



# Role of Private and public sector university students' demographic variation on study skills and academic achievement

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## ABSTRACT

Present study was designed to investigate the role of demographic variables in determining the study skills and academic achievement among the university students. Study was descriptive correlational in nature in which scientific method was used to achieve the research objectives. The first objective of this study was to investigate the relationship of effective study skills and academic achievement, second objective was to investigate the role of demographic variation such as gender, discipline, family income, birth order, parents' qualification and profession in determining the levels and dimensions of effective study skills and academic achievement. In this study a stratified random sample of 250 male (104) and female (146) university students were collected from 4 selected private and public sector universities of Rawalpindi and Islamabad. Family income of Students ranged from 50,000 to 150,000. The study was delimited to Master level students studying in the fourth semester only. In this research for the measurement of effective study skills an inventory named as, "Study Skills" based on 51 items developed by Congos was used. The students' academic achievement was measured through their results of first three semesters (students result was taken as measure their academic achievement). After data collection it was analyzed with the help of SPSS 16 by applying various statistical tests such as, Percentile Analysis, Mean, SD, Linear Regression, and Pearson Correlation. On the basis of findings, it was found that there is positive relationship between study skills and academic achievement in the context of Master level university students. The students of private sector universities possessed more effective study skills and higher score on the academic achievement as compared to the students of public sector universities. Present research is significant due to its uniqueness it can bring new avenues in the teaching learning process. University management can provide creative competitive environment to exercise study skill in their course of studies.

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## Introduction

Study skills play an important role in determining academic achievement of students. Study skills differ from one individual to other because every individual cannot learn in the same way; different students have different capacities and their willingness for learning. Study skills are abilities and approaches that are applied to learning. "Study skills are learning strategies that help students' to organize, process, and use information effectively." The study skills are essential for acquiring good grades, and are useful for learning throughout one's learner life because it comprises of a broad range of skills and abilities, which includes time management, reading, writing, listening, planning, goal setting, memorization, note-taking and preparation for exams (Cottrell, 2003).

Obviously study skills are strategies and techniques that enable the learner to make the most efficient use of their time, resources, and academic potential abilities. To develop and to improve the study skills can help the learner to make more efficient use of their study time and to get more work done in less time. Study skills can make learning easier and help to retain what the learners have learned for long and feel the work and effort that is involved over all. Anyone who is engaged in the field of learning can benefit from developing his or her study skills.

A study method is a formalized learning process or procedure of study. In 1941 Robinson developed a study method (SQ3R) Survey, Question, Read, Recite and Review which is still popular. SQ3R is a four-step strategy for reading and taking notes from chapters of textbook. It is a very effective note taking and study method which can be used in a variety of ways. Later in 1976 Rowntree worked on this method and advocates a systematic method of surveying (or skimming) a text, thinking of questions the learner want answered, and then reading, reviewing and revisiting the text (VanBlerkom, 1994). Effective study skills which help a learner to achieve their academic goal are as under:

Planning and preparation are of great importance and they cannot be ignored. The learners must set one's goals, and then prepare to develop the required skills and knowledge. They should be capable to apply them to succeed in the examination or any other assessment. Goal setting is important. Teachers set goals for learners and they know what is important for the learners and which things are related with their success. The learners should know clearly what to study and one should also set a time period for it. Goals may be set for one day, one week, or one month so that the learners can easily achieve their set targets. The goals must be within the skills and abilities of learners and must be realistic, flexible, and measurable and

within the control of learner. Teacher will help the learners to achieve their set goals (Maddox, 1988).

After planning and goal setting motivation is also important for good studying. The motivation will help the learners to remain focused on their study over a period of time. Motivation can be increased if the learners study with their friends and they remember their long-term goals, they eliminate distractions that occur during study time. Managing the time is important factor that help the learner to prioritize things and to understand the importance of time. The learner will manage the time for study and they will never waste their time. There is time for everything. Play when you play and study when you study.

The learners must organize their things, resources, environment and they must know how to study and where to study. They must study in a quiet place that is free from distractions and interruptions. Learners try to create a space designated solely for studying. Beside these all things he/she must be good at listening. Listening is a cognitive act that requires the learner to pay attention and think about and mentally process to what they hear. As teacher's lecture is very valuable so learner can remove their doubts about different things by asking questions during lecture and may also take class notes in their own words.

