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Exploring the Association between University Students' Study Skills and Academic Achievement

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Abstract

This study conducted to explore the association among university students' study skills and academic achievement. The descriptive correlational survey research design was used in the study. All the male and female students enrolled in BS program were the population of this study. The sample selected was 2207 students studying in general public universities of Punjab Pakistan through stratified random sampling technique. With the permission of author, the study skill assessment questionnaire was modified, validated and put through a reliability coefficient .094. Two research hypotheses were formulated and tested through Mean, Standard deviation, ANOVA and Pearson r. The result showed a considerable positive association between study skills and academic achievement of university students. According to the finding of this study, it is recommended that at the time of entrance universities should offer especial training to students so that they can learn or improve their study skills and improve their academic achievement.

Keywords: Study Skills, Academic Achievement, University Students

Introduction

At university level no one force the students to learn because at this level students are consider more mature and independent learners. And they take their own decision that what to study and how to study. But sometime due to lack of proper study skills students spent more time on study however, they don't have good grades. So, study skills are important for effective study and for getting high grades (Wilujeng, 2014). Study skills generally a bigger idea that encompasses all other concepts, including study attitude, study technique and study habits (Munir, 2022). But in this study, study skills are define as well-defined schedule which students use during their study hour more over it comprises on those methods or techniques which students use in their study to manage and improve their course work. Time management, motivation, note taking and test taking strategies, organizational and study habits are some study skills practices which students frequently utilize during their study time (Cottrell, 2019). While, all these skills are also consider students study skills i.e. critical thinking, using dictionary, graphic skills, library skills, recording or planning and time management. So there is no specific study skill yet a lot of techniques and method include in study skills. According to Chan & Bauer (2016) students use study skills purposefully according to learning situation because it helps them to make an independent learner. Cottrell (2019) described that if students want deeper understanding of their learning material then they have to use study skills effectively. She further explain that study skills mean a person perform his or her learning activity in a good way and when a student uses these skills during his or her study hour then he or she can study effectively.

Study skills guide an individual that how much he learned and further what to do for more learning (Sasikala, 2012). Researchers also confirm that due to study skills students' academic achievement increased (Verma, 2016). According to Rabia et al., (2017) study skills and academic achievement has positive relationship. According to Sherafat & Murthy (2016) study skills aid in academic success and reading activities. According to Verma (2016) study result, study skills and academic achievement has a positive relationship at higher secondary level. Moreover, Khan (2016) study results exposed that gender is most dominating factor which effects on students' study skills.

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Ogbodo (2010) stated that if a person study with different study skills then he or she achieve good grades and also feel pleasure. According to Owusu- Owusu Acheaw & Larson (2014) if students learn to read or study and develop study abilities, then he or she will be able to independently explore the learning experience and knowledge, which will also have an impact on their academic progress.

One of the most important goal of students is to achieve high grades in study therefore, achievement cannot be detached from study. The second most important goal of study is to getting useful knowledge. So study is not simple to sit in front of desk, asking question and doing the tasks. In fact if students want that they get high score then they have to use good study skills because it helps them in getting high achievement (Cerna & Pavliushchenk., 2015). Study skills are essential for academic success, according to (Shakouri & Nakhei, 2008), and they have significant impact on students' academic achievement and progress. Additionally, they claimed that students who employ efficient study skill techniques can quickly overcome academic failure and enhance both their physical and emotional wellbeing. In a similarly vein, Mendezabal (2013) found that students with higher marks exhibited a wider variety of study skills than those with lower score. In her research, Sasikala (2012) examined the impact of study skills on aspiring B.Ed. teachers. The study's conclusions showed that there are no differences in the study skills of male and female teacher's candidates, and study skills have a favorable impact on candidates' communication abilities. According to Hassanbeigi et al. (2011)'s study, university students whose practice good study skills earn higher grade point averages than those who don't. While, Jordan et al. (2015) conducted study on how study skills affected on undergraduate students' academic success. The findings of study showed that students in experimental group have high CGPA as compare to students in control group. It was also found that most of the student accomplished their goals by engaging in study skills techniques. In their study, Nouhi et al. (2008) explore the connection between students' study habits and academic success. The study's findings indicate that the p value is less than the alpha level of 0.05 ($r = 0.101$, P0.05). So it was suggested that to get success in educational activities students have to learn study skills. Griffin et al. (2013) conducted research to determine what elements influence students' intrinsic motivation and academic achievement. The study showed that study skills are most dominating factor that stimulates students' academic achievement and intrinsic motivation. So we can say that if students use study skills then no one can stop them in getting success (Jordan et al., 2015).

