INTERNATIONAL JOURNAL OF SOCIAL SCIENCES BULLETIN
ISSN: (E) 3007-1917 (P) 3007-1909
Volume 3, Issue 6, 2025

GENDER DISPARITY IN LEARNING ACHIEVEMENTS OF THE STUDENTS IN HIGHER EDUCATION IN PAKISTAN

Muhammad Shoaib[*1], Syed Rahat Ali[2], Tabassum Iqbal[3], Farooq Abdullah[4]

[*1]*Associate Professor, Department of Sociology, University of Gujrat, Gujrat, Pakistan*
[2]*M. Phil Student, Department of Sociology, University of Gujrat, Gujrat, Pakistan*
[3]*Lecturer, Department of English, University of Gujrat, Gujrat, Pakistan*
[4]*Lecturer, Department of Sociology, Mirpur University of Science & Technology, Mirpur, AJ&K, Pakistan*

[*1]shoaibsoc@uog.edu.pk, [2]rahatasoc@gmail.com, [3]tabassum.iqbal@uog.edu.pk, [4]farooq.abdullah@must.edu.pk

Corresponding Author: *
Muhammad Shoaib

DOI: https://doi.org/10.5281/zenodo.15854585

Received	Revised	Accepted	Published
05 May, 2025	05 June, 2025	20 June, 2025	30 June, 2025

ABSTRACT

The study has been designed to evaluate the effects of gender disparity on the learning achievements of students in higher education in Pakistan. A quantitative study has been conducted. The students of the BS (4 Years) program in social sciences constitute the population of the study. The sampling frame has been collected from the concerned departments. A proportionate random sampling technique has been used to draw a representative sample. A sample of 316 students has participated in the study. A cross-sectional study has been conducted. A structured questionnaire has been used to collect the data. The tool consists of different sections, including socio-demographic, gender disparity in enrollment, gender disparity in classroom, gender disparity in learning environment, supportive classroom climate, gender disparity in residential backgrounds, accessible resources, and disparity in learning achievements. A pilot test has been done on 30 randomly selected students. An altitudinal scale of (dis)agreement has been used to measure the response of the students. Statistical analysis has been made using the normality test, Kendall's tau_b, and the Chi-Square test. The study findings asserted that gender disparity in enrolment, classroom, and learning environment has a positive correlation and an association with disparity in learning achievements. Similarly, the study findings revealed that culturally relevant teaching materials, gender disparity in communication, and policy and institutional support have a positive correlation and an association with disparity in learning achievements.

Keywords: *Gender Disparity, Learning Achievements, Students, Classroom, University.*

INTRODUCTION

Unequally male and female access to educational opportunities (Shoaib & Zaman, 2025), resources (Shoaib, Waris, & Iqbal, 2025), and their outcomes which results from social (Shoaib, Tariq, Rasool, & Iqbal, 2025), cultural (Shoaib, Tariq, & Iqbal, 2025b), institutional and economic factors is termed as gender inequality in education (Shoaib, Tariq, & Iqbal, 2025a). Despite international efforts battling the education gender gap (Shoaib, Shamsher, & Iqbal, 2025), many countries (Shoaib, Shamsher, & Iqbal, 2025), especially low-income and developing ones (Shoaib, Iqbal, & Iftikhar, 2025), still face this issue (Shoaib & Bashir, 2025). Gender inequality in education affects millions of children and adults by impeding their ability to learn (Shoaib, 2025a), polish existing skills (Shoaib, 2025b), and access better