The purpose of note-making is not to copy great chunks of information from books but it should only act as a trigger to help the learner to remember what they have read. Key words are more easily remembered than long sentences. Notes should be short, to the point, well-organized and easily read. The techniques of note-making can be mind-maps, keywords and brain storming. For reading the learner can do flipping through a book to get a quick idea, scanning the content, skimming the text to get the overview and concentration on detailed reading (Van Blerkom, 1994). Learners will make a plan depending on how much time they will give to each subject. The plan should have outline of time, as time will differ from subject to subject depending on the quality of lecture, difficulty level and interest of the learner in revision. The learner can do effective revision of notes by using different techniques like the information can be broken into chunks, flash cards, mnemonics and memorizing after learning.

Academic achievement is dependent upon intelligence and study skills of the learner. An academic achievement is defined "as excellence in all academic disciplines, in class as well as in extracurricular activities". To be successful in academics the learner must have certain level of intelligence and a well-planned study habits.

The goal of university education is that the students can improve their academic achievement by developing their study skills. Each student has a chance to fulfill their education that improves their self-confidence and self-efficiency. They deserve a teacher that is fair and understands the different ability levels of each student of their class. Some students learn the information by seeing, some learn through listening and others learn through their experiences. There are three types of learners such as visual, auditory and kinesthetic. The first types of learners are visual that learns through seeing things. These learners study notes, handouts, they prefer to study alone in quiet place; they think while understanding the lecture and they are good at sign language. The second type of learners are auditory that learn through hearing. These learners are good at oral exams, narrating a story, reading a text, to solve difficult problems, good at explanation and study in groups. The third

type of learners are kinesthetic that learn through doing things. These learners are good at sports, arts and hand-tasks. They possess high level of energy and have quick reception. These learners study with music and they take break in their studying schedule and do not have good writing (Cottrell, 2007). Due to diverse educational background and lack of experience some learners may possess low confidence, which can lead to insufficiency and fear of failure. The teacher can cope up with this problem of the learners by assigning them creative assignment like research projects, presentations, quizzes and discussions. In this way the learners can achieve good grades in their exams. Present research is designed to unravel the impact of demographic variations in determining the effective study skills among private and public sector university teachers.

### **Statement of the Problem**

The problem under consideration is to explore the role of demographic variables with effective study skills and academic achievement of the university students, it further aims to investigate the role of certain biographical variables such as gender, discipline, family income, birth order and parents' profession in determining the levels and dimensions of effective study skills and academic achievement.

### **Objectives of the Study**

The objectives of the study are as under:

1. To investigate the relationship of effective study skills and academic achievement in the context of university students.
2. To measure the impact of effective study skills on the academic achievement of university students.
3. To investigate the role of demographic variations such as gender, discipline, family income, birth order and profession in determining the levels and dimensions of effective study skills and academic achievement in the context of university students.

### **Hypotheses**

1. There is a positive relationship between the effective study skills and higher academic achievement.
2. Students of the private sector universities possess more effective study skills as compared to the students of the public sector universities
3. Students of the private sector universities score higher on academic as compared to the students of the public sector universities.

### **Population**

The population of the study was comprised of all Master level university students of Rawalpindi and Islamabad.

### **Sample**

For present study a stratified random sample of 250 male and female students of public and private sector universities was collected i.e. Islamic International University, National University of Modern Languages, Foundation University and Women Institute for Science and Humanities.

### **Research Instruments**

For the measurement of study skills, "Study Skills Inventory" developed Congos, consisting of 51 items and 6 sub-scales were taken as research instruments. For the measurement of academic achievement the results of last 3 semesters were taken as an students' achievement score.

### **Delimitation of Study**

Due to limited time and resources available to researcher the study was delimited to Master level students of Humanities, Social Sciences and Management Sciences departments of 2 public sector and 2 private sector universities of Rawalpindi and Islamabad.

