

INTERACTIVE DEMONSTRATION IN CLASSROOM AND STUDENTS' LEARNING SKILLS AT TERTIARY LEVEL

Muniba Amjad*

BS Student, Department of Sociology, University of Gujrat, Pakistan
munibaamjad0@gmail.com

Muhammad Usman Iqbal

BS Student, Department of Sociology, University of Gujrat, Pakistan
usmaniqbal405@gmail.com

Umar Shabbir

BS Student, Department of Sociology, University of Gujrat, Pakistan
umarshabbir2020@gmail.com

ABSTRACT

This article has been designed to examine the interactive demonstration in the classroom and students' learning skills at the tertiary level. A quantitative study design has been opted to conduct a cross-sectional survey of university students. A total of 141 students have participated from the University of Gujrat through proportionate random sampling. A well-structured questionnaire has been developed consisting of different sections. A pilot testing has been done on 25 randomly selected students and the reliability of the instrument has been ranged from .701 to .905 Alpha value. The study findings reveal that interactive demonstration has favourable effects on students' learning skills at the tertiary level. The study has concluded that the predictor variables including frequency, duration, the intensity of social interaction, communication skills, professional and practical skills, intellectual skills development, and social interaction in the classroom are significantly contributing to developing students' learning skills at the tertiary level.

Keywords: Interactive Learning, Social Interaction, Learning Skills, Students, Classroom

INTRODUCTION

It has been observed that social interaction has been a very important component in normal routine life generally and in-classroom particularly (Shoaib, Rasool, & Anwar, 2021). In the same way, several studies have pointed out that social interaction in the classroom has favourable effects on students learning skills (Shoaib, Iqbal, & Tahira, 2021). Generally, social interactions are playing a very important role in communication skills, broad minding, intellectual skill development learning, and understanding of things (Shoaib, Fatima, & Jamil, 2021). Usually, social interaction is helping to improve confidence which is very good for learning (Shoaib, Ali, & Akbar, 2021). Students interact with other students and teachers more than one time in the classroom (Shoaib, Ali, Anwar, & Shaukat, 2021). Normally, students give proper attention to other students and teachers during class content discussion (Shoaib, Ali, Anwar, Rasool, et al., 2021). In the same fashion, students interact with other students and teachers for learning purposes (Shoaib, Ahmad, Ali, & Abdullah, 2021). It is worth stating that frequency, duration, focus, and intensity of the social interaction with teachers and other students in the classroom have favourable effects on students' learning (Shoaib, Abdullah, & Ali, 2021). Students built confidence and adopt proper terminology to present their topic well in front of other students in the classroom (Shoaib, 2021). They also develop a positive attitude by staying calm, focused, and showing respect to others (Anwar, Shoaib, & Mustafa, 2022). Besides, social interaction among students helps them to improve their thinking logically (Ali, Shoaib, & Abdullah, 2022). Furthermore, through social interaction students gain new perspectives and experiences that make their concepts clear (Shoaib & Ullah, 2021a). It helps to increase verbal communication and play important role in professional and practical skills (Shoaib & Ullah, 2021b). Classroom discussions have also affected the

* Corresponding Author

intellectual development of the students and made them clear to understand the concept under discussion.

The Study Context

Several studies have been conducted to highlight students' learning in class and social interaction (Shoaib, Anwar, & Mustafa, 2022; Shoaib & Ullah, 2021a; Ullah & Shoaib, 2021). In Pakistan, only a few types of research have been conducted to analyse the phenomenon (Shoaib, 2021; Shoaib, Abdullah, et al., 2021). It is a dire need to highlight the issue and measure the exact situation on the subject. It is worth stating here that social interaction has been very important for students learning in the classroom (Ali, Shoaib, & Abdullah, 2021; Ali, Shoaib, & Asad, 2021; Ali, Shoaib, & Syed, 2021). Thus, the role of the teacher has been very important in the process of interactive demonstration and debate (J. Ahmad, Ahmad, Shoaib, & Shaukat, 2021; J. Ahmad, Shoaib, & Shaukat, 2021; Shoaib, Abdullah, & Ali, 2020). Hence, this research minimizes the gap in the existing body of literature and provides insight into the issue. Therefore, this article has been aligned to evaluate the effects of social interaction on students' learning in the classroom.

REVIEW OF LITERATURE

Several studies have been conducted to analyze the students' learning following different domains including qualitative and quantitative analysis (Shoaib, Bilal, Iqbal, Hassan, & Sher, 2012; Shoaib, Khan, & Ashraf, 2011; Shoaib, Khan, & Khan, 2011). It is pertinent to mention here that social interaction has favorable effects on the frequency of social interaction, duration of social interaction, the focus of social interaction, and intensity of social interaction (Shoaib, Saeed, & Cheema, 2012; Shoaib & Ullah, 2019). Similarly, a huge body of literature has been available using the contents including social interaction in the classroom, students' learning, communication skills, professional and practical skills, intellectual skill development, and knowledge and development (Shoaib, Khan, & Shaukat, 2012; Shoaib, Munir, Masood, Ali, & Sher, 2012; Shoaib, Saeed, et al., 2012). The study findings of Podschuweit, Bernholt, and Brückmann (2016) pointed out that students interact with their teachers on daily basis to learn different skills. The key findings of Shoaib, Usmani, and Abdullah (2023) depict that interaction between teachers and students is more than interaction among students. Similarly, the main argument of Shoaib, Rasool, Anwar, and Ali (2023) pointed out that discussion of class material helps in interaction and is useful for studies. In addition, the analysis Shoaib, Mustafa, and Hussain (2023) described that students get involved in class discussions. Likewise, the study of Shoaib (2023) commissioned that the appreciation of the teacher is helpful for students to interact with teachers and students in the classroom. On the other side, the statistical analysis of Kausar, Mumta, and Shoaib (2023) illustrated that students get interacted more than one time in a class.