employment and financial opportunities (Duke, 2017). Many nations have reached a significant level of gender balance in primary education; however, gaps remain at the secondary and tertiary education levels, in certain fields of study, and professional progression (Shoaib, Zaman, & Abbas, 2024; Egalite & Kisida, 2016). Financial barriers, deep-seated ethnical biases, safety concerns, and legislative loopholes largely drive gender inequality in education (Shoaib, 2025b). Though this impacts boys, it is girls in particular who are affected the most (Shoaib et al., 2024). Education prioritization over females as compared to males is a major factor for gender imbalance in education (Shoaib, Shehzadi, & Abbas, 2024b). Girls' chances of attending school are restricted in many traditional communities since they are expected to take up household duties from a young age (Shoaib, Shehzadi, & Abbas, 2024a). Financially strapped families may decide to spend more money on their sons' education than their daughters', considering boys to be the future breadwinners while girls are supposed to get married and take care of the home (Shoaib, Ali, & Abbas, 2024). Because girls are frequently compelled to leave school to fulfill family and social obligations (Shoaib, 2024e), early marriage and adolescent pregnancies further impede their education in these communities (Shoaib, 2024d). The belief that girls' education is less important than boys' education perpetuates gender inequality and denies girls the same educational opportunities as boys (Shoaib, 2024b). The gender gap in education is also significantly influenced by economic considerations (Shoaib, 2024c). A significant obstacle to education is poverty, which frequently has a more noticeable impact on girls (Shoaib, 2024a). Financially troubled families might not be able to pay for books, uniforms, school fees, and transportation (Ali, Zaman, & Shoaib, 2024). Girls are frequently kept at home to assist with childcare, domestic duties, or jobs that generate revenue (Shoaib, Usmani, & Abdullah, 2023). A significant contributing factor to gender inequality in education is the lack of a secure and nurturing learning environment for females (Shoaib, Shehzadi, & Abbas, 2023). The absence of basic amenities like separate restrooms for boys and girls in many schools across the world makes it challenging for teenage females to attend class (Shoaib, 2023c), particularly while they are menstruating (Shoaib, 2023b). Higher dropout rates among girls may result from inadequate hygienic facilities (Shoaib, 2023a). However, the long commutes some kids have to make to school might put them at risk for safety issues like violence, harassment, and assault, which disproportionately affect girls (Shoaib, Tariq, Shahzadi, & Ali, 2022). Furthermore, discouraging girls from pursuing further education is gender based violence in and around schools, which includes harassment by male students or teachers (Ullah & Shoaib, 2021; Flores, 2017). Reducing gender gaps in education and increasing female students' retention rates require a secure and welcoming learning environment (Shoaib & Ullah, 2021a).

In formal or informal education, learning achievement is the degree of knowledge, abilities, competencies, and attitudes that a learner gains (Shoaib & Ullah, 2021b). It is frequently evaluated through examinations, standardized tests, real-world applications, and ongoing evaluations and is a crucial indicator of academic achievement (Shoaib, Rasool, & Anwar, 2021). Teaching effectiveness, curriculum design, student involvement, socioeconomic circumstances, and access to learning resources are some of the variables that affect learning accomplishment (Shoaib, Iqbal, & Tahira, 2021). A high level of learning attainment shows that a student can understand, evaluate, and apply information well, all of which are critical for future academic success, employment prospects, and general personal growth (Shoaib, Fatima, & Jamil, 2021). Ensuring that students attain the intended learning outcomes and acquire the skills they need to succeed in life is the main objective of any educational institution (Shoaib, Ali, & Akbar, 2021). However, despite initiatives to deliver high-quality education, there are notable differences in students' learning outcomes, which are impacted by a number of structural, socioeconomic, and regional factors (Shoaib, Ahmad, Ali, & Abdullah, 2021). Academic achievement disparity is the term used to describe the disparate educational outcomes that are seen among students as a result of variations in socioeconomic origins, access to high-quality education, and other outside influences (Shoaib, Abdullah, & Ali, 2021). These differences are frequently manifested in the academic achievement of pupils from diverse

socioeconomic backgrounds, urban and rural areas, and different ethnic or demographic groupings (Shoaib, 2021). Such discrepancies are a sign of systemic injustices that keep some student groups from reaching their most promising potential (Shoaib, Abdullah, & Ali, 2020). Socio-economic status is one of the main causes of learning attainment gaps (Shoaib & Ullah, 2019). Students from wealthy households usually have easier access to extracurricular activities, private tutoring, educational materials, and a supportive home environment that encourages academic achievement (Shoaib, Latif, & Usmani, 2013). These pupils frequently attend well-funded institutions with cutting-edge infrastructure, skilled instructors, and extensive curricula that improve their educational opportunities. Students from low-income households, on the other hand, could experience financial hardships, a lack of parental support for their education, and schools with few resources, antiquated textbooks, and packed classes. Because of disparities in access to high-quality education, pupils from affluent homes do better than their less fortunate counterparts, which exacerbates social and economic inequality. Hence, this study has been designed to evaluate the effects of gender disparity on the learning achievements of the students in higher education in Pakistan.

Review of Literature

The study findings outline that the motivation of talented female students is impacted by unequal recognition of their achievements in higher education in the United States (Flores, 2017). Similarly, the study findings examine that girls face higher social pressures that lead to prioritizing marriage over education goals in developing countries (Follmer, Patchan, & Spitznogle, 2022). In the same way, analysis of the study pointed out that student involvement and classroom inclusion are impacted by teachers' use of gendered terminology in Australia (Ford, 2013). Likewise, the argument of the study reveals that literacy levels of parents strongly impact their support for their disabled daughter in education (Friedman, 2024). However, the results of the study articulated that disparity in opportunities discourages female students from succeeding in technical education programs by unequal career options (Gallagher & Wahler, 2018). Comparably, the study of Ganle (2016) asserted that gender-inclusive learning settings frequently disappear from schools in rural areas of developing countries. The analysis of the research reported that girls' access to co-educational learning environments might occasionally be restricted by religious traditions (Garcia et al., 2023). Correspondingly, the study findings show that girls' aspirations for leadership are impacted by their limited access to role models in the United States (Garcia, Carris, & Goldsmith, 2023). Furthermore, the study findings indicate that boys are often given preference over girls in apprenticeships and internships due to gender inequality in opportunities (Geduld, 2024). In addition, the study findings conclude that disparities in inclusive school policies have a strong impact on ignoring the particular obstacles encountered by female learners (Gee, 2018).