**Procedure**

The proposed research was designed to explore the role of demographic variables with effective study skills and academic achievement. This was a descriptive correlational research in which a stratified random sample of 250 students was selected from various universities of Rawalpindi and Islamabad. Data was collected through personal visit of the researcher to sample university. Data was analyzed according to objectives of the study with the help of SPSS 16 by applying various statistical tests such as, percentile analysis, mean, SD, linear regression, and Pearson correlation.

**Results**

The alpha reliability yielded an internal consistency coefficient of .596 for entire 49 items.

**Table 1. Correlation Coefficient among Total and Subscales of Study Skills (N=250)**

Sub Scales	No of items	Correlation
Memory	9	.72
Test- Preparation	13	.84
Concentration	8	.71
Time-Management	6	.61
Note-taking	5	.69
Text-books	8	.74

\*\*p <.01

Table 1 describes coefficient of correlations between total scale and subscales of study skills inventory. The result indicates that all subscales significantly correlated with the total scale. The highest correlation subscale test-preparation has highest with the total scale (.84), while time-management has lowest correlation with the total scale (.61).

**Table 2. Inter-Scales Correlation of Study Skills Inventory (N=250)**

Subscales	Memory	Test-Prep	Concentration	Time-Mgmt	Note-taking	Text -book
Memory						
Test-Prep	.48					
Concentration	.41	.53				
Time Mgmt	.17	.53	.34			
Note-taking	.42	.49	.43	.33		
Text book	.57	.49	.46	.29	.48	
Total	.72	.84	.71	.61	.69	.74

Table 2 portray the inter-scales correlations of the study skills inventory, results shows that all the subscales have positive correlation with total scale as well as with each other. The highest inter-scales correlation exists between test-preparation and text-book reading.

The percentile rankings of the respondents' scores on study skills were also determined. The scores of 149 falls on 25<sup>th</sup> percentile characterizing less developed study skills, whereas score of 168 falls on 50<sup>th</sup> percentile illustrating moderately developed study skills and score of 186 falls on 75<sup>th</sup> percentile demonstrating highly developed study skills. Cronbach's Alpha Coefficients of Academic Achievement was yielded an internal consistency coefficient of .814 for 3 semesters.

**Table 3. Semester Wise Correlations of Student's Academic Achievement (N=250)**

Results	Sem1	Sem2	Sem3
Sem1			
Sem2	.851		
Sem3	.726	.836	
Total	.918	.961	.918

\*\*p <.01

Table 3 indicates the inter-correlations of the results of respondents for last semesters. The 1<sup>st</sup> and 2<sup>nd</sup> semester correlation was highest and 2<sup>nd</sup> and 3<sup>rd</sup> semester correlation was lowest. Percentile rankings of the respondents' scores on academic achievement were determined, score of 199 falls on 25<sup>th</sup> percentile characterizing low academic achievement, whereas score of 217 falls on 50<sup>th</sup> percentile illustrating moderate academic achievement and score of 243 falls on 75<sup>th</sup> percentile demonstrating high academic achievement.

**Table 4. Regression Analysis of Respondents Scores on the Study Skill Inventory For the Variable Type of University (N=250)**

**Model Summary**

Model	R	R square	Adjusted R square	Std. Error of the Estimate
1	0.123*	0.015	0.011	26.064

a. Predictors: (Constant), university

**ANOVA**

Model	Sum of squares	df	Mean square	F	Sig	
1	Regression	2595.724	1	2595.724	3.821	0.052*
	Residual	168475.880	248	679.338		
	Total	171071.604	249			

a. Predictors: (Constant), university

b. Dependent Variable: study skill

**Co efficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	157.974	4.986		31.685	0.000
	University	6.589	3.371	0.123	1.955	0.052

a. Dependent Variable: study skill

Table 4 describes the regression analysis of the respondents score for the variables type of university, regression analysis shows significant difference on this variable (F value = 3.821 and sig. 0.052).

