EXPLORING THE LEVELS OF UNDERGRADUATE UNIVERSITY STUDENTS' STUDY SKILLS

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ABSTRACT

The ability to study well is crucial to students' academic performance. The aims of this research were to investigate the study skills levels of undergraduate students, to determine the correlation between academic performance and the study skills of undergraduate students, and to identify any noteworthy variations in study skills based on gender and location. Multi-stage stratified random sampling technique was used to select representative sample of 2207 undergraduate students from Punjab, Pakistan's general public universities. With the author's consent, a modified version of the study skills evaluation questionnaire was adapted, and the academic performance scale was created, verified, and subjected to a reliability coefficient of .094 and 0.85. Four research hypotheses were developed and put to the test using the t-test, Pearson r, mean, and standard deviation. The results indicated a substantial difference in terms of gender and location, as well as a favorable link between study skills and academic performance. Moreover, the majority of undergraduate students employed study skills at a moderate level; therefore, it is recommended to design and incorporate study skills in educational courses for students in academic curricula.

INTRODUCTION

A lot of teachers look at the problem of some pupils performing poorly in colleges and other higher education settings. Students today seem to know less and use their knowledge less, even with access to study tools (Cottrell, 2019). In a similar vein, students also lack the abilities needed to think and study well. Most teachers pay little attention to helping students acquire these skills (Bergey et al., 2017). As a result, many students are able to continue their studies at higher levels without ever developing study time management habits. Many abilities and potentials remain unrealized as a result of the neglect given to their academic and personal development (Rabia et al., 2017). There are multiple factors that affect the academic progress of students. According to Hamzah et al. (2018), one of these components is a collection of behaviors known as study skills that students pick up, favor, and take pleasure in using for learning both inside and outside of the classroom. Study skills are defined as the routine actions and behaviors one does to learn and gain knowledge. According to Oluwatimilehin and Owoyele's (2012) research simple study skills are the abilities that come from studying. The study abilities that had the biggest impacts on students' academic performance were time management, exercise, attention, taking notes on reading assignments, and teacher consultation. Consequently, Cicekci and Sadik (2019) advised that students attend counseling sessions on a regular basis in order to acquire study techniques and strategies that will enhance their academic performance and study skills.

The biggest influence on a student's academic success is the development of efficient study skills (Al'Omairi

& Al Balushi, 2015). As a result, learning anything properly will be impossible for someone with inadequate study skills. It is a well-known fact that students acquire effective study skills in high school and college (Wilson et al., 2021). Thus, it is commonly assumed that college students have effective study skills. Nonetheless, there are significant differences between the environments of school, college, and university, and at the university level, superior study skills are far more important than in school and college (Hua, 2022). Therefore, the goal of this study is to investigate the levels of study skills among undergraduate students as well as to explore the study skills of undergraduate students concerning gender and locality. The analysis in the next section looked at the relationship between study habits and academic success.

What are Study Skills?

Study skills are the strategies or tactics that students employ to better organize and complete their assignments. Students frequently employ time management, motivation, note-taking and test-taking tactics, organizational abilities, and study habits during their study sessions (Akpan & Salome, 2015). However, all of these abilities, critical thinking, dictionary use, graphic design, library skills, planning and documenting, and time management, are also regarded as study skills for students. Thus, while there is not a single study skill, there are several approaches and strategies that fall under the category (Akpan & Salome, 2015). Chan and Bauer (2016) claim that because study skills foster independent learning, students intentionally apply them to the needs of the learning environment. According to Cottrell (2019), students must properly employ their study skills if they hope to have a deeper comprehension of the content they are studying. She went on to say that having study skills enables one to carry out their learning activities well. Students may study more efficiently if they apply these skills during study hours.

Elements of Study Skills

The ability to execute a learned task quickly and effectively is what it means to be competent. In contrast to a consequence attained by accident or chance, a skill is an acquired aptitude. Study skills encompass more than simply academic abilities. These are techniques better described as learning strategies that you use. Thus, improving one's study skills is advantageous for performance in the classroom and in real life (Yulianti et al., 2019). Additionally, the category of study skills includes the methods of arranging and processing new knowledge, recalling details, and managing tests. These are unique techniques that can be easily learned and used in all or most academic subjects (Cottrell, 2019). Effective study techniques will also increase your confidence, competence, and respect. They can help relieve some of the pressure brought on by deadlines and tests. A person may be able to spend less time studying and more time on other activities by developing their study skills (Akpan & Salome, 2015). According to Cottrell (2019) following are crucial elements of study skills, i.e., Selecting the main idea/self-testing /reading**,** Information Processing /Critical Thinking**,** Writing**,** Motivation/Attitude**,** Notes-Taking**,** Memory**,** Test anxiety**,** Concentration and Time Management

Merits of Study Skills

According to Ebele and Olofu (2017) study skills are a dynamic force for the success of students. He further described the following benefits of study skills, i.e., it assists learners in enhancing their scholastic performance and encourages pupils to pursue education. Moreover, study skills enhance the students learning and teach them how to take notes, read comprehension and apply critical thinking techniques. So, through study skills, students are better able to apply their information to novel settings and retain the activities they have acquired.