The study findings outline that disparity is impactful for policy development and is diminished by a lack of research on gender equity in education (Shoaib & Zaman, 2025). Similarly, the study findings examine that peer perception against girls in technical fields significantly discourages STEM participation at the higher education level (Shoaib, Waris, & Iqbal, 2025). In the same way, analysis of the study pointed out that families of developing countries spend less money on individual education for girls than for boys (Shoaib, Tariq, Rasool, & Iqbal, 2025). Likewise, the argument of the study reveals that the way traditional roles are portrayed in the media significantly discourages girls from pursuing unusual educational paths. However, the results of the study articulated that disparate allocation of educational resources significantly affects the learning environment of the students at the tertiary level (Shoaib, Tariq, & Iqbal, 2025b). Comparably, the study of Gertsakis, Kroustallaki, and Sideridis (2021) asserted that gender inequality in academic groups is dominated by boys, depriving girls of leadership roles in schools. As the analysis of the research reported that boys are more confident than girls, who are impacted by their fear of failing academically due to a communication gap (Shoaib, Tariq, & Iqbal, 2025a). Correspondingly, the study findings show that the gender disparity of students' achievements in primary education is more significant in

geographical regions than in schools (Shoaib, Shamsher, & Iqbal, 2025). Furthermore, the study findings indicate that girls' access to high-quality education is disproportionately impacted by the gender disparity in the lack of financial aid programs at the university level (Shoaib et al., 2025). In addition, the study findings conclude that inequality against girls in science and math is reinforced by the effects of unequal interactions between teachers and students at the higher education level (Shoaib et al., 2025).

The study findings outline that parents prefer sons for professional ambitions, which frequently take precedence over daughters for academic objectives. Son preference significantly affects the learning outcomes of females (Gottfredson, Marciniak, Birdseye, & Gottfredson, 1995). Similarly, the study findings examine that social norms greatly restrict girls ' learning or academic achievement in developing countries (Gouvias, Katsis, & Limakopoulou, 2012). In the same way, analysis of the study pointed out that students' learning is significantly affected by an overcrowded classroom environment at the higher education level (Graham, 2023). Likewise, the argument of the study reveals that teachers are more likely to give boys with academic difficulties their full attention right away at the college level (Shoaib, Waris, & Iqbal, 2025a, 2025b; Shoaib, Waris, & Iqbal, 2025; Shoaib, Waris, & Iqbal, 2025; Greenfader, 2023). However, the results of the study articulated that in a male-dominated classroom system, the girls are alienated by the absence of inclusive teaching strategies in educational institutions (Grineski, 2009). Comparably, the study of Grogan-Kaylor and Woolley (2010) asserted that families sometimes respect the education of girls that is affected by fewer resources or family. The analysis of the research reported that girls are less exposed to a variety of skill development opportunities due to disparity in gendered extracurricular activities (Gullo & Ammar, 2022). Correspondingly, the study findings show that disparity in leadership male students dominate class leadership responsibilities, excluding equally competent female classmates with several affecting factors (Gunderson, Park, Maloney, Beilock, & Levine, 2018). Furthermore, the study findings indicate that disparities in the regulation of rules, females are significantly more likely to encounter disproportionate consequences for violations of discipline in comparison to their male peers (Guterman & Neuman, 2019). In addition, the study findings conclude that unequal distribution of resources greatly affects the distant learning of females in developing countries (Hadjar & Niedermoser, 2019).

The Data and Methods

A quantitative study has been conducted. The students of the BS (4 Years) program in social sciences constitute the population of the study. The sampling frame has been collected from the concerned departments. A proportionate random sampling technique has been used to draw a representative sample. A sample of 316 students has participated in the study. A cross-sectional study has been conducted. A structured questionnaire has been used to collect the data. The tool consisted of different sections, including socio-demographic, gender disparity in enrollment, gender disparity in classroom, gender disparity in learning environment, supportive classroom climate, gender disparity in residential backgrounds, accessible resources, and disparity in learning achievements. A pilot test has been done on 30 randomly selected students. An altitudinal scale of (dis)agreement has been used to measure the response of the students. Statistical analysis has been made using the normality test, Kendall's tau_b, and the Chi-Square test.