Study skills are crucial for students' success because they help them to utilize their time, resources, and academic talent to the fullest (Ayesha & Khurshid, 2013). In the views of Surapur (2012) good study skills influence the educational achievement favorably. Malhotra and Mehta (2015) reported that students who exhibit ineffective study skills have lower academic achievement. Additionally, Crede and Kuncel's (2008) meta-analysis revealed that students' academic success is influenced by their study skills. Study skills are therefore crucial to pupils' academic success (Hyseni et al., 2018 and Rabia et al., (2017). Researches also confirm that study skills are important in field of education (Sakirudeen & Sanni, 2017; Roya & Murthy, 2016 & Lawrence, 2014).

It is usually seen high performing students generally have higher study skills then lower performing students. But students success can also be effected by some other factors like student's age, gender, locality, studying material, home environment, peer groups, poor time management and availability of teaching learning material and students' concentration but generally it related to students' study skill (Munir, 2022). There are other elements that affect pupils' academic success, such as their grades, participation in extracurricular activities, and attendance. But Grades are most popular and essential indicator of students' academic progress since it tell average score of students' assignment and test score. Therefore, a student's grade point average (GPA) and cumulative grade point average (CGPA) serve as one of the primary indicators of academic achievement and provide information about overall academic performance. Some general fundamental that study skills does not relate with students' academic achievement. i.e. According to Akpan and Salome's (2015) research, there is no connection between students' study skills and academic achievement. According to Lawrence's (2014) research, there was no discernible relationship between higher secondary school students' study behaviors and academic achievement. However, Md Rahim & Meon (2013) those students who have very low CGPA and they feel difficulty in their course and sometime they terminated halfway through his or her course did not possess good study skills. Therefore, students must have good study skills in order to attain a high CGPA. Because learning happens when a person, their environment, and their behavior interact dynamically and reciprocally, according to Albert

Bandura's Social Cognitive theory (SCT) of 1960 (Bandura, 1989).In view of SCT theory academic achievement of student is outcome of interaction of his personality and study behavior (Siahi & Maiyo, 2015). According to Armstrong (2012) Bandura found that high achievers students make appropriate use of study skills and time management. So to confirm the theory of Albert Bandura's Social Cognitive theory (SCT) the current study was done to investigate the association between study skills and academic achievement of university students in the setting of Pakistani Asian culture.

Statement of the Problem

The current study was to investigate the association between study skills and academic achievement of university students.

Research Objectives

1. To investigate the association between University students' study skills and their academic achievement?
2. To find out difference between Sciences, social sciences, management sciences, and languages students study skills?

Methodology

A survey research design was utilized to evaluate the association between University students' study skills and academic achievement. The population of this study consisted of all BS 2nd semester students enrolled in regular public Universities in Punjab, Pakistan. Multistage random sampling technique was used to select the sample. Total six Universities were selected from top, middle and bottom level Universities which ranked according to Higher Education Commission Pakistani (HEC) Universities ranking, 2019. Moreover data was collected from four (4) faculty of universities sciences, social sciences, management sciences and languages. Further from selected faculty two departments were selected and from each department present students in the class were selected randomly. Total sample of 2207 students were randomly selected from sample Universities.

Research Instruments

In this study, study skills were measured through study skills assessment scale. The scale was adapted with the permission of author Cook (2021) who originally developed this scale. The scale was composed of eight factors: time management, memory/concentration, study aids/note-taking, anxiety-reducing exam tactics, information processing/critical thinking, motivation/attitude, reading selection/self-testing, and writing, each of factor had eight items. Additionally, the grade point average (GPA) of students' preceding semester was used as a measure of academic achievement.