Poor Study Skills of Students

Kumar (2015) described the various poor study skills of students i.e., students typically prioritize completing easier assignments first and save the more challenging ones for last. As a result, there won't be enough time to complete the more challenging jobs later. Moreover, loud noises or distractions during studying lead to lower levels of focus; therefore, sometimes the mind wanders when studying in the midst of distractions. Consequently, a mentally weary mind operates slowly. Therefore, learning when you're

sleepy or hungry hinders your thinking. According to Wilson et al. (2021), often, students just copy the task without thinking about why they are doing it or studying after hours; as a result, learners only commit the information to memory without really understanding it, which affects their long-term conceptual comprehension.

Study skills and Academic Performance

A clear timetable that students follow during their study sessions is referred to as study skills. It instructs a person on how much he has learned and what more has to be studied. Researchers have also confirmed that students' academic performance improved as a result of their study skills (Verma, 2016; Wilson et al., 2021; Hua, 2022). Academic achievement and study skills are positively correlated, according to Rabia et al. (2017). Furthermore, study skills help kids develop their reading, thinking, and creative thinking skills as well as their personalities. According to Sherafat & Venkatesha Murthy (2016), study skills support reading activities as well as the academic performance of students. The findings of Verma's (2016) study further support the positive correlation between academic achievement and study skills at the upper secondary level. The idea that there is a substantial disparity between male and female study skills and academic success is supported by additional research findings. Furthermore, Khan (2016) carried out research to determine the variables influencing students' ability to study. The study's conclusions demonstrated that gender had the biggest impact on students' academic achievement and study skills. According to Gormley et al. (2018), Study skills are a more important predictor of academic success for first-year college students. According to Bulent et al. (2015), study skills are also crucial for raising students' academic performance since they enable us to extract knowledge from written or printed words. Thus, if a student picks up reading and study skills, he or she will be able to explore the material and learning process on their own, which will have an impact on their academic achievement.

METHODOLOGY

A cross-sectional quantitative research design was used to explore the levels of undergraduate students' study skills at higher educational levels. After passing the college exam, students enrolled in universities and at BS 2nd semester level students mature enough therefore to check their study skills and academic performance. Students of BS 2nd semester was chosen as a sample of the study. The population of this study consisted of all undergraduate BS 2nd semester students enrolled in all general public Universities of Punjab, Pakistan. Moreover, at the University level, a large number of students get enrolled so as to access BS 2nd semester students, and due to variations in the population, a multi-stage stratified random sampling technique was used to select a representative sample. The sample was selected through a multi-stage sampling technique from all general Public Universities of Punjab, Pakistan. Moreover, in the study, two questionnaires were used: the study skills assessment questionnaire and a self-developed academic performance scale. The studies skills scale was adapted with the permission of author Cynthia (2021), who originally developed this scale, and the academic performance scale was developed by reviewing the literature (Ouyang, 2008; Bennett et al., 2009; Martha, 2009; Shahzadi & Ahmad, 2011; Kasantra et al. 2013; Chandi, 2014)., to find out the face and content validity of the item, the scales were reviewed by 11 national (6) and international (5) Subject Matter Experts (SMEs). The SMES were requested to review the item and provide their opinion about each statement's clarity, correctness, suitability of language, the linkage between factors, the relevance of each item with construct, and rate the item as (essential, useful, or not necessary). After the initial construction of the research instrument, the researcher carried out a pilot study. The obtained data were analyzed by using Statistical Packages for Social Sciences (SPSS) to find out the reliability coefficient Cronbach Alpha. Its value for study skills and academic performance Questionnaires were .094 and 0.85.

RESULTS AND DISCUSSION

The objectives of the study were met through percentage, frequency, range and the use of statistical analysis such as Pearson r and t-test. Levels of undergraduate students' responses are analyzed factor-wise and presented in sequence as under the given criteria: high study skills level = 176-110, moderate study skills level 109-77, low study skills level 76-44.