The study findings of Ullah, Shoaib, Ali, and Ullah (2022) pointed out that social interaction in the classroom improves the communication skills of students. In addition, the analysis of Shoaib, Usmani, and Ali (2022) described that professional and practical skills get enhanced through interaction among students in the classroom. Likewise, the study by Shoaib, Tariq, Shahzadi, and Ali (2022) commissioned that interaction among students helps in the development of their intellectual skills. On the other side, the statistical analysis of Shoaib, Mustafa, and Hussain (2022) illustrated that knowledge and the power of understanding increased through social interaction. Shoaib, Mehmood, and Butt (2022) argue in the favour of that students have the confidence to talk in front of others and however, teachers leave job. The study findings of Shoaib, Anwar, and Rasool (2022) pointed out that students also use their body language to communicate. On the other side, the statistical analysis of Spencer (1998) illustrated that students try their best to present the topic of discussion in the class. Similarly, the main argument of Nkonyane and Wyk (2015) pointed out that students listen carefully in the classroom. In addition, the analysis of de Roos, van der Heijden, and Gorter (2010) described that students use proper words to explain their point of view in the class. Likewise, the study of Beaumont, Rowe, and Mikhaylov (2012) commissioned that students also use different signs and symbols to communicate in the class. The main argument of Colley (2003) pointed out that students adopt a positive attitude in the classroom. In addition, the analysis of Kestell (2008) described that students stay calm during class discussions. Likewise, the study of Kausar, Manaf, and Shoaib (2022) commissioned that students have proper time management to meet the deadlines for assignments given to them. On the other side, the statistical analysis of Ghumman and Shoaib (2013) illustrated that students stay focused on the contents during class. By the same token, the result of Smeby and Heggen (2014) highlighted that students

maintain eye contact with their teachers. Similarly, Shoaib, Ali, and Akbar (2021) argue in the favour of showing respect towards others in the class during practical work.

The study findings of Lakkala et al. (2017) pointed out that the verbal comprehension capacity of social work students increased by interacting in the classroom. In addition, the analysis of Shoaib, Ali, and Naseer (2021) described that students think about different things logically. Likewise, the study of Shoaib, Ali, Anwar, and Shaukat (2021) commissioned that students develop a problem-solving attitude in the classroom. On the other side, the statistical analysis of Mistry (2021) illustrated that students remember the accurate details of lectures delivered during class which enhance their ability to learn employability skills. Similarly, the main argument of Shoaib and Abdullah (2021) pointed out that students analyse things intellectually. By the same token, the result of Mariam, Anwar, Shoaib, and Rasool (2021) shows that nursing students enhance the capacity for competition among themselves by interacting in the classroom. However, the study of Shiferaw (2022) argues in the favour of that civil engineering students gain new perspectives about the things they already know. The study findings of Naseer, Shoaib, Ali, and Bilal (2021) pointed out that the students experience different new things while interacting in the classroom. Likewise, the study of Korpi, Piirainen, and Peltokallio (2017) commissioned that the students can enhance their judgment quality through interaction. On the other side, the statistical analysis of Burke-Smalley and Wheatley (2015) illustrated that students try to personally interpret different contents discussed in the class.

THE DATA AND METHODS

Study Design: A quantitative study design has been used to conduct this study. The rationale to select this design has been based on the nature of the study, variables, hypothesis, and main important research objectives. It is important to mention here that this explanatory research.

Population and Sampling Unit: The population of this study has been based on the students of the BS (4 Years) program studying at Hafiz Hayat Campus, University of Gujrat. Similarly, the sampling unit has been specific to the 5th and 7th semesters of the Faculty of Social Sciences at the university.

Sampling Procedures and Sample Size: The sample size has been calculated by using Yamane (1967) sample size calculation formula;

$$n = \frac{N}{1 + N(e)^2}$$

$$n = \frac{257}{1 + 257(0.05)^2}$$

$$= 156.231$$

The calculated sample size is 156 for this study. However, 141 students participated to fill out the questionnaire.

Technique and Tool of Data Collection: A cross-sectional survey has been conducted and a well-structured questionnaire has been developed to measure the response of the students.