**Table 5. Regression Analysis of Respondents Scores on the Study of Academic Achievement for the Variable Type of University (N=250)**

**Model Summary**

Model	R	R square	Adjusted R square	Std. Error of the Estimate
1	0.444*	0.197	0.194	24.663

a. Predictors: (Constant), university

**Anova**

Model	Sum of squares	df	Mean square	F	Sig	
1	Regression	37113.749	1	37113.749	61.018	0.000*
	Residual	150844.287	248	608.243		
	Total	187958.036	249			

- a. Predictors: (Constant), university
- b. Dependent Variable: academic achievement

**Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
	B	Std. Error	Beta			
1	(Constant)	184.537	4.718		39.116	0.000
	University	24.913	3.189	0.444	7.811	0.000

- a. Dependent Variable: academic achievement

Table 5 describes the regression analysis of the respondents score for the variables type of university, regression analysis shows significant difference in these responses of subjects on the academic achievement (F value = 61.018 and sig. 0.000).

**Table 6. Regression Analysis of Respondents Scores on the Study Skill Inventory For the Variable Type of Department (N=250)**

**Model Summary**

Model	R	R square	Adjusted square	Std. Error of the Estimate
1	0.061*	0.004	0.000	26.215

- a. Predictors: (Constant), department

**Anova**

Model		Sum of squares	df	Mean square	F	Sig.
1	Regression	645.548	1	645.546	0.939	0.333*
	Residual	170426.058	248	687.202		
	Total	171071.604	249			

- a. Predictors: (Constant), department

- b. Dependent Variable: study skill

**Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
	B	Std. Error	Beta			
1	(Constant)	163.436	4.196		38.946	0.000
	Department	1.853	1.912	0.061	0.969	0.333

- a. Dependent Variable: study skill

Table 6 describes the regression analysis of the respondents score for the variables type of department, regression analysis shows insignificant difference in these responses of subjects on the study skill (F value = 0.939 and sig. 0.333).

**Table 7. Regression Analysis of Respondents Scores on the Study of Academic Achievement for the Variable Type of Department (N=250)**

**Model Summary**

Model	R	R square	Adjusted square	Std. Error of the Estimate
1	0.107*	0.011	0.007	27.371

- a. Predictors: (Constant), department

**Anova**

Model		Sum of squares	df	Mean square	F	Sig.
1	Regression	2157.291	1	2157.291	2.879	0.091*
	Residual	185800.745	248	749.197		
	Total	187958.036	249			

- a. Predictors: (Constant), department

- b. Dependent Variable: academic achievement

Table 7 describes the regression analysis of the respondents score for the variables type of department, regression analysis shows significant difference in these responses of subjects on the academic achievement (F value = 2.879 and sig. 0.091).

**Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
	B	Std. Error	Beta			
1	(Constant)	212.486	4.382		48.495	0.000
	Department	3.388	1.997	0.107	1.697	0.091

- a. Dependent Variable: academic achievement

**Table 8. Regression Analysis of Respondents Scores on the Study Skill Inventory For the Variable Birth Order (N=250)**

**Model Summary**

Model	R	R square	Adjusted square	Std. Error of the Estimate
1	0.031*	0.001	-0.003	26.252

- a. Predictors: (Constant), birth order

**Anova**

Model		Sum of squares	df	Mean square	F	Sig.
1	Regression	163.017	1	163.017	0.237	0.627*
	Residual	170908.587	248	689.148		
	Total	171071.604	249			

- a. Predictors: (Constant), birth order

- b. Dependent Variable: study skill

**Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
	B	Std. Error	Beta			
1	(Constant)	166.162	2.659		62.499	0.000
	Birth order	0.293	0.603	0.031	0.486	0.627

- a. Dependent Variable: study skill

Table 8 describes the regression analysis of the respondents score for the variables birth order, regression analysis shows insignificant difference in these responses of subjects on the study skill (F value = 0.237 and sig. 0.627).

**Table 9. Regression Analysis of Respondents Scores on the Study of Academic Achievement for the Variable Birth Order (N=250)**

**Model Summary**

Model	R	R square	Adjusted square	Std. Error of the Estimate
1	0.130*	0.017	0.013	27.295

- a. Predictors: (Constant), birth order

**Anova**

Model		Sum of squares	df	Mean square	F	Sig.
1	Regression	3197.246	1	3197.246	4.292	0.039*
	Residual	184760.790	248	745.003		
	Total	187958.036	249			

- a. Predictors: (Constant), birth order

- b. Dependent Variable: academic achievement

**Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
	B	Std. Error	Beta			
1	(Constant)	214.843	2.764		77.721	0.000
	Birth order	1.299	0.627	0.130	2.072	0.039

- a. Dependent Variable: academic achievement

Table 9 describes the regression analysis of the respondents score for the variables birth order, regression analysis shows significant difference in these responses of subjects on the academic achievement (F value = 4.292 and sig. 0.039).