The detailed description of questionnaire is as under

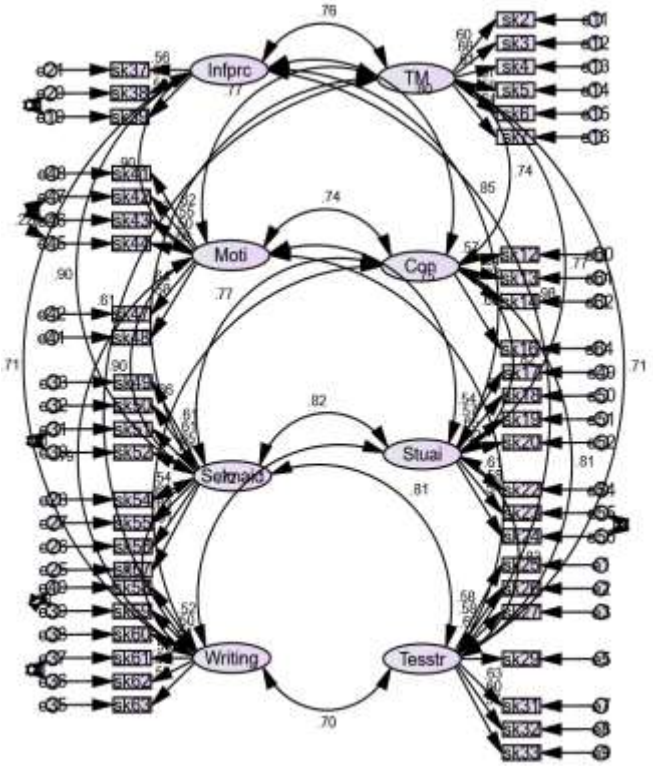
Validation of Study skills Scale

For validation of scale it was discussed with 11 Subject Matter Experts who rate the item as essential, useful, necessary and not necessary. The items' content validity ratios (CVR) ranged from 36.36 to 100, while the scale's total content validity index (CVI), which included 64 statements, was 0.75.

Further to make the scale reliable and valid confirmatory factor analysis was run through AMOS

Reliability through Confirmatory factor Analysis

AMOS software was used to undertake a confirmatory factor analysis to determine the study skills scale's model fit's reliability. The study skills scale's model fit's value of CMIN/DF ratio was 1.891 which is below than 3 and meet the criterion of model fit. GFI value was observed at 0.836 and AGFI value was found 0.815 which was meet the acceptable criterion value of model fit i.e. > 0.8. TLI value was found at 0.99 which was found greater than model fit value i.e. 0.9. Similarly, RMSEA value was observed at 0.46 which was much closer to 0.5 model fit value. Moreover, the standardized regression weights against each item ranged from 502 to 670 and all the SRW values showed that model has become fit according to the criterion of model fit > 0.5 (Arifin & Yusoff, 2016).



Model fit of study skills assessment questionnaire

After the Confirmatory Factor Analysis (CNF) the reliability analysis was done. The reliability of the scale with 44 statements was 0.94.

Results

The purpose of the study was to investigate the association between study skills and academic achievement of university students. The study's objectives were meet through the use of statistical analysis such as Pearson r and One Way ANOVA.

Table 1

Correlation between University students' study skills and academic achievement

	Mean	Std. Deviation	Pearson Correlation	Sig (P-value)
Study Skills	3.37	.35	.08	.00
Academic achievement	127.50	16.30		

N=2207

Table 1 shows the correlation between university students' academic achievement and their study skills. According to data analysis by Pearson's r (.086), there is a significant positive association between university students' academic achievement and their study skill (r (2207) =.08, p =.00 =0.05).

Table 2

Regression analysis of the relationship between university students' study skills and academic achievement

Model	Sum of Squares	df	Mean Square	F	Sig (P-value)
1. Regression	2.05	1	2.05	16.47	.00
Residual	275.00	2205	.12		
Total	277.05	2206			

a. Dependent variable= Academic Achievement

b. Predictor (constant) = Study Skills

Table 2 displays the regression model of University students' academic achievement and their study skills. The model revealed that university students' academic achievement was predicted by their study skills. The total statistical significance of the regression model's prediction of university students' academic achievement was shown by the F value of 16.47 at p value = .00.