Scale Development and Pilot Testing:

An attitudinal scale of (dis)agreement has been developed to measure the response of the students. A pilot testing has been done on 25 randomly selected students from the university. Total 49 items

Table No. 1 Reliability Statistical Test of Variables

Sr. No.	Variables	Code	Item No.	Cronbach's Alpha value
1	Frequency of Social Interaction	FOSI1	6	.756
2	Duration of Social Interaction	DOSI	6	.709
3	The focus of Social Interaction	FOSI2	7	.720
4	The intensity of Social Interaction	IOSI	6	.727
5	Communication Skills	COSK	6	.719
6	Professional and Practical Skills	PAPS	6	.752
7	Intellectual Skill Development	INSD	6	.701
8	Knowledge and Understanding	KNAU	6	.782
9	Social Interaction in Classroom	SIIC	25	.806
10	Student's Learning	STLE	24	.862
	Overall		49	.905

Data Collection and Data Analysis: Final tool of data collection has been used to collect data from the sampled students at Hafiz Hayat Campus of the University of Gujrat. Descriptive statistics, correlation, and an OLS multiple regression analysis have been employed to conclude.

THE RESULTS AND DISCUSSION

Table 2 elaborates the descriptive statistics of the variable. Data indicates that the range of age is 10 years along with 18 minimum, 28 maximum, 21.91 mean value, 1.447 standard deviations, and 2.093 variances. Similarly, the analysis also asserts that family size has a range of 14, 2 minimum, 16 maximum, 6.55 mean value, 2.401 standard deviation, and 5.763 variances. However, the descriptive statistics of the variable frequency of social interaction have the range value of 12, 10 minimum, 22 maximum, 16.99 mean value, 2.616 standard deviations, and 6.843 variances. It is worth stating here that the duration of social interaction has the range value of 13, 10 minimum, 23 maximum, 17.34 mean value, 2.722 standard deviations, and 7.412 variances. Primary data analysis in the table also indicates the descriptive statistics of the variables including the focus of social interaction, the intensity of social interaction, communication skills, professional and practical skills, intellectual skill development, knowledge and understanding, and social interaction in the classroom, and students' learning.

Table No. 2 Descriptive Statistics of the Variables (n=141)

Variables	Ran.	Min.	Max.	Mean	Std. Dev.	Var.
Age (Years)	10	18	28	20.91	1.447	2.093
Family Size (No.)	14	2	16	6.55	2.401	5.763
Frequency of Social Interaction	12	10	22	16.99	2.616	6.843
Duration of Social Interaction	13	10	23	17.34	2.722	7.412
The focus of Social Interaction	16	12	28	20.61	3.026	9.154
The intensity of Social Interaction	14	10	24	17.69	2.605	6.788
Communication Skills	16	8	24	18.20	2.533	6.417
Professional and Practical Skills	35	13	48	19.40	3.447	11.884
Intellectual Skill Development	13	11	24	18.01	2.344	5.493
Knowledge and Understanding	13	11	24	18.64	2.418	5.847
Social Interaction in Classroom	39	53	92	72.62	8.291	68.736
Students' Learning	56	50	106	74.24	8.095	65.527

Table 3 describes the Pearson correlation between variables. The analysis reveals that there is a moderate positive correlation of frequency of social interaction with the duration of social interaction ($r=.368$), the focus of social interaction ($r=.431$) intensity of social interaction ($r=.343$), and knowledge and understanding ($r=.416$) however the positive weak relationship of frequency of social interaction has been mentioned in the table with communication skills ($r=.323$), professional and practical skills ($r=.271$) and intellectual and skill development ($r=.115$). Likewise, the analysis reveals that there is a moderate positive correlation between the duration of social interaction with the focus of social interaction ($r=.432$), and the intensity of social interaction ($r=.472$) communication skills ($r=.446$), and knowledge and understanding ($r=.427$). However, the positive weak relationship between duration of social interaction has been mentioned in the table with professional and practical skills ($r=.307$) and intellectual and skill development ($r=.313$). It has been noted that the study findings are in favour of the interlinked study findings of multiple research in several countries (J. Ahmad, A. Ahmad, et al., 2021; Naseer, Shoaib, Ali, & Ahmad, 2021).

In the same way, the analysis reveals that there is a moderate positive correlation of focus of social interaction with the intensity of social interaction ($r=.507$), communication skills ($r=.447$), and Intellectual skill development ($r=.353$). However, the positive weak relationship of focus on social interaction has been mentioned in the table with professional and practical skills ($r=.318$) and

knowledge and understanding ($r=.305$). In the same way, the analysis reveals that there is a moderate positive correlation between the intensity of social interaction with communication skills ($r=.483$), professional and practical skills ($r=.345$), and intellectual skill development ($r=.404$) and knowledge and understanding ($r=.470$). Similarly, the analysis reveals that there is a moderate positive correlation between communication skills with intellectual skill development ($r=.513$), and knowledge and understanding ($r=.523$). The results are aligned with the study findings of different scholars in the field of sociology of education, education, and similar interlinked disciplines (A. Ahmad, Shoaib, & Abdullah, 2021; Shoaib & Abdullah, 2020).

However, the positive weak relationship between communication skills has been mentioned in the table with professional and practical skills ($r=.316$). In the same fashion, analysis reveals that there is a moderate positive correlation between frequency of social interaction with a duration of social interaction ($r=.368$), the focus of social interaction ($r=.431$) intensity of social interaction ($r=.343$), and knowledge and understanding ($r=.416$). However, the positive weak relationship of frequency of social interaction has been mentioned in the table with communication skills ($r=.323$), professional and practical skills ($r=.271$), and intellectual skill development ($r=.115$). Likewise, the analysis reveals that there is a moderate positive correlation between professional and practical skills with knowledge and understanding ($r=.456$). However, the positive weak relationship between professional and practical skills has been mentioned in the table with intellectual skill development ($r=.292$). In the same way, the analysis reveals that there is a moderate positive correlation between intellectual skill development with knowledge and understanding ($r=.489$). The results are linked with the findings of several Studies (Shoaib, 2021; Shoaib, Khan, et al., 2012; Shoaib, Khan, & Abid, 2011; Shoaib, Khan, & Ashraf, 2011; Shoaib, Khan, & Khan, 2011; Shoaib, Munir, et al., 2012).