Table 1. Frequency of levels of study skills.

Sr.	Level / Range		Frequency	%
1	High	110-176	1882	85.3%
2	Medium	77-109	311	14.1%
3	Low	44-76	14	0.6%
4	Total		2207	100%

Table 1 shows the levels of undergraduate students' study skills. It reflected that students' scores ranging from 110-176 have higher level study skills, the student's scores ranging from 77-109 have medium level study skills, while the students' scores ranging from 44-76 have lower level study skills. Further, the analysis showed that most 85.3% students have higher-level study skills. The 14.1% students have lower-level study skills. Overall majority of 99.4% of undergraduate students have high or medium-level study skills, whereas almost 0.6% of only 14 undergraduate students have lower-level study skills.

Table 2. Analysis of levels of undergraduate students' responses about time management factors.

Sr.	Level / Range		Frequency	%
1	High	14-20	1710	77.5%
2	Medium	10-13	421	19.1%
3	Low	6-9	70	3.2%
4	Total		2207	100%

Table 2 shows the levels of undergraduate students' time management. It reflected that students' scores ranging from 14-20 have a higher level of time management, the student's scores ranging from 10-13 have a medium level of time management, while the students' scores ranging from 6-9 have a lower level of time management. Further, the analysis showed that most 77.5% undergraduate students have a higher level of time management. The 19.1% students have medium-level time management. The overall majority of 96.6% of undergraduate students have high or medium-level time management, and almost 3.2% of only 70 students have lower-level time management.

Table 3. Responses of undergraduate students about concentration/memory.

Sr.	Level / Range		Frequency	%
1	High	9-12	1714	77.7%
2	Medium	6-8	439	19.9%
3	Low	3-5	54	2.4%
4	Total		2207	100%

Table 3 shows the level of undergraduate students' study skills regarding concentration/memory factor. It reflected that students' scores ranging from 9-12 have higher levels of concentration/memory, the students' scores ranging from 6-8 have medium level concentration/memory, while the students' scores ranging from 3-5 have lower concentration/memory. Further, the analysis showed that most 77.7% undergraduate students have higher levels of concentration/memory. As shown in table 19.9% of students have medium-level concentration/memory. The overall majority of 97.6% of students have high or medium-level concentration/memory, whereas almost 2.4% (54) undergraduate students have lower-level concentration/memory.

Table 4. Responses of undergraduate students about study aids/note-taking.

Sr.	Level / Range		Frequency	%
1	High	20-32	1924	87.2%
2	Medium	14-19	252	11.4%
3	Low	8-13	31	1.4%
4	Total		2207	100%

Table 4 shows the levels of undergraduate students' study aids/note-taking. It reflected that students' scores ranging from 20-32 have higher level study aids/note taking, students' scores ranging from 14-19 have medium level study aids/note-taking, while the students' scores ranging from 8-13 have lower level study aids/note taking. Further, the analysis showed that most (87.2%) undergraduate students have higher-level study aids/note-taking. Total 11.4% of students have medium-level study aids/note-taking. The overall majority of 98.6% of undergraduate students have high or medium-level study aids/note taking, whereas almost only 1.4% (31) students have lower-level study aids/note taking.

Table 5. Analysis of levels of undergraduate students' response about test strategies factor.

Sr.	Level / Range		Frequency	%
1	High	10-16	1897	86%
2	Medium	7-9	244	11.1%
3	Low	4-6	66	3.0%
4	Total		2207	100%

Table 5 shows the levels of undergraduate students' test strategies. It reflected that students' scores ranging from 10-16 have higher level test strategies, the students' scores range from 7-9 have medium level test strategies, while the students' scores range from 4-6 have lower level test strategies. Further, the analysis shows that most (86%) students have higher-level test strategies. Only 11.1% of students have medium-level test strategies. The overall majority of 97.1% of students have high or medium-level test strategies, whereas almost only 3.0% (66) students have lower-level study skills.

Table 6. Responses of undergraduate students about information processing/critical thinking.

Sr.	Level / Range		Frequency	%
1	High	9-12	1073	48.6%
2	Medium	6-8	956	43.3%
3	Low	3-5	178	8.1%
4	Total		2207	100%

Table 6 shows the levels of undergraduate students' information processing/critical thinking. It reflected that students' scores ranging from 9-12 have a higher level of information processing/critical thinking, the student's scores ranging from 6-8 have a medium level of information processing/critical thinking, while the students' scores ranging from 3-5 have lower-level information processing/critical thinking. Further, the analysis showed that most (48.6%) undergraduate students have a higher level of information processing/critical thinking. Total 43.3% of students have medium-level Information Processing/Critical Thinking. Overall, only 8.1% of students have a lower level of information processing/critical thinking. The overall majority of 91.9% of students have high or medium-level information processing/critical thinking, whereas almost only 8.1% (178) students have lower-level information processing/critical thinking.