Table 3

Study skills and academic achievement of University Students: A Linear Regression Analysis

Model	R	R^2	Adjusted R^2	Std. Errors
1	.08	.00	.00	.35

Predictor (constant) = Study Skills

Table 3 represents the linear regression between study skills and academic achievement of University students. The R value of .08 indicated a weak relationship between study skills and academic achievement of University students. The R^2 value = .00 indicated that study skills is low predictor of academic achievement of University students.

Table 4

Comparison of students' study skills across several faculties

		Sum of Squares	df	Mean Square	F	Sig.
Faculties	Between Groups	13447.34	3	4482.44	17.24	.00
	Within Groups	572722.30	2203	259.97		
	Total	586169.65	2206			

Table 4 above shows the comparison of students' study skills across four faculties of (Sciences, Social Sciences, Languages, and Management Sciences). The F value 17.24 at p value .00 < 0.05 showed that there is significant difference of students' study skills between four Faculties.

In different faculties .00 level of significance is less than the 0.05 level of significance, so in order to determine which faculty students has better study skills than others, the Post Hoc test was used.

Post Hoc analysis of various faculty of study students' study skills

Table 5

The comparison of Languages, Sciences, Social sciences and Management Sciences students' study skills with in Post Hoc

Faculties	Faculties	Mean Difference	Std. Error	Sig.
	Languages	4.62	.98	.00
Sciences	Social Sciences	2.83	.93	.01
	Management Sciences	6.49	.93	.00
Management Sciences	Social Sciences	3.66	.96	.00
	Sciences	6.49	.93	.00

Table 5 depicts the comparison of Languages, Sciences, Social sciences and Management Sciences students' study skills. Analysis of data showed that there is significant difference of study skills between students of Sciences and Languages, Social sciences and Management Sciences at p value =.00<0.05, .01<0.05 and .00<0.05 respectively. The positive mean difference indicated that students of Sciences have higher study skills than the students of Languages, Social sciences and Management Sciences. There is significant difference of study skills between Management Sciences and social sciences and Sciences students at p value =.00<0.05 and .00<0.05 respectively. The positive mean difference indicated that students of Management sciences have higher study skills than the students of Social sciences and Sciences students.

Table 6

The comparison of students' time management study skill with respect to different faculties

Factor		Sum of Squares	df	Mean square	F	Sig
Time Management	Between Groups	139.92	3	46.64	8.34	.00
	Within Groups	12310.64	2203	5.58		
	Total	12450.57	2206			

The above table 6 shows the comparison of different faculties of students' time management study skill. The time management study skill with respect to the Faculties significantly differ, as indicated by the F value of 8.34 at p.000 0.05.

In the above table the magnitude level of significance is less than the significance level 0.05. So the Post Hoc test was applied to explore that which faculty of students have higher time management study skill as compare to other faculty of students.

Table 7

The comparison of Sciences, Social sciences and Management sciences students' time management study skill with in Post Hoc

Faculties	Faculties	Mean Difference	Std. Error	Sig.
Sciences	Management sciences	.64	.13	.00
Social Sciences		.43	.14	.00

Table 7 depicts the comparison of Sciences, Social sciences and Management sciences students' time management study skill. Data analysis showed that there is significant difference of time management study skill between Sciences, Social Sciences and Management sciences students at p value =.00<0.05 and .00<0.05 respectively. The positive mean difference indicated that students of Sciences, Social Sciences have higher time management study skills than the students of Management sciences.

Table 8

The comparison of students' concentration/memory study skill with respect to different faculties

Factor		Sum of Squares	df	Mean square	F	Sig
Concentration/Memory	Between Groups	86.91	3	28.97	11.06	.00
	Within Groups	5768.32	2203	2.61		
	Total	5855.24	2206			

The above table 8 shows the comparison of different faculties students' concentration/memory study skill. The F value = 11.06 at p value .00 < 0.05 showed that there is significant difference of concentration/memory study skill with respect to different discipline of study.