**Table 10. Regression Analysis of Respondents Scores on the Study Skill Inventory for the Variable Type of Father Profession (N=250)**

Model	R	R square	Adjusted square	R	Std. Error of the Estimate
1	0.033*	0.001	-0.003		26.250

a. Predictors: (Constant), father profession

**Anova**

Model		Sum of squares	df	Mean square	F	Sig
1	Regression	183.782	1	183.782	0.267	0.606*
	Residual	170887.822	248	689.064		
	Total	171071.604	249			

a. Predictors: (Constant), father profession

b. Dependent Variable: study skill

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	165.711	3.279		50.531	0.000
	Father Prof.	0.527	1.020	0.033	0.516	0.606

a. Dependent Variable: study skill

Table 10 describes the regression analysis of the respondents score for the variables type of father profession, regression analysis shows insignificant difference in these responses of subjects on the study skill (F value = 0.267 and sig. 0.606).

**Table 11. Regression Analysis of Respondents Scores on the Study of Academic Achievement for the Variable Type of Father Profession (N=250)**

**Model Summary**

Model	R	R square	Adjusted square	R	Std. Error of the Estimate
1	0.094*	0.009	0.005		27.407

a. Predictors: (Constant), father profession

**Anova**

Model		Sum of squares	df	Mean square	F	Sig
1	Regression	1678.072	1	1678.072	2.234	0.136*
	Residual	186279.964	248	751.129		
	Total	187958.036	249			

a. Predictors: (Constant), father profession

b. Dependent Variable: academic achievement

**Coefficient<sup>s</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	223.729	3.424		65.344	.000
	Father Prof.	-1.592	1.065	-.094	-1.495	.136

a. Dependent Variable: academic achievement

Table 11 describes the regression analysis of the respondents score for the variables type of father profession, regression analysis shows insignificant difference in these responses of subjects on the academic achievement (F value = 2.234 and sig 0.136).

**Table 12. Regression Analysis of Respondents Scores on the Study Skill Inventory For the Variable Type of Mother Profession (N=250)**

Model	R	R square	Adjusted square	R	Std. Error of the Estimate
1	0.005	0.000	-0.004		26.264

a. Predictors: (Constant), mother profession

**ANOVA**

Model		Sum squares	df	Mean square	F	Sig
1	Regression	4.081	1	4.081	0.006	0.939*
	Residual	171067.523	248	689.788		
	Total	171071.604	249			

a. Predictors: (Constant), mother profession

b. Dependent Variable: study skill

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	166.922	3.650		45.727	0.000
	Mother Prof.	0.212	2.755	0.005	0.077	0.939

a. Dependent Variable: study skill

Table 12 describes the regression analysis of the respondents score for the variables type of mother profession, regression analysis shows insignificant difference in these responses of subjects on the study skill (F value = 0.006 and sig 0.939).

**Table 13. Regression Analysis of Respondents Scores on the Study Academic Achievement for the Variable Type of Mother Profession (N=250)**

**Model Summary**

Model	R	R square	Adjusted square	R	Std. Error of the Estimate
1	0.028	0.001	-0.003		27.519

a. Predictors: (Constant), mother profession

**Anova**

Model		Sum squares	df	Mean square	F	Sig
1	Regression	151.161	1	151.161	0.200	0.655*
	Residual	187806.875	248	757.286		
	Total	187958.036	249			

a. Predictors: (Constant), mother profession

b. Dependent Variable: academic achievement

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	220.838	3.825		57.738	0.000
	Mother Prof.	-1.290	2.886	-0.028	-0.447	0.655

a. Dependent Variable: academic achievement

Table 13 describes the regression analysis of the respondents score for the variables type of mother profession, regression analysis shows insignificant difference in these responses of subjects on the academic achievement (F value = 0.200 and sig 0.655).