Table No. 3 Pearson Correlation Statistical Analysis between Variables

Var.	FOSI1	DOSI	FOSI2	IOSI	COSK	PAPS	INSD	KNAU
FOSI1	1	.368**	.431**	.343**	.323**	.271**	.115	.416**
DOSI		1	.432**	.472**	.446**	.307**	.313**	.427**
FOSI2			1	.507**	.447**	.318**	.353**	.305**
IOSI				1	.483**	.345**	.404**	.470**
COSK					1	.316**	.513**	.523**
PAPS						1	.292**	.456**
INSD							1	.489**
KNAU								1

Table 4 points out the multiple regression analysis predicting students' learning, the predictor's variables as mentioned in the table are frequency of social interaction, duration of social interaction, the intensity of social interaction, communication skills, professional and practical skills, intellectual skill development, and social interaction in the classroom. It is pertinent to mention that all the variables in the table are significantly predicting the students' learning. The calculated value of p also confirms the

results. Hence, social interaction in the classroom has significant effects on students' learning at university. The study findings are interlinked with the study of Mitchard et al. (2021) on the flipped classroom and practical learning of the students. Similarly, the result of the study by Podschuweit et al. (2016) argues that interaction in the classroom enhances the skills of students. However, the study of Zhao, Lin, Sun, Zheng, and Yin (2018) links the students' learning with their classroom engagement. Likewise, the argument of Cai, Niu, Wen, and Li (2021) is also in support of student-teacher interaction in the classroom and its link with learning positively. Summing up the argument that interactive demonstration in the classroom has favourable effects on students learning at the university (Abdullah & Shoaib, 2021; A. Ahmad, Ahmad, & Shoaib, 2016; Shoaib, Latif, & Usmani, 2013; Shoaib, Shaikat, Khan, & Saeed, 2013).

Table No.4 An OLS Multiple Regression Analysis Predicting Students' Learning (Parameter Estimates and Standard Errors)

Predictors	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
Frequency of Social Interaction	.360	.101	.116	3.562	.001
Duration of Social Interaction	.246	.097	.083	2.546	.012
Intensity of Social Interaction	.242	.108	.078	2.245	.026
Communication Skills	1.174	.076	.367	15.359	.000
Professional and Practical Skills	1.155	.047	.492	24.385	.000
Intellectual Skill Development	1.281	.076	.371	16.750	.000
Social Interaction in Classroom	.133	.062	.137	2.145	.034
(Constant)	1.543	1.538		1.003	.318

R=.978, R Square=.957, Adjusted R Square=.954, Sum of Squares=8776.038, df=8, F=364.047, Sig.=.000, n=141

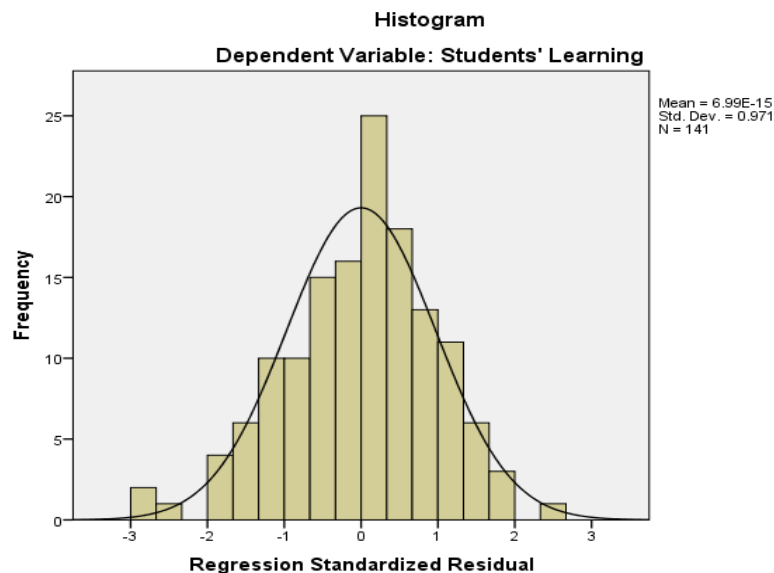


Figure 1: Histogram Showing Students' Learning

CONCLUSION

This study concludes that social interaction in the classroom has favourable significant effects on students' learning. Interactive discussion in the classroom affects the learning of the students positively. The study findings indicate that social interaction is a very important factor in the classroom to engage the students in the process of learning academic activities. Similarly, teachers play a vital role to develop

the skills of learning through healthy discussion, question-answer sessions, and debates between students in the classroom to enhance their communication skills, professional and practical skills, intellectual skill development, and knowledge and understanding. Hence, this study concludes that healthy social interaction in the classroom has favourable effects on students learning at the university level.