Table 7. Responses of undergraduate students about motivation/attitude.

Sr.	Level / Range		Frequency	%
1	High	14-20	1785	80.9%
2	Medium	10-13	369	16.7%
3	Low	6-9	53	2.4%
4	Total		2207	100%

Table 7 shows the levels of students' motivation/attitude. It reflected that students' scores ranging from 14-20 have higher levels of motivation/attitude, the students' scores ranging from 10-13 have medium level motivation/attitude, while the students' scores ranging from 6-9 have lower-level motivation/attitude. Further, the analysis showed that the majority (80.9%) of undergraduate students have a higher level of motivation/attitude. Only 16.7% of students have medium-level motivation/attitude. The overall majority of 97.6% of undergraduate students have high or medium level motivation/attitude, whereas almost only 2.4% (53) students have lower-level motivation/attitude.

Table 8. Responses of undergraduate students about selecting main ideas/self-testing/reading.

Sr.	Level / Range		Frequency	%
1	High	20-32	1344	60.9%
2	Medium	14-19	823	37.3%
3	Low	8-13	40	1.8%
4	Total		2207	100%

Table 8 shows the levels of students' selecting main ideas/self-testing/reading. It reflected that students' scores ranging from 20-32 have a higher level selecting main ideas/self-testing/reading, the student's scores ranging from 14-19 have a medium level selecting main ideas/self-testing/reading, while the students' score range from 8-13 have lower level selecting main ideas/self-testing/reading. Further, the analysis showed that most (60.9%) students have a higher level of selecting main ideas/self-testing/reading. The 37.3% of students have medium-level selecting main ideas/self-testing/reading. The overall majority of 98.2% of students have a high or medium level selecting main ideas/self-testing/reading, whereas almost 1.8% (40) undergraduate students have a lower level selecting main ideas/self-testing/reading.

Table 9. Responses of students' response about writing factor.

Sr.	Level / Range		Frequency	%
1	High	14-20	1931	87.5%
2	Medium	10-13	243	11.0%
3	Low	6-9	33	1.5%
4	Total		2207	100%

Table 9 shows the levels of undergraduate students' writing. It reflected that students' score range from 14-20 have higher level writing, the student's score ranges from 10-13 have medium level writing, while the students' score ranges from 6-9 have lower-level writing. Further, the analysis showed that the majority (87.5%) of students have higher-level writing. The 11.0% of students have medium-level writing. Overall majority of 98.5% of undergraduate students have high or medium-level writing, whereas almost only 1.5% (33) students have lower-level writing.

Table 10. Comparison of mean scores of male and female students' study skills.

Students gender	N	Mean	SD	t	df	P-value	Effect size Cohen's d
Male	1032	125.38	17.04	-5.76	2205	.00	.24
Female	1175	129.36	15.38				

Table 10 shows that there is a statistically significant difference between male and female undergraduate students' study skills as indicated by t= 5.76, df=2205, and p=0.00 < α =0.05. The higher mean score of 129.36 and SD=15.38 showed that female students have higher study skills than male students 125.38 and SD = 17.04. The value of effect size .24 indicated that the difference is smaller. So, it is concluded that female students have higher study skills than male students.

Table 11. The comparison of factors wise male and female students' study skills.

Factors	Students' gender	N	Mean	S. D	T	df	P-value	Effect size Cohen's d
Time Management	Male	1032	14.83	2.50	1.94	2205	.05	-
	Female	1175	15.03	2.25				-
Concentration/Memory	Male	1032	9.38	1.71	2.68	2205	.00	.11
	Female	1175	9.57	1.54				-
Study Aids/Note-taking	Male	1032	24.25	4.55	9.21	2205	.00	.38
	Female	1175	25.96	4.16				-
	Male	1032	12.37	2.86	6.26	2205	.00	.26
Test strategies	Female	1175	13.09	2.55				-
Information Processing/ Critical Thinking	Male	1032	8.20	1.88	.02	2205	.98	-
	Female	1175	8.20	1.79				-
Motivation/Attitude	Male	1032	16.11	3.19	2.34	2205	.00	.50
	Female	1175	16.42	2.90				-
Selecting main ideas/ self-testing/reading	Male	1032	19.45	2.53	1.67	2205	.09	-
	Female	1175	19.63	2.45				-
Writing	Male	1032	17.03	3.19	3.05	2205	.00	.13
	Female	1175	17.43	3.04				