In the above table the magnitude level of significance is less than the significance level 0.05. So the Post Hoc test was applied to explore that which faculty of students have higher concentration/memory study skills as compare to other faculty's students.

Table 9

The comparison of Management sciences, Languages, Social sciences and Sciences students' concentration/memory study skill with in Post Hoc

Faculties	Faculties	Mean Difference	Std. Error	Sig.
Languages	Management sciences	.48	.10	.00
Social Sciences	Management sciences	.36	.09	.00
Sciences	Management sciences	.48	.09	.00

Table 9 depicts the comparison of Management sciences, Languages, Social sciences and Sciences students' concentration/memory study skill. The analysis of the data revealed that students of management sciences and languages, social sciences, and sciences have significantly different concentration/memory study skill at p values of.00.05, .00.05, and and.00.05, respectively. The Positive mean difference indicated that students of languages, social sciences and Sciences have higher concentration/memory study skill than the students of Management sciences.

Table 10

The comparison of students' Study Aids/Note taking study skill with respect to discipline of study

Factor		Sum of Squares	df	Mean square	F	Sig
Study Aids/Note taking	Between Groups	773.67	3	257.89	13.35	.00
	Within Groups	42551.60	2203	19.31		
	Total	43325.28	2206			

The above table 10 shows the comparison of different faculties' students' study aids/note taking study skill. The F value = 13.35 at p value .00 < 0.05 showed that there is significant difference of study aids/note taking study skill with respect to faculties.

In the above table the magnitude level of significance is less than the significance level 0.05. So the Post Hoc test was applied to explore that which faculty students have higher study aids/note taking study skills as compare to other faculty students.

Table 11

The comparison of Sciences, Languages, Social sciences and Management sciences students' study aids/note taking study skill with in Post Hoc

Faculties	Faculties	Mean Difference	Std. Error	Sig.
Sciences	Languages	1.15	.26	.00
	Social sciences	.97	.25	.00
	Management Sciences	1.54	.25	.00

Table 11 depicts the comparison of Sciences, Languages, Social sciences and Management sciences students' study aids/note taking study skill. The analysis of data showed that there is significant difference of study aids/note taking study skill between students of Sciences and Languages, Social sciences and Management sciences at p value =.00<0.05, .00<0.05 and .00<0.05 respectively. The positive mean difference indicated that students of Sciences have higher Study Aids/Note taking study skill than the students of Languages, Social sciences and Management sciences.

Table 12

The comparison of students' test strategies study skill with respect to different faculties

Factor		Sum of Squares	df	Mean square	F	Sig
Test strategies	Between Groups	335.95	3	111.98	15.31	.00
	Within Groups	16106.25	2203	7.31		
	Total	16442.20	2206			

The above table 12 shows the comparison of different faculties' students' test strategies study skills. The F value = 15.317 at p value .000 < 0.05 showed that there is significant difference of test strategies study skill with respect to different faculties.

In the above table the magnitude level of significance is less than the significance level 0.05. So the Post Hoc test was applied to explore that students of which faculty have higher test strategies study skill as compare to other faculties' students.

Table 13

The comparison of Sciences, Languages, Social sciences and Management sciences students' test strategies study skill with in Post Hoc

Faculties	Faculties	Mean Difference	Std. Error	Sig.
Sciences	Languages	.66	.16	.00
	Social sciences	.67	.15	.00
	Management sciences	1.03	.15	.00

Table 13 depicts the comparison of Sciences, Languages, Social sciences and Management sciences students' test strategies study skill. The analysis of data showed that there is significant difference of test strategies study skill between students of Sciences, Languages, Social sciences and Management sciences at p value =.00<0.05, .00<0.05 and .00<0.05 respectively. The positive mean difference indicated that students of Sciences have higher test strategies study skill than the students of Languages, Social sciences and Management sciences.

Table 14

The comparison of students' processing / critical thinking study skill with respect to different faculties

Factor		Sum of Squares	df	Mean square	F	Sig
Information Processing/critical Thinking	Between Groups	63.77	3	21.25	6.36	.00
	Within Groups	7359.50	2203	3.34		
	Total	7423.27	2206			

The above table 14 shows the comparison of different faculties students' information processing/ critical Thinking study skill. The F value = 6.36 at p value .00 < 0.05 showed that there is significant difference of information processing/ critical thinking study skill with respect to different faculties.

