignments /material	-0.608	.000*			
Exam preparation	0.507	.000*			

^a dependent variable: Exam taking Habits (CGPA)

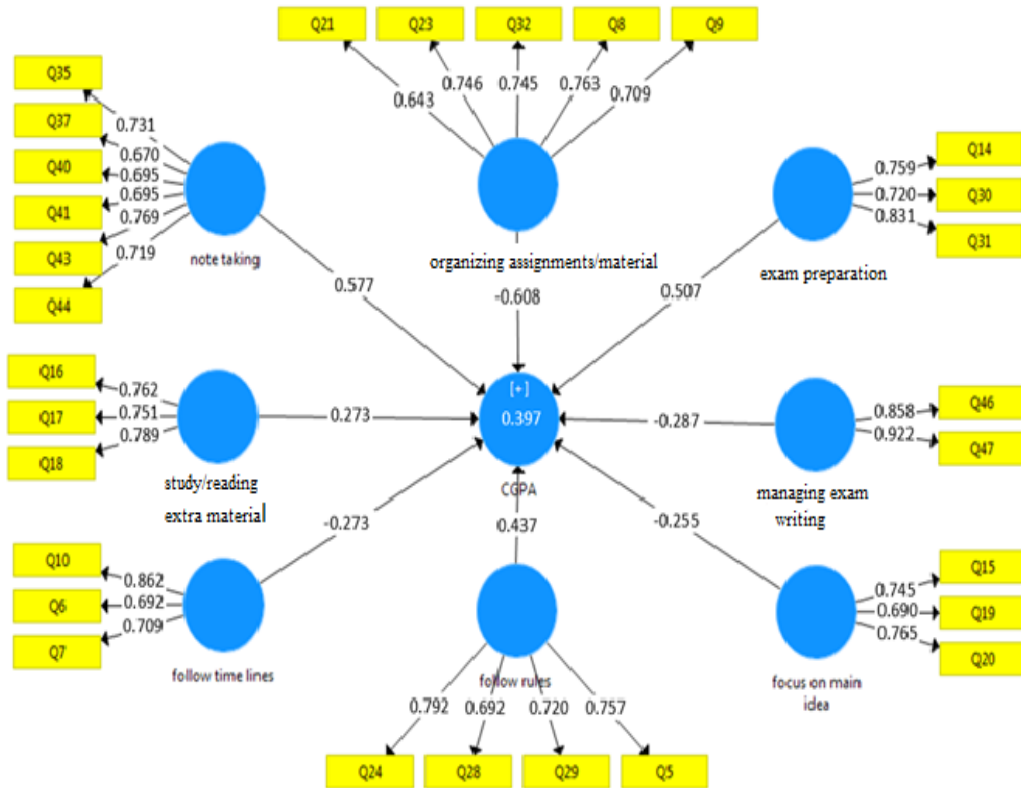
* Effect is significant at .05 level

** Effect is significant at .01 level

Table 6 comprised of coefficient values and R Square. Results showed that ‘note taking’ and ‘exam preparation’ are the two habits which highly effect on Cumulative Grade Point Average. Beta values indicated the positive effect of ‘note taking’ up to 58 percent ($\beta = .577, P = .00$) and positive effect of ‘exam preparation’ up to 51 percent ($\beta = .507, P = .00$). Likewise, path coefficient values indicated that habit of ‘evaluating extra material’ also have moderate positive effect on Cumulative Grade Point Average ($\beta = .273, P = .01$). According to results, habit of ‘organizing assignments’ have high negative effect ($\beta = -.608, P = .00$) on Cumulative Grade Point Average of students. Seemingly, other three habits named ‘focus on main idea’, ‘follow timelines’, and ‘managing exam writing are also seeming to decrease Cumulative Grade Point Average among students. Path coefficient for ‘focus on main idea’ was $-.255 (P = .02)$, for ‘follow timeline’ was $-.275 (P = .01)$, and for ‘managing examination writing’ was $-.287 (P = -.28)$. In order to test the model, fit, explanatory power is also called, which can be evaluated by two criteria: Coefficient of determination (R^2) and standardized root mean square residual values (SRMR). As indicated by Chin (1998), that the value of R^2 up to 0.670 is considerable, the value up to 0.333 is average and the value 0.190 is weak. values of SRMR ought to be higher than 0.05 and lower than 0.08 than the model we can call fit. Coefficient of determination ($R^2 = 0.397$) showed an explanatory power. The value is based on acceptable values in accordance with Chin (1998), which advocates that the model is suitable. The SRMR must be above 0.05 and below 0.08. The standardized root mean square residual (SRMR) value was .07 in the acceptable premises, which advocated the model as appropriate.

Figure 1 is the dissemination of measurement model “Association between study and exam taking habits on CGPA

Figure1



Discussion

This study was accomplished to determine the association between study habits and exam taking habits of the higher achievers taking part in science and arts students of Women University. The findings showed overall average mean score by higher achiever’s students for the study habits and its related factors and about exam taking habits and factors. The study conducted by Koushan and Heidari (2007) and Moghadam ad Cheraghian (2009) also showed average level of study habits and its related factors on the students.

Table 1 shows the 8 domains and 29 statements of tool and Table 2 reflects the mean scores and standard deviation of study habits and exam habits of higher achievers. 8 factors out of which note taking, study extra material, follow rules, exam preparation have significantly impact on CGPA on the other hand note taking, organizing

assignments/ material, study extra material and follow rules have significantly effect of exam habits in short higher achievers are having objectively good study habits along with good exam habits. Based on the obtained results, it can say fairly that good study habits and exam taking habits will present in the form of good results.