Table 11 shows the comparison of male and female students' mean scores about study skills in time management, concentration/memory, study aids/note taking, test strategies, information processing/critical thinking, motivation/attitude, selecting main ideas/self-testing/reading and writing factors. It is depicted that there is a significant difference between male and female students' Concentration/Memory study skills as indicated by t= 2.68, df=2205, and p value=0.00<0.05. The effect size of Cohen's d value .11 revealed that the difference in Concentration/Memory study skill is small. Similarly, there is a significant difference between male and female students studying Aids/Note taking study skills as indicated by t=9.21, df=2205 and p value=.00<0.05. The effect size of Cohen's d value .38 revealed that the difference in Study Aids/Note-taking study skills is medium. There is a significant difference between male and female students' test strategies and study skills as indicated by t= 6.26, df=2205 and p value=0.00< 0.05. The effect size of Cohen's d value .26 revealed that the difference between male and female test strategies study skill is small., there is a significant difference between male and female students' Motivation/Attitude study skills as indicated by t= 2.34, df=2205 and p value=0.00< 0.05. The effect size of Cohen's d value of .50 showed that the difference in motivation/attitude study skill is medium. Similarly, there is a significant difference between male and female students' Writing study skills as indicated by t= 3.05, df=2205, and p value=0.00< 0.05. The effect size of Cohen's d value .13 indicated that the difference in writing study skills is smaller.

Whereas there is no significant difference between male and female students' Time Management study skills (t= 1.94, df=2205 and p value=0.05 > 0.05), Information Processing/critical Thinking study skill (t= .02, df=2205 and p value=.98 >0.05) and in Selecting main ideas/self-testing/reading study skills (t= 1.67, df=2205 and p value=0.09> 0.05).

Table 12. Comparison of mean scores of urban and rural students' study skills.

Students Locality	N	Mean	SD	T	df	P-value	Effect size Cohen's d
Urban	1328	126.43	16.47	3.79	2205	.00	.16
Rural	879	129.12	15.90				

Table 12 shows that there is a statistically significant difference between urban and rural undergraduate students' study skills as indicated by t= 3.79, df=2205, and p=.00< 0.05. The rural students' higher mean score =129.12 & SD = 15.90 showed that they have higher study skills than urban students' mean score of 126.43 & SD = 16.47. The value of effect size .16 indicated that the difference is much smaller. So, it is concluded that rural students have higher study skills than urban students.

Table 13. The comparison of factor-wise students' study skills concerning locality.

Factors	Students' locality	N	Mean	S. D	t	df	P-value	Effect size Cohen's d
Time Management	Urban	1328	14.86	2.42	1.95	2205	.05	-
	Rural	879	15.06	2.28				-
Concentration/ Memory	Urban	1328	9.43	1.72	1.91	2205	.05	-
	Rural	879	9.56	1.46				-
Study Aids/ Note-taking	Urban	1328	24.83	4.46	4.35	2205	.00	.18
	Rural	879	25.67	4.32				
Test strategies	Urban	1328	12.60	2.78	3.28	2205	.00	.14
	Rural	879	12.99	2.62				
Information Processing/ Critical Thinking	Urban	1328	8.14	1.82	1.70	2205	.08	-
	Rural	879	8.28	1.84				-
Motivation/ Attitude	Urban	1328	16.17	3.07	1.95	2205	.05	-
	Rural	879	16.43	3.00				-
Selecting main ideas/self-testing/reading	Urban	1328	19.56	2.52	.31	2205	.75	-
	Rural	879	19.53	2.44				-
Writing	Urban	1328	17.10	3.12	2.63	205	.00	.11
	Rural	879	17.46	3.10				

Table 13 shows the comparison of urban and rural undergraduate students' mean scores about study skills in time management, concentration/memory, study aids/note taking, test strategies, information processing/critical thinking, motivation/attitude, selecting main ideas/self-testing/reading, and writing factors. It was depicted that there is a significant difference between urban and rural students' Study Aids/Note-taking study skills as indicated by t= 4.35, df=2205 and p value=0.00<0.05. The effect size of Cohen's d value .18 revealed that the difference in Study Aids/Note-taking study skills is small. There is a significant difference between urban and rural students' test strategies and study skills as indicated by t=3.28, df=2205 and p value=.00<0.05. The effect size of Cohen's d value .14 exposed that difference in Study Aids/Note-taking study skills is small. Similarly, there is a significant difference between urban and rural students' Writing study skills t= 2.63, df=2205 and p value=0.00< 0.05. The effect size of Cohen's d value .11 exposed that the difference in writing study skills is small.