In the above table the magnitude level of significance is less than the significance level 0.05. So the Post Hoc test was applied to explore that which faculty of students have higher information processing/ critical thinking study skill as compare to other faculties' students.

Table 15

The comparison of Sciences, Languages, Social sciences and Management sciences students' information processing/ critical thinking study skill with in Post Hoc

Faculties	Faculties	Mean Difference	Std. Error	Sig.
Sciences	Languages	.46	.11	.00
	Social sciences	.29	.10	.02
	Management sciences	.27	.10	.00

Table 15 depicts the comparison of Sciences, Languages, Social sciences and Management sciences students' information processing/ critical thinking study skill. The analysis of data showed that there is significant difference of information processing/ critical thinking study skill between students of Sciences and Languages, Social sciences and Management sciences students at p value =.00<0.05, .02<0.05 and .00<0.05 respectively. The Positive mean difference indicated that students of Sciences have higher information processing/ critical thinking study skill than the students of Languages, Social sciences and Management sciences.

Table 16

The comparison of students' Motivation/Attitude study skill with respect to different faculties

Factor		Sum of Squares	df	Mean square	F	Sig
Motivation/Attitude	Between Groups	113.58	3	37.86	4.09	.00
	Within Groups	20364.48	2203	9.24		
	Total	20478.06	2206			

The above table 16 shows the comparison of different faculties students' motivation/attitude study skill. The F value = 4.09 at p value .00< 0.05 showed that there is significant difference of motivation/attitude study skill with respect to different faculties.

In the above table the magnitude level of significance is less than the significance level 0.05. So the Post Hoc test was applied to explore that students of which faculty have higher motivation/attitude study skill as compare to other discipline of study.

Table 17

The comparison of Social sciences, Languages and Management sciences students' motivation/attitude study skill with in Post Hoc

Faculties	Faculties	Mean Difference	Std. Error	Sig.
Social sciences	Languages	.54	.19	.02
	Management Sciences	.51	.18	.02

Table 17 depicts the comparison of Social sciences, Languages and Management sciences students' motivation/attitude study skill. The analysis of data showed that there is significant difference of motivation/attitude study skill between students of Social sciences, Languages, and Management sciences at p value =.02<0.05 and .02<0.05 respectively. The positive mean difference indicated that students of Social sciences have higher motivation/attitude study skill than the students of Languages and Management sciences.

Table 18

The comparison of students' selecting main ideas/self-testing/reading study skill with respect to different faculties

Factor		Sum of Squares	df	Mean square	F	Sig
Selecting main ideas/self-testing/reading	Between Groups	83.27	3	27.75	4.48	.00
	Within Groups	13638.74	2203	6.19		
	Total	13722.01	2206			

The above table 18 shows the comparison of different faculties of students' selecting main ideas/self-testing/reading study skill. The F value = 4.48 at p value .00 < 0.05 showed that there is significant difference of selecting main ideas/self-testing/reading study skill with respect to different faculties.
In the above table the magnitude level of significance is less than the significance level 0.05. So the Post Hoc test was applied to explore that students of which faculty have higher selecting main ideas/self-testing/reading study skill as compare to other faculty's students.

Table 19

The comparison of Sciences, Languages and Social sciences students' selecting main ideas/self-testing/reading study skill with in Post Hoc

Discipline of study	Disciplines of study	Mean Difference	Std. Error	Sig.
Sciences	Languages	.47	.15	.01
	Social sciences	.40	.14	.02

Table 19 depicts the comparison of Sciences, Languages and Social sciences students' selecting main ideas/self-testing/reading study skill. The analysis of data showed that there is significant difference of selecting main ideas/self-testing/reading study skill between students of Sciences, Languages and Social sciences at p value =.01<0.05 and .02<0.05 respectively. The positive mean difference indicated that students of sciences have higher selecting main ideas/self-testing/reading study skill than the students of Languages and Social.