Encouraging students to achieve good study and exam habits will automatically improve their position. This study coincided with other studies by Hassanbeigi et al. (2011) which show that note taking has a significant impact on students' academic performance. It has been put forward by Foos, Mora and Tkacz (1994) that students give better results those who prepared their material by self as opposed to on materials created by others. Van Meter et al. (1994) furthermore, the college students ' possess notes were personally meaningful to them for the reason that they exemplified the selection of essential and important points and were fathomable to them

With regard to the factor of organizing assignment/material, organization and processing of information, successful students are committed to maximizing learning from educational experiences, monitoring their progress and adjusting their efforts to achieve their goals when necessary (Ainley & Patrick, 2006). This study also concurred with the study of De la Fuente and Cardelle-Elawar (2009) that organizing and planning of learning according to his or her abilities reflects these study habits. They also include lucidity of purpose and the habit of goal- oriented action in the learning of the individual. This study revealed that teacher must ensure that lower achievers must review all subject notes before giving any sort of class test, and during the test lower achievers practice that they must distribute time among questions before starting any question along with its direction in test. It will boost up their exam writing and will present in the form of good results.

Conclusion

First and second objective of the study was to investigate study habits and exam habits among higher achiever's students. Table no.1 contains mean and standard deviation values for six factors of study habits and two factors about exam habits named 'note taking', 'study/reading extra material', 'organizing assignments/material', 'focus main idea', 'follow rules', 'follow timelines', 'exam preparation', and 'managing exam writing'. Mean values indicated that high achievers always took class notes, study extra material, always focus on main idea and organized their study assignments while studying they also follow up schedule for better results in their exams. Mean value indicated that higher achievers always revised their study material two to three times, do this same with every subject before exam while taking exam they distribute time among questions moreover they read section and directions carefully but they did not review all notes on the day of exam. It was also concluded that note taking, study /reading extra material, follow rules and exam preparation among higher achievers having a statistically significant impact of students CGPA.

Reference

- Ahmad, Z. (1993). Existing system of examination and the need of reform. *Journal of Elementary Education, 1*(3), 56.
- Ainley, M., & Patrick, L. (2006). Measuring self-regulated learning processes through tracking patterns of student interaction with achievement activities. *Educational Psychology Review, 18*(3), 267–286.
- Bashir, I., & Mattoo, N. H. (2012). A Study on Study Habits and Academic Performance Among Adolescents (14–19) years. *International Journal of Social Science Tomorrow, 1*(5), 1-5.
- Chin, W. W. (1998). The partial least squares approach to structural equation modeling. *Modern Methods for Business Research, 295*(2), 295- 336.
- Foos, P. W., Mora, J. J., & Tkacz, S. (1994). Student study techniques and the generation effect. *Journal of Educational Psychology, 86*, 567– 576.
- De La Fuente, J., Cardelle-Elawar, M. (2009). Research on action–emotion style and study habits: Effects of individual differences on learning and academic performance of undergraduate students. *Learning and Individual Differences, 19*, 567–576.
- Gettinger, M., & Seibert, J.K. (2000). Contributions of study skills to academic competence. *School Psychology Review, 31*, 350-365
- Hassanbeigi, A., Askari, J., Nakhjavani, M., Shirkhoda, S., Barzegar, K., Mozayyan, M. R., & Fallahzadeh, H. (2011). *The relationship between study skills and academic performance of university students*. Paper presented at the WCPCG
- Jato, M., Ogunniyi, S. O. and Olubiyo, P.O. (2014). Study habits, use of school libraries and students' academic performance in selected secondary schools in Ondo West Local Government Area of Ondo State. *International Journal of Library and Information Science, Vol.6*(4). Retrieved on 13th April, 2017 from: <http://www.academicjournals.org/IJLIS>
- Koushan M & Heidari, A. (2007). Analysis of study habits among students of Sabzevar University of Medical Sciences. *13*(4) 9-185.
- Karpicke, J. D., & Roediger, H. L., III. (2008). The Critical Importance of Retrieval for Learning. *Science 319*, 966-968. doi: 10.1126/science.1152408
- K.Suresh. (2015). A study on study habits, academic motivation and academic achievement of high school students *EPRA International Journal of Economic and Business Review, 3*(10), 138-141.

- Mathews, J.C (1995), Examination: A Commentary , London: George Allen and Unwin publishers Ltd.
- McDaniel, M. A., Roediger, H. L., & McDermott, K. B. (2007). Generalizing test-enhanced learning from the laboratory to the classroom. *Psychonomic Bulletin & Review*, 14(2), 200-206.
- Moghadam, F. M. and Cheraghian B. (2009). Study Habits and Their Relationship with Academic Performance among Students of Abadan School of Nursing. *Strides Dev Med Educ*. 6(1)21-8.
- Nolan, M. F. (2014). A Method to Assist Students with Effective Study Habits and Test-Taking Strategies. *International Association of Medical Science Educators*, 25, 61-68. doi: 10.1007/s40670-014-0091-5
- Onubugwu, R.A. (1990). Study Habits Techniques among Secondary School Students in Anicimbra State. Unpublished M.Ed. Dissertation UNN
- Roediger, H. L., III, & Karpicke, J. D. (2006a). The power of testing memory: Basic research and implications for educational practice. *Perspectives on Psychological Science*, 1, 181-210.
- Thiyagu, K. (2013). Study habits and academic achievement of ninth standard students. *Ijpe journal*.
- Van Meter, P., Yokoi, L., & Pressley, M. (1994). College students' theory of note-taking derived from their perceptions of note-taking. *Journal of Educational Psychology*, 86, 323–338
- Verma, A. (2016). A study of academic achievement among high school students in relation to their study habits". *International Journal of Research in Humanities, Arts and Literature*, 4(3).