Whereas there is no significant difference between urban and rural students' Time Management study skills t= 1.95, df= 2205 and p value=0.05>= 0.05, Concentration/Memory study skill (t= 1.91, df=2205 and p value=.05 >0.05), Information Processing/critical Thinking study skill (t= 1.70, df=2205 and p value=.08 >0.05), Motivation/Attitude study skill (t= 1.95, df=1908.96 and p value=.05 >0.05), and Selecting main ideas/self-testing/reading study skill (t= .31, df=1923.22 and p value=.75 > 0.05).

Table 14. Correlation between study skills and academic performance of undergraduate students.

Correlation	Mean	Std. Deviation	Pearson Correlation r	Sig (P-value)
Study Skills	127.50	16.30	.51	.00
Academic Performance	78.01	10.79		

Table 14 shows the relationship between study skills and the academic performance of undergraduate students. The analysis of data Pearson's r (.51) showed that there is a moderate positive correlation between study skills and academic performance of undergraduate University students as indicated by r (2207) = .51, p = .00 <=0.05.

Table 15. Regression analysis between study skills and academic performance of undergraduate students.

Model	Sum of Squares	df	Mean Square	F	Sig (P-value)
1. Regression	67935.17	1	67935.17	791.33	.00
Residual	189295.58	2205	85.84		
Total	257230.76	2206			

Table 15 shows the regression model of study skills and academic performance of undergraduate students. The model showed that study skills predicted the academic performance of undergraduate students as indicated by F value = 791.33 and p= .00<0.05. Overall, the regression model was statistically significant and showed that study skills predicted the academic performance of undergraduate students.

Table 16. Linear Regression analysis between study skills and academic performance of undergraduate students.

Model	R	R2	Adjusted R2	Std. Errors
1	.51	.26	.26	9.26

Table 16 shows the linear regression among university students' study skills and academic performance. The R-value = .51 showed a medium degree of correlation between undergraduate university students' study skills and academic performance. The R2 value (.264) indicated that study skills are a medium predictor of academic performance, as recommended by Sarstedt et al. (2019).

Discussion

This study set out to determine the levels of study skills among undergraduate university students, the relevance of differences in study skills across gender and location, and the relationship between academic performance and study skills among undergraduate university students. The study conclusions showed that a large number of students at Punjab's general public universities in Pakistan demonstrated high levels of study skills. This conclusion is consistent with the findings of studies conducted by Naemullah and Saeed (2009) and Iqbal et al. (2010), who found that the mostly students were at high levels of study skills. This study also revealed that female students of general public universities in Punjab, Pakistan, had higher study skills than male students. This finding is consistent with a study by Saleem et al. (2020) titled "Gender-based differences of study habits among university students," which found that female students have better study skills than male students. Furthermore, this study found that students in rural areas had higher levels of study skills than students in urban areas, confirming the results of studies by Agajelu and Anyaneche (2020) and Biswas (2016), "Influence of locality on students' study orientation at the secondary level," and "Survey of the Study Skill of Nigeria School Students (Case Study of Secondary Schools in Orumba South Local Government Area)." They found a significance difference in the study skills of both urban and rural students. Although both urban and rural students reported lower levels of study skills. Another finding of this study revealed that university student's academic performance and study skills had a moderately

positive relationship. This could be because the factors of study skills relate to the factors of academic performance, i.e., the study skills motivation and attitude are related to exam preparation, and it is also related to extracurricular activities. Similarly, the factors of time management, motivation, and attitude study skills are related to low procrastination, and the factors of time management, study aids, and note-taking study skills are related to academic self-regulation. Furthermore, in study skills factors and academic performance factors, students are at the same (high) level; the possible reason is that the factors of both scales match with each other, which is why they make a link with each other and have a moderate positive correlation. The other possible reason for this conclusion may be that due to fewer opportunities and more competition, students do extra work to improve their academic performance and achievement, and because students put extra effort into improving their academic performance, that is why their study skills improve. This conclusion confirms the findings of Hassanbeigi et al. (2011) study entitled "The Relationship between study Skills and Academic performance of University students." The finding was that study skills play an important role in improving students' academic performance. This conclusion is also in line with the findings of the study of Didarloo and Khalkhali (2014) entitled "Assessing study skills among a sample of University students: an Iranian survey" The finding was that study skills have a positive role in improving students' academic performance.