**Table 14. Regression Analysis of Respondents Scores on the Study Skill Inventory for the Variable Type of Family Income (N=250)****Model Summary**

Model	R	R square	Adjusted square	R	Std. Error of the Estimate
1	0.041*	0.002	-0.002		21.242

a. Predictors: (Constant), family income

**Anova**

Model		Sum of squares	Df	Mean square	F	Sig.
1	Regression	291.153	1	291.153	0.423	0.516*
	Residual	170780.451	248	688.631		
	Total	171071.604	249			

a. Predictors: (Constant), family income

b. Dependent Variable: study skill

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	169.367	3.761		46.030	0.000
	t.f. income	-1.158	1.780	-0.041	-0.650	0.516

a. Dependent Variable: study skill

Table 14 describes the regression analysis of the respondents score for the variables type of family income, regression analysis shows insignificant these responses of subjects on the study skill (F value = 0.423 and sig. 0.516).

**Table 15. Regression Analysis of Respondents Sores on the Study Academic Achievement for the Variable Family Income (N=250)****Model Summary**

Model	R	R square	Adjusted square	R	Std. Error of the Estimate
1	0.032	0.001	-0.003		27.516

a. Predictors: (Constant), family income

**Anova**

Model		Sum of squares	Df	Mean square	F	Sig.
1	Regression	192.992	1	192.992	0.255	0.614
	Residual	187765.044	248	757.117		
	Total	187958.036	249			

a. Predictors: (Constant), family income

b. Dependent Variable: academic achievement

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	221.103	3.944		56.063	0.000
	t.f. income	-0.942	1.867	-0.032	-0.505	0.614

a. Dependent Variable: academic achievement

Table 15 describes the regression analysis of the respondents score for the variables family income, regression analysis shows insignificant difference in these responses of subjects on the academic achievement (F value = 0.255 and Sig. 0.614).

Table 16 presents the result of correlation between study skills and academic achievement. The results confirm the research hypothesis that there is a significant relationship between study skills and academic achievement.

**Table 16. Correlation between Study Skills and Academic Achievement**

	Study Skills	Academic Achievement
Study Skills	1	
Academic Achievement	.84	1

Correlation is significant at 0.05 levels.

**Discussion**

In this study demographic variables are treated as independent variable, whereas study skills and academic achievement was considered as dependent variable. The comparison of birth order of students revealed that the first-born students scored higher on SSI and in academic achievement. The reason may be that parents pay more attention to the future and up-bringing of their first child and concentrate more on his/her studies. Father's profession was one of the important variables of the study and father profession comparison reveals that students whose fathers are working as government servants had the highest score on SSI and in their academic achievement. This showed that the government servants were more concerned about the education as well as the career of their children. As, being highly educated themselves, they are aware of the importance of time and can thus better focus on the studies of their children. The comparison of students' mothers' profession revealed that the students whose mothers are teachers have the highest score on SSI scores and in their academic achievement. This may be due to the fact that these mothers can concentrate more on their children's upbringing, by contributing more to their academic success. They can provide guidance in their studies and develop their study skills. Family Income is one of the important variables which can affect the behaviour of individual differently. The students whose family income was Rs.50, 000 or less had highest scores on SSI and academic achievement. This may be due to the fact that students who belong to middle class are more hardworking, ambitious about their studies and show greater concerns about their academic career which helps them live a successful life. The first hypothesis stated that there is a positive relationship between study skills and academic achievement. The result of analysis showed that there was a positive relationship between study skills and academic achievement. The value of correlation coefficient showed a positive relationship between study skills and academic achievement, so study approved this hypothesis. The second hypothesis of the study was that students of private sector universities possess more effective study skills as compared to the students of public sector universities. The results of study supported hypothesis. The third hypothesis was proposed that students of private sector universities score higher on academic achievement as compared to the students of public sector universities.

**Conclusions**

In the light of the analysis and interpretation of data, it reveals that the study skills and academic achievement are interrelated constructs in the teaching learning environment. Based on the findings of the study following conclusions were drawn:

1. Study skills and academic achievement are significantly positively correlated with each other.
2. There was a significant difference in the study skills possessed by students of public and private sector university students. The students of private sector universities possessed

more effective study skills as compared to the students of public sector universities.

3. There was a significant difference between the students of public and private sector universities on the basis of scores of academics. The students of private sector universities scored higher in academics as compared to public sector universities.