Limitations of the study

This article has been limited to quantitative study design and has been conducted in one university. Similarly, only a few variables have been extracted from a review of literature on the subject.

Future implication

Future research may be conducted by using Mixed Method Research (MMR) approach to examine the similar nature of the study. Further, different variables and themes may be used to analyse the phenomenon of social interaction in the classroom and students' learning. Advance statistical analysis may be applied to draw a conclusion and the best utilization of available data.

REFERENCES

- Abdullah, F., & Shoaib, M. (2021). Psychosocial impacts of COVID-19 pandemic: a cross-sectional study of Mirpur, Pakistan. *International Review of Sociology*, 31(3), 1-17.
- Ahmad, A., Ahmad, F., & Shoaib, M. (2016). Democratic Attitude and Respect of Humanity in Pakistan: The Role of Mass Media Attitude and Family Values. *The Pakistan Journal of Social Issues*, 7, 114-121.
- Ahmad, A., Shoaib, M., & Abdullah, F. (2021). COVID-19 black swan and personal protective equipment (PPE) in Pakistan. *Health Education*, 122(4), 365-373.
- Ahmad, J., Ahmad, A., Shoaib, M., & Shaukat, B. (2021). Public Library Online Information Resources to Library Patrons during COVID-19 Pandemic: A Case of Higher Education Institutions. *Library Philosophy and Practice*, 1-14.
- Ahmad, J., Shoaib, M., & Shaukat, B. (2021). Academic Library Resources and Services at Higher Education Institutions during COVID-19 Pandemic: A Case of Students' Satisfaction. *Library Philosophy and Practice*, 1-17.
- Ali, N., Shoaib, M., & Abdullah, F. (2021). Trends of Research Visualization of Digital Collections and Resources in Academic Libraries from 2001 to 2020: A Bibliometric Analysis. *Library Philosophy and Practice*, 1-25.
- Ali, N., Shoaib, M., & Abdullah, F. (2022). Information literacy and research support services in academic libraries: A bibliometric analysis from 2001 to 2020. *Journal of Information Science*, 1-14. doi:<https://doi.org/10.1177/01655515211068169>
- Ali, N., Shoaib, M., & Asad, D. I. H. (2021). Research is a Scientific Capital: The Role of University Libraries in Higher Education Institutions. *Library Philosophy and Practice*, 1-18.
- Ali, N., Shoaib, M., & Syed, K. (2021). Steady ship: Digital, online, and e-libraries (1971–2020). *Journal of Information Science*, 1-15.
- Anwar, B., Shoaib, M., & Mustafa, R.-e.-. (2022). Factors Influencing Students' Willingness to Use Academic Library after COVID-19 Lockdown. *International Information & Library Review*, 35(2), 136-142.
- Beaumont, E. S., Rowe, G., & Mikhaylov, N. S. (2012). Promoting Interactive Learning: A Classroom Exercise to Explore Foraging Strategies. *Bioscience Education*, 19(1), 1-6. doi:10.11120/beej.2012.19000008
- Burke-Smalley, L. A., & Wheatley, K. (2015). Mission-Centric Learning: Developing Students' Workplace Readiness Skills. *Organization Management Journal*, 12(1), 34-44. doi:10.1080/15416518.2015.1004965
- Cai, S., Niu, X., Wen, Y., & Li, J. (2021). Interaction analysis of teachers and students in inquiry class learning based on augmented reality by iFIAS and LSA. *Interactive Learning Environments*, 1-17. doi:10.1080/10494820.2021.2012808
- Colley, S. M. (2003). Lessons for the profession: Teaching archaeological practical work skills to university students. *Australian Archaeology*, 57(1), 90-97. doi:10.1080/03122417.2003.11681766
- de Roos, S. A., van der Heijden, M. H. R. M. A., & Gorter, R. J. (2010). Professional development schools and early childhood education: interactive skills of students, playgroup and