CONCLUSIONS AND RECOMMENDATIONS

The conclusion is drawn from the study that most of the undergraduate University students reported high-level study skills in all the factors, i.e., time management, concentration/memory, study aids/note taking, test strategies, information processing/critical thinking, motivation/attitude, selecting main ideas/self-testing/reading and writing study skills. Similarly overall study skills level of undergraduate female students was higher than that of male students. Moreover, the factor-wise comparison revealed that female students have higher study skill levels than male students in the factors of concentration/memory, study aids/note taking, test strategies, motivation/attitude, and writing, so it is recommended that Universities' Head of Departments and Teachers may train male students through seminars and workshops, to strengthen their study skills. Whereas, in the factors of study skills, time management, information processing/critical thinking, and selecting main ideas/self-testing/reading, male and female undergraduate university students were at an equivalent level. Moreover, the locality-wise comparison revealed that undergraduate rural students reflected higher level study skills than urban students. So urban students must improve their study skills by attending different seminars and workshops. dditionally, factor-wise, it was concluded that rural students reported higher study aids/note-taking study skills, test strategies study skills, and writing study skills. Whereas urban and rural students reported equivalent time management study skills, concentration/memory study skills, information processing/critical thinking study skills, motivation/attitude study skills, and selecting main ideas/self-testing/reading study skills. It is concluded that there was a moderate positive correlation between study skills and the academic performance of university students. Hence, study skills were a predictor of the academic performance of university students. So, it is also recommended that at the time of entry into university, undergraduate students'' study skills need to be assessed, and in addition, special training may be arranged to improve study skills to make pace with subject and program requirements.

REFERENCES

Agajelu, K. N., & Anyaneche, I. M. (2020). Survey of the study skill of nigeria school students (case study of secondary schools in Orumba South local government area). Nnadiebube Journal of Education in Africa, 5(3), 67-81.

Akpan, N. A., & Salome, E. (2015). Effect of study habit on academic achievement of agricultural science students in senior secondary schools in emohua local government area of rivers state, Nigeria. International Journal of Education and Evaluation, 1(8), 118-125.

Al'Omairi, T., & Al Balushi, H. (2015). The influence of paying attention in the classroom on students' academic achievement in terms of their comprehension and recall ability. In Proceedings of INTCESS15-2nd international conference on education and social sciences.2-4. https://files.osf.io/v1/resources/tk7dp/providers/osfstorage/59df5197594d9002b0c42e9b?.

Bennett, A. E., Power, T. J., Eiraldi, R. B., Leff, S. S., & Blum, N. J. (2009). Identifying learning problems in children evaluated for ADHD: the academic performance questionnaire. Pediatrics, 124(4), 633-639.

Bergey, B. W., Deacon, S. H., & Parrila, R. K. (2017). Metacognitive reading and study strategies and academic achievement of university students with and without a history of reading difficulties. Journal of Learning Disabilities, 50(1), 81-94. https://doi.org/10.1177/0022219415597020.

Biswas, S. K. (2016). Influence of locality on students' study orientation at secondary level. European Journal of Education Studies, 1(4), 86.

Bulent, A., Hakan, K., & Aydin, B. (2015). An analysis of undergraduates' study skills. Procedia-Social and Behavioural Sciences, 197, 1355-1362. https://files.eric.ed.gov/fulltext/EJ1052017.pdf.

Chan, J. Y., & Bauer, C. F. (2016). Learning and studying strategies used by general chemistry students with different affective characteristics. Chemistry Education Research and Practice, 17(4), 675-684. DOI: 10.1039/CRP00205B.

Chandi, J. R. (2014). Influence of study habits and demographic variables on academic performance: the case of bachelor of education (arts) students, University of Nairobi, Kenya, Doctoral dissertation, University of Nairobi.

Cicekci, M. A., & Sadik, F. (2019). Teachers' and students' opinions about students' attention problems during the Lesson. Journal of Education and Learning, 8(6), 15-30.

Cottrell, S. (2019). The study skills handbook. Bloomsbury Publishing. Retrieved online from the website: http://ils.school/files/High%20Students.pdf.

Cynthia. A. C. (2021). Study skills assessment questionnaire. Retrieved online from the website: https://www.uhcl.edu/counseling-services/resources/documents/handouts/study-skills-assessment-questionnaire.pdf.

Didarloo, A., & Khalkhali, H. R. (2014). Assessing study skills among a sample of university students: an Iranian survey. Journal of Educational Evaluation for Health Professions, 11(1), 8.