1. On study skills students of management sciences scored higher than students of other departments.

2. On study skills and academic achievement students of management sciences scored higher.

3. Male students had higher score on study skills while female students had higher score in academic achievement.

4. The birth order had moderate effect on study skills and academic achievement.

5. The students whose fathers were government servants had higher score on study skills and academic achievement.

6. The students whose mothers were teachers had higher score on study skills and academic achievement.

7. The students whose family income was less than Rs.50, 000 had higher score on study skills and academic achievement.

#### **Recommendations**

1. Efficient study habits can increase students' academic achievements, teaching studying skills increases academic achievements of students. So public sector universities may adopt such strategies and measures through which study habits of students can be flourished.

2. Selection of curriculum can play an important role for development of efficient studying skills which enables students to organize the study environment and to use some specific methods effectively such as efficient reading, listening lectures, note-taking, efficient writing and doing homework.

3. Awareness is very important for learning and improvement. So in order to increase student motivations and attitude towards studies university management can organize educational seminars.

4. University teachers by providing opportunities for polishing their knowledge as well as skills for this management can organize teacher training program in which they can train teachers how to teach efficient studying skills to adult learners (pedagogical techniques).

5. The male students may work hard to increase their academic achievement and pay more attention towards their studies, if they need extra help they may not feel any hesitation to discuss their problems with their teachers.

6. Teacher may communicate the importance of study skills of the learner and try to teach them various strategies through which students can enhance their study skills which consequently affect the goal that is academic achievement of the learner, especially the students of social sciences and humanities.

7. The students may make the weekly or monthly plans of study, organize their resources, to improve their reading skills, note-making ability and concentrate on their studies to accomplish their goals.

8. The teachers may teach various techniques to the students for preparing their exams such as flash cards, mnemonics, chunks and writing after learning their notes.

9. Awareness programs through workshops and counseling and guidance may be conducted for students to make them aware about their study skills for their success in academic social and professional life.

10. The findings of my study showed that the students whose mothers were teachers had higher academic achievement score because these mothers can concentrate more on their children's upbringing, by contributing more to their academic success. So mother's education is very important for the academic achievement of students. Hence it is recommended that government may take solid steps to increase and encourage female education programs.

11. Individual differences and variations are there in the students so teachers may respect and consider these differences and should try to adopt the teaching strategies accordingly.

12. University management can provide creative competitive environment for the learner and exhibit serious attitudes towards studies. Students may also be taught the importance of proactive behaviour so they may face the challenges of life effectively and successfully.

13. Management and teachers can use positive reinforcement and rewards in order to motivate learners.

14. Home environment, parental care and support can play an important role in improving the academic achievement of the learners through polishing study habits. It is recommended in university there may be a system of awareness for the parents and caretakers through which parents can be informed about the ways to develop knowledge and skills their offspring.

15. Teachers play an important role in the process of education, in order to impart quality education to students, it is recommended that teachers may train and teach reflective teaching practices so they can constantly improve their teaching in order to accommodate the needs of learner in a creative competitive learning environment.

#### **Applied Significance**

Present research is significant due to its uniqueness in teaching learning process as learning takes place through experiences influencing psychological functions which leads to differences in behaviour. Generally there are five elements in learning which are learner, learning, learnt, teacher, and learning environment. Taking these five elements in terms of influencing learning shows that last two elements do not affect learning directly but they have an indirect effect since they influence other elements. In the past, people used to think that efficient learning depends mainly on teacher's teaching methods. However, today it is a commonly accepted fact that permanent and significant learning can be achieved only through learner efforts and contributions (Benson, 2001). From this point of view, learners can catch up with the intended achievement standards only by perceiving the given information accurately, analyzing, and internalizing them. This process is briefly called studying (Bacanli, 2005). After learning the weak areas of their personality students can work hard in that dimension which will help them to enhance their academic scores. The findings on the role of demographic variables in determining study skills and academic achievement will help the educationalists to make the curriculum of students accordingly. The study can be considered as a pioneering research in Pakistan because no study was conducted previously that directly address these relationships at university level. Before this research, empirical evidence was needed to unravel the relationship of study skills with academic achievement among university students.

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