- kindergarten teachers. *European Early Childhood Education Research Journal*, 18(1), 15-28. doi:10.1080/13502930903520017
- Ghumman, A., & Shoaib, M. (2013). Personality traits linked with irrational beliefs: a case of adults, Gujrat-Pakistan. *Middle-East Journal of Scientific Research*, 16(4), 496-501.
- Kausar, N., Manaf, A., & Shoaib, M. (2022). Suicidal Ideation among Adolescents: A Case of Bullying Victimization and Emotional Intelligence. *OMEGA - Journal of Death and Dying*, 1-14. doi:10.1177/00302228221120123
- Kausar, N., Mumta, S., & Shoaib, M. (2023). Lived Experiences of Individuals with Gender Dysphoria: A Qualitative Analysis. *Sexuality and Culture*, 1-18.
- Kestell, C. D. (2008). The Green Petrol Heads: Developing Practical Professional Engineering Skills that Generate Interest in Sustainable Engineering. *Australasian Journal of Engineering Education*, 14(2), 105-114. doi:10.1080/22054952.2008.11464015
- Korpi, H., Piirainen, A., & Peltokallio, L. (2017). Practical work in physiotherapy students' professional development. *Reflective Practice*, 18(6), 821-836. doi:10.1080/14623943.2017.1361920
- Lakkala, S., Turunen, T. A., Kangas, H., Pulju, M., Kuukasjärvi, U., & Autti, H. (2017). Learning inter-professional teamwork during university studies: a case study of student-teachers' and social work students' shared professional experiences. *Journal of Education for Teaching*, 43(4), 414-426. doi:10.1080/02607476.2017.1342051
- Mariam, S., Anwar, B., Shoaib, M., & Rasool, S. (2021). Literacy and Numeracy Drive: An Evaluation of Class Three English Textbook of Punjab. *Journal of Critical Reviews*, 8(2), 938-946.
- Mistry, U. (2021). Enhancing students' employability skills awareness through the accounting professional body on an undergraduate accounting degree. *Accounting Education*, 30(6), 578-600. doi:10.1080/09639284.2021.1950016
- Mitchard, L., Catterall, A., Brown, S., Gray, L., Squire, L., O'Shaughnessy, S., & Baillie, S. (2021). Flipped classroom resources to help students prepare for animal handling and clinical skills practicals. *Veterinary Nursing Journal*, 36(9), 285-287. doi:10.1080/17415349.2021.1944831
- Naseer, A., Shoaib, M., Ali, N., & Ahmad, I. (2021). Research Visualization of Different Treatment Modalities to Treat COVID-19 Infection: Bibliometric Analysis of PubMed Database. *Library Philosophy and Practice*, 5891, 1-17.
- Naseer, A., Shoaib, M., Ali, N., & Bilal, M. (2021). Trend of Research Visualization of COVID-19 Complications in PubMed Database Using Scientometric Analysis from 2020 to March 20, 2021. *Library Philosophy and Practice*, 5731, 1-17.
- Nkonyane, V. A., & Wyk, M. M. v. (2015). Post Graduate Certificate of Education Student Teachers' Views of Economics Games as an Interactive Classroom Technique. *International Journal of Educational Sciences*, 8(2), 427-434. doi:10.1080/09751122.2015.11890264
- Podschweit, S., Bernholt, S., & Brückmann, M. (2016). Classroom learning and achievement: how the complexity of classroom interaction impacts students' learning. *Research in Science & Technological Education*, 34(2), 142-163. doi:10.1080/02635143.2015.1092955
- Shiferaw, H. M. (2022). Evaluating practical teaching approach in civil engineering training among public universities of Ethiopia: students' view and opinion. *African Journal of Science, Technology, Innovation and Development*, 14(1), 216-224. doi:10.1080/20421338.2020.1821947
- Shoaib, M. (2021). *Sociological Analysis of Teachers Perspectives on Students Academic Performance in Higher Education in the Punjab*. (PhD Thesis). International Islamic University Islamabad, Central Library.
- Shoaib, M. (2023, September 22). Galvanising Bourdieu's typology with Pakistani education and social class. *The Nation*, p. 4.
- Shoaib, M., & Abdullah, F. (2020). Risk Reduction of COVID-19 Pandemic in Pakistan. *Social Work in Public Health*, 35(7), 557-568. doi:10.1080/19371918.2020.1806172
- Shoaib, M., & Abdullah, F. (2021). COVID-19 backlash: psycho-social impacts of outbreak in Pakistan. *Health Education*, 121(3), 265-274.
- Shoaib, M., Abdullah, F., & Ali, N. (2020). Library Resources and Research Environment in Higher Education Institutions: Students' Satisfaction. *Library Philosophy and Practice*, 1-18.