Ebele, U. F., & Olofu, P. A. (2017). Study habit and its impact on secondary school student's academic performance in Biology in the federal capital territory, Abuja. Educational Research and Reviews, 12(10), 583-588.

Gormley, M. J., Pinho, T., Pollack, B., Puzino, K., Franklin, M. K., Busch, C., & Anastopoulos, A. D. (2018). Impact of study skills and parent education on first-year GPA among college students with and without ADHD: A moderated mediation model. Journal of Attention Disorders, 22(4), 334-348. https://doi.org/10.1177/1087054715594422.

Hamzah, F., Mat, K. C., Bhagat, V., & Mahyiddin, N. S. (2018). Test anxiety and its impact on first-year University students and the overview of mind and body intervention to enhance coping skills in facing exams. Research Journal of Pharmacy and Technology, 11(6), 2220-2228.

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. Procedia-Social and Behavioural Sciences, 30, 1416-1424. https://doi.org/10.1016/j.sbspro.2011.10.276.

Hua, J. (2022). The role of study habits in the relationships among self-esteem, self-control, and academic performance: the case of online English classes. Journal of Language Teaching and Research, 13(3), 600-608. DOI: https://doi.org/10.17507/jltr.1303.16.

Iqbal, H. M., Sohail, S., & Shahzad, S. (2010). Learning and study strategies used by university students in Pakistan. Procedia-Social and Behavioural Sciences, 2(2), 4717-4721.

Kasantra, T., Ho, S. C., Tan, L. K., Tan, S. Y., & Tan, W. M. (2013). Analysis of factors influencing the academic performance of undergraduates in Kampar (Doctoral dissertation, UTAR). http://eprints.utar.edu.my/1016/1/AC-2013-0904962-1.pdf.

Khan, Z. N. (2016). Factors affecting study habits. Retrieved online from the website: https://files.eric.ed.gov/fulltext/ED566247.

Kumar, S. (2015). Study habits of undergraduate students. International Journal of Education and Information Studies, 5(1), 17-24.

Martha, K. (2009). Factors affecting academic performance of undergraduate students at Uganda Christian University. Unpub. Master of Arts in Educational Management Dissertation, Makerere University, Uganda.

Naemullah, M., & Saeed, M. (2009). Study-orientation of high and low academic achievers at secondary level in Pakistan. Educational Research and Reviews, 4(4), 204.

Oluwatimilehin, J.T.B. & Owoyele, J. W. (2012). Study habits and academic achievement in core subjects among Junior secondary school Students in Ondo State, Nigeria, Bulgarian Journal of Science and Education. http://bjsep.org/getfile.php?id=112.

Ouyang, L. (2008). Motivation, cultural values, learning processes, and learning in Chinese students (Doctoral dissertation). https://www.collectionscanada.gc.ca/obj/thesescanada/vol2/002/MR44507.pdf.

Rabia, M., Mubarak, N., Tallat, H., & Nasir, W. (2017). A study on habits and academic performance of students. International Journal of Asian Social Science, 7(10), 891-897. https://doi.org/10.18488/journal.1.2017.710.891.897.

Saleem, N., Shah, M. A. U. H., & Ali, A. (2020). Gender-based differences of study habits among university students. Journal of the Research Society of Pakistan, 57(1). http://pu.edu.pk/images/journal/history/PDF-FILES/53_57_1_20.pdf.

Sarstedt, M., Mooi, E., Sarstedt, M., & Mooi, E. (2019). Regression analysis. A Concise Guide to Market Research: The Process, Data, and Methods Using IBM SPSS Statistics, 209-256. https://www.researchgate.net/publication/300403700_Regression_Analysis.

Shahzadi, E., & Ahmad, Z. (2011). A study on academic performance of university students. Recent Advances in Statistics, 255.

Sherafat, R., & Venkatesha Murthy, C. G. (2016). A study of study habits and academic achievement among secondary and senior secondary school students of Mysore city. The International Journal of Indian Psychology, 3(2), 162-171.

Verma, A. N. J. U. (2016). A study of academic achievement among high school students about their study habits. International Journal of research in Humanities, Arts and literature, 4(3), 75-88.

Wilson, R., Joiner, K., & Abbasi, A. (2021). Improving students' performance with time management skills. Journal of University Teaching & Learning Practice, 18(4), 16.

Yulianti, S., Nuraeni, S., & Parmawati, A. (2019). Improving students' writing skills using Brains writing strategy. Journal of English Education, 2(5), 714-721.