Table 20

The comparison of students' writing study skill with respect to different faculties

Factor		Sum of Squares	Df	Mean square	F	Sig
Writing	Between Groups	196.04	3	65.34	6.76	.00
	Within Groups					
	Total	21296.89		9.66		
			2203			
		21492.93				
			2206			

The above table 20 shows the comparison of different faculties students' writing study skill. The F value = 6.76 at p value .00 < 0.05 showed that there is significant difference of writing study skill with respect to different faculties.
In the above table the magnitude level of significance is less than the significance level 0.05. So the Post Hoc test was applied to explore that students of which faculty have higher writing study skill as compare to other faculty's students.

Table 21

The comparison of Management sciences, Social sciences and Sciences students' writing study skill with in Post Hoc

Faculties	Faculties	Mean Difference	Std. Error	Sig.
Social sciences	Management sciences	.73	.18	.00
Sciences	Management sciences	.67	.18	.00

Table 21 depicts the comparison of Management sciences, Social sciences and Sciences students' writing study skill. The analysis of data showed that there is significant difference of writing study skill between Social sciences, Sciences and Management sciences students' writing study skill at p value =.00<0.05 and .00<0.05 respectively. The positive mean difference indicated that students of Social sciences and Sciences have higher writing study skill than the students of Management sciences.

Discussion

The purpose of the current study was to investigate the association between University students study skills and academic achievement. The first objective of the study was to investigate the association between University students' study skills and their academic achievement. The second objective of the study was to find out difference between sciences, social sciences, management sciences and languages students study skills. The findings of study showed that there is a strong positive correlation between study skills and academic achievement (CGPA) of university students, which

supports the findings of Arora's (2016) study "Academic achievement of adolescents in relation to study habits". The study's findings showed that there is a strong correlation between study skills and academic achievement. The findings of this study were consistent with the study "The Role of Study Skills on Academic Achievement" by (Fazal et al., 2012). The study's findings indicate a positive association between note-taking, time management, and study skills. Additionally, students who performed better academically used a wider variety of study skills than those who performed poorly. Similarly Md Rahim & Meon (2013) study also exposed that to achieve high CGPA students must have good study skills. Additionally, according to Ayesha & Khurshid (2013), study skills are crucial for raising students' academic achievement. Hassanbeigi et al. (2011) study results exposed that students who follow study skills have high CGPA as compare to those students who did not follow study skills. So study skills are crucial for academic achievement. However Akpan, N. A., & Salome, E. (2015) study showed contradictory findings in the article "Effect of study habit on academic accomplishment of agricultural science students in senior secondary schools in emohua local government area of rivers state". They discovered in the study that there is no connection between study skills and academic achievement. Moreover, According to Bulent et al. (2015), departments of primary school teaching and computer instructional technologies had higher study skills than science and other departments. This finding corroborated the finding of our study, which found that students of Management sciences had higher study skills than the students of Social sciences. According to the study's findings, students majoring in sciences showed better study skills than those majoring in languages, social sciences, and management sciences. This could be because science majors typically have strong academic backgrounds and are more experienced students overall, The findings are in line with a recent study by Cebeci et al. (2013) titled "Medical students' methods to learning and study skills," which discovered that scientific students utilize more in-depth study skills than students from other disciplines to succeed in their academic years.

Conclusions

The study's findings led to the following conclusions, which were made.

1- There was a significant positive association between university students' academic achievement and their study skills. It's mean, when study skills are better than academic achievement and grades of university students will improve.
2- The students of sciences had better study skills than those of languages, social sciences, and management sciences students, and students of management sciences had better study skills than those of social science.
3- Over all in all contributing factors the students of Sciences had higher study skills, Secondly students of Social Sciences and Languages had higher study skills. But students of management sciences had lower study skills in all contributing factors.

Recommendations from studies

1- The research may be useful for university teachers so they may comprehend the significance of study skills for academic achievement.
2- The findings may be helpful for students who are having problems in study since they don't take study skills seriously. So after reading this study they can able to pick up a variety of study skills.
3- Moreover, the results of the study may assist pupils in overcoming their academic challenges by using study skills.

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