- Shoaib, M., Abdullah, F., & Ali, N. (2021). A Research Visualization of Academic Learning Skills among Students in Higher Education Institutions: A Bibliometric Evidence from 1981 to 2020. *Library Philosophy and Practice*, 5579, 1-34.
- Shoaib, M., Ahmad, A., Ali, N., & Abdullah, F. (2021). Trend of Research Visualization of Learning, Classroom, and Class Participation in Higher Education Institutions: A Bibliometric Analysis from 2001 to 2020. *Library Philosophy and Practice*, 5743, 1-26.
- Shoaib, M., Ali, N., Anwar, B., Rasool, S., Mustafa, R.-e., & Zici, S. (2021). Research Visualization on Teaching, Language, Learning of English and Higher Education Institutions from 2011 to 2020: A Bibliometric Evidences *Library Philosophy and Practice*, 5677, 1-27.
- Shoaib, M., Ali, N., Anwar, B., & Shaukat, B. (2021). Plotting the Literature on Learning Outcomes and Academic Performance in Higher Education from 2001 to 2020: A Scientometric Analysis. *Library Philosophy and Practice*, 5919, 1-24.
- Shoaib, M., Ali, N., & Naseer, A. (2021). Plotting the Literature on Precautionary Measures of COVID-19: A Scientometric Analysis of Web of Science. *Library Philosophy and Practice*, 5899, 1-20.
- Shoaib, M., Ali, R., & Akbar, A. (2021). Library Services and Facilities in Higher Education Institutions in Pakistan: Satisfaction of Patrons. *Library Philosophy and Practice*, 1-19.
- Shoaib, M., Anwar, B., & Mustafa, R.-E.-. (2022). Moral Literacy and Islamic Values among Students at Tertiary Level. *Al-Āfāq Islamic Research Journal*, 2(2), 1-11.
- Shoaib, M., Anwar, B., & Rasool, S. (2022). Factors Affecting EFL Teaching Skills at Higher Education Institutions in Pakistan: An Analysis of Teachers' Perspective. *Pakistan Journal of Language Studies*, 15(1), 1-15.
- Shoaib, M., Bilal, M. Z., Iqbal, A., Hassan, S. A., & Sher, F. (2012). Mass media and consumer purchasing behaviour: A case study of Lahore, Pakistan. *Academic Research International*, 2(2), 641.
- Shoaib, M., Fatima, U., & Jamil, R. (2021). Academic Library and Students' Learning at University Level: Nothing is Pleasanter than Exploring a Library. *Library Philosophy and Practice*, 1-19.
- Shoaib, M., Iqbal, S., & Tahira, G. (2021). Digitalization of Academic Libraries in Higher Education Institutions during COVID-19 Pandemic. *Library Philosophy and Practice*, 1-15.
- Shoaib, M., Khan, M. N. A., & Shaukat, B. (2012). Democratic attitude and concept of justice: A case of Lahroe-Pakistan. *World Applied Sciences Journal*, 20(3), 382-387.
- Shoaib, M., Khan, S., & Abid, S. (2011). Motivational Factors and Satisfaction Levels of Infertile Couples towards Spiritual Healing in Pakistan. *Middle-East Journal of Scientific Research*, 10(2), 233-238.
- Shoaib, M., Khan, S., & Ashraf, A. (2011). Occupational Risk Factors Associated with Reproductive Health of Working Women: A Case Study of University of Gujrat. *Academic Research International*, 1(2), 292.
- Shoaib, M., Khan, S., & Khan, M. H. (2011). Family support and health status of elderly people: A case study of district gujrat, Pakistan. *Middle-East Journal of Scientific Research*, 10(4), 519-525.
- Shoaib, M., Latif, B., & Usmani, F. (2013). Economic contribution changes the decision-making of working women; A case of Bhimben District-AJK. *Middle-East Journal of Scientific Research*, 16(5), 602-606.
- Shoaib, M., Mehmood, S., & Butt, S. M. (2022). Intention to Leave a Job among Public Sector University Teachers: A Case of Work Environment. *Pakistan Journal of Social Research*, 4(2), 370-383.
- Shoaib, M., Munir, A., Masood, M., Ali, Q., & Sher, F. (2012). Education as a Source of Child Health Care Practices: A Case of Mothers in Tehsil Kharian, Gujrat-Pakistan. *World Applied Sciences Journal*, 19(5), 754-761.
- Shoaib, M., Mustafa, R.-E.-., & Hussain, K. G. (2022). Revisiting Classroom Environment and Academic Performance of the Students in Higher Education Institutions. *Pakistan Journal of Social Research*, 4(3), 969-986.
- Shoaib, M., Mustafa, R.-E.-., & Hussain, K. G. (2023). Citing the Empirical Shreds of Electronic Evidence on Pedagogical Skills Employing Bibliometric Analysis from 2001- 2020. *Pakistan Journal of Social Research*, 5(2), 1050-1062.

- Shoaib, M., Rasool, D., & Anwar, D. (2021). Evaluating Research Support Facilities to University Students during COVID-19. *Library Philosophy and Practice*, 4953(1), 1-18.
- Shoaib, M., Rasool, S., Anwar, B., & Ali, R. (2023). Academic library resources and research support services to English teachers in higher education institutions. *Journal of Electronic Resources Librarianship*, 35(1), 17-27.
- Shoaib, M., Saeed, Y., & Cheema, S. N. (2012). Education and Women's Empowerment at Household Level: A Case Study of Women in Rural Chiniot, Pakistan. *Academic Research International*, 2(1), 519-526.
- Shoaib, M., Shaukat, B., Khan, M. N. A., & Saeed, M. (2013). Family Environment and the Concept of Tolerance among Family Members: A Case of Faisalabad-Pakistan. *World Applied Sciences Journal*, 23(1), 123-128.
- Shoaib, M., Tariq, M., Shahzadi, S., & Ali, M. (2022). Role of Academic Libraries in Online Academic Activities during COVID-19 Outbreak at Tertiary Level: A Library is a Thought in Cold Storage. *Library Philosophy and Practice*, 1-19.
- Shoaib, M., & Ullah, H. (2019). Female and Male Students' Educational Performance in Tertiary Education in the Punjab, Pakistan. *Pakistan Journal of Social Issues*, X(1), 83-100.
- Shoaib, M., & Ullah, H. (2021a). Classroom Environment, Teacher, and Girl Students' Learning Skills. *Education and Urban Society*, 1-25. doi:10.1177/00131245211001908
- Shoaib, M., & Ullah, H. (2021b). Teachers' perspectives on factors of female students' outperformance and male students' underperformance in higher education. *International Journal of Educational Management*, 35(3), 684-699. doi:10.1108/IJEM-05-2020-0261
- Shoaib, M., Usmani, F., & Abdullah, F. (2023). Plotting The Literature On Social Work Education From 1971-2020: A Scientometric Analysis. *Pakistan Journal of Social Research*, 5(2), 1347-1360.
- Shoaib, M., Usmani, F., & Ali, N. (2022). Citing the Empirical Shreds on Social Welfare and Methods of Social Work Employing Bibliometric Analysis From 1971 to 2020. *Pakistan Journal of Social Research*, 4(3), 1113-1133.
- Smeby, J.-C., & Heggen, K. (2014). Coherence and the development of professional knowledge and skills. *Journal of Education and Work*, 27(1), 71-91. doi:10.1080/13639080.2012.718749
- Spencer, L. (1998). Motivating Students to Learn through the Interactive Learning Model. *Journal of Health Education*, 29(5), 277-281. doi:10.1080/10556699.1998.10603352
- Ullah, H., & Shoaib, M. (2021). Trend of Research Visualization of Sociology of Education from 2001 to 2020: A Bibliometric Analysis. *Library Philosophy and Practice*, 1-24.
- Ullah, H., Shoaib, M., Ali, N., & Ullah, R. (2022). Digital Research Support Services during COVID-19 Pandemic: An Analysis of the Higher Education Institutions. *Journal of Electronic Resources Librarianship*, 34(2), 121-134.
- Yamane, T. (1967). An Introductory Analysis of Statistics. In: New York: Harper and Row.
- Zhao, J., Lin, L., Sun, J., Zheng, X., & Yin, J. (2018). Students' engagement in a science classroom: Does knowledge diversity matter? *The Journal of Educational Research*, 111(6), 756-763. doi:10.1080/00220671.2018.1427036

Interactive demonstration in classroom and Students' Learning Skills at Tertiary Level

(Questionnaire)

A) Identification of Student

i) Semester _____ ii) Subject _____

B) Socio-economic Characteristics of the Students

- Q.1 Gender a) Male b) Female
 Q.2 Age (in completed years) _____
 Q.3 Family occupation _____
 Q.4 Family monthly income (PKR) _____
 Q.5 Family size _____
 Q.6 Family type a) Joint Family b) Nuclear Family c) Extended Family
 Q.7 Residential Area a) Rural b) Urban

C) Social Interaction in Classroom

SD = Strongly Disagree, D = Disagree, A = Agree, SA = Strongly Agree

Sr. No.	Statement	SD	D	A	SA
C.1	Frequency of Social Interaction				
I	You interact with teacher daily	1	2	3	4
Ii	You interact with the teachers of other department	1	2	3	4
iii	You interact frequently with students	1	2	3	4
Iv	You interact with students instead of teachers	1	2	3	4
V	You interact with teacher instead of students	1	2	3	4
vi	You interact more than one time in a class	1	2	3	4
C.2	Duration of Social Interaction				
I	You prefer to interact with teachers in classroom more	1	2	3	4
Ii	You prefer to interact with friends more in classroom	1	2	3	4
iii	You prefer to interact with other class fellows more	1	2	3	4
Iv	You take higher time for question-answer session	1	2	3	4
V	You raise questions at least one time	1	2	3	4
vi	Your teacher appreciates your interaction duration	1	2	3	4
C.3	Focus of Social Interaction				
I	Your interaction with teachers is focused	1	2	3	4
Ii	Your interaction with students is focused	1	2	3	4
iii	You discuss class material to the point	1	2	3	4
Iv	You discuss lecture in front of others	1	2	3	4
V	You discuss lecture in a complete way	1	2	3	4
vi	You raise questions in the classroom	1	2	3	4
vii	You do relevant exemplification in the classroom	1	2	3	4
C.4	Intensity of Social Interaction				
I	You discuss course content with teachers mostly	1	2	3	4
Ii	You oftenly discuss course content	1	2	3	4
iii	You oftenly discuss course contents with others	1	2	3	4
Iv	You discuss the examples related to course	1	2	3	4
V	You do online searching on the topics	1	2	3	4
vi	You oftenly involve in practical discussions	1	2	3	4

D) Students' Learning

Sr. No.	Statements	SD	D	A	SA
D.1	Communication Skills				
i	You have confidence to talk in front of others	1	2	3	4

ii	You use body language to communicate	1	2	3	4
iii	You present topic well in classroom	1	2	3	4
iv	You listen carefully in classroom	1	2	3	4
v	You use proper terminology in the classroom	1	2	3	4
vi	You use symbols to communicate with others	1	2	3	4
D.2	Professional and Practical Skills				
i	You have positive attitude in the classroom	1	2	3	4
ii	You stay calm during discussions	1	2	3	4
iii	You have effective time management to meet the deadline	1	2	3	4
iv	You stay focused on the contents	1	2	3	4
v	You maintain eye contact with teacher	1	2	3	4
vi	You show respect others in the classroom	1	2	3	4
D.3	Intellectual Skill Development				
i	Your verbal comprehension capacity increased	1	2	3	4
ii	You think about things in a logical way	1	2	3	4
iii	You develop problem solving attitude	1	2	3	4
iv	You remember accurate details of lectures	1	2	3	4
v	You analyze things intellectually	1	2	3	4
vi	You enhance the capacity of competing	1	2	3	4
D.4	Knowledge and Understanding				
i	You gain new perspectives about what you know	1	2	3	4
ii	You experience new things in the classroom	1	2	3	4
iii	You try to make concepts clear	1	2	3	4
iv	You get the answers of W's questions	1	2	3	4
v	You enhance judgement quality through interaction	1	2	3	4
vi	You personally interpret different contents	1	2	3	4

Suggestion to improve social interaction in classroom

Suggestion to improve students' learning

Date _____ Name (Optional)