Results and Discussion

Table 1 presents the socio-demographic characteristics of the students. The statistical analysis pointed out that 33.4 percent of the students were enrolled in the third semester at the university. Similarly, primary data analysis revealed that 24.7 percent of students were studying in the seventh semester at university. Likewise, field data described that 16.2 percent of students were registered in the first semester. The statistical analysis pointed out that 83.8 percent gender of the students were female. Similarly, primary data analysis revealed that 16.2 percent of students were male.

Table 1

Socio-Demographic Characteristics of the Students

Category	*f*	%	Category	*f*	%
Semester			Age Distribution (Years)		
First Semester	50	16.2	Up to 18	11	3.6
Third Semester	103	33.4	19 – 20	152	49.3
Fifth Semester	79	25.6	21 – 22	126	41.0
Seven Semester	76	24.7	23 – 24	19	6.1
Total	308	100.0	Total	308	100.0
Gender			Family Type		
Male	50	16.2	Nuclear	234	76.0
Female	258	83.8	Joint	74	24.0
Total	308	100.0	Total	308	100.0
Father's Education			Mother's Education		
Illiterate	3	1.0	Illiterate	12	3.9
Primary	11	3.6	Primary	23	7.4
Middle	7	2.3	Middle	18	5.8
Matriculation	121	39.3	Matriculation	122	39.6
Intermediate	84	27.3	Intermediate	75	24.4
Bachelor	43	14.0	Bachelor	45	14.7
Master & Above	39	12.5	Master & Above	13	4.2
Total	308	100.0	Total	308	100.0
Number of Siblings			Family Size		
Up to 1	12	3.9	Up to 3	9	2.9
2 – 3	99	32.2	4 – 6	134	43.5
4 – 5	140	45.4	7 – 9	144	46.8
6 – 7	55	17.9	10 – 12	19	6.2
8 & Above	2	0.6	13 & Above	2	0.6
Total	308	100.0	Total	308	100.0
Family Occupation			Family Monthly Income (PKR)		
Government job	53	17.2	Up to 30000	9	2.9
Private job	30	9.7	30001 – 40000	5	1.6
Business	100	32.5	40001 – 50000	54	17.7
Labor	11	3.6	50001 and Above	240	77.8
Old\Retired\Abroad	40	13.0	Total	308	100.0
Unemployed	3	1.0	Residential Area (n=308)		
Agriculture	71	23.1	Rural	197	64.0
Total	308	100.0	Urban	111	36.0

The statistical analysis pointed out that 49.3 percent of students were between the ages of nineteen and twenty years. Similarly, primary data analysis revealed that 41.0 percent of students were aged from twenty-one to twenty-two years. Equally, field data described that 3.6 percent of students were aged up to eighteen years. The statistical analysis pointed out that 39.3 percent of the students were matric. Similarly, primary data analysis revealed that 14.0 percent of students were bachelor's degree recipients. Correspondingly, field data described that 1.0 percent were illiterate due to the education of their fathers.

The statistical analysis pointed out that 39.6 percent of the students were matric. Similarly, primary data analysis revealed that 14.7 percent of the mothers of students had a bachelor's degree. Correspondingly, field data described that 3.9 percent of mothers. The statistical analysis pointed out that the family occupation of 32.5 percent of students was business. Similarly, primary data analysis revealed that the family occupation of 13.0 percent of students was retired and abroad. Likewise, field data described

that the family occupation of 3.6 percent of students was labor. The statistical analysis pointed out that the family monthly income of 77.8 percent of students was fifty thousand dollars and above. Similarly, primary data analysis revealed that the family monthly income of 17.7 percent of students was forty thousand to fifty thousand. Equally, field data described that the family monthly income of 1.6 percent of students was thirty thousand to forty thousand. The statistical analysis pointed out that 45.4 percent of students were four to five siblings. Similarly, primary data analysis revealed that 17.9 percent of students were six to seven siblings. Likewise, field data described that 0.6 percent of students had eight or more siblings.

The statistical analysis pointed out that the family size of 46.8 percent of students was seven to nine members. Similarly, primary data analysis revealed that the family size of 6.2 percent of students was ten to twelve members. Correspondingly, field data described that 0.6 percent of students were thirteen and above members of their family. The statistical analysis pointed out that 76.0 percent of students belonged to a nuclear family system. Similarly, primary data analysis revealed that the family type of 24.0 percent of students was a joint family system. The statistical analysis pointed out that 64.0 percent of students were from rural areas. Similarly, primary data analysis revealed that 36.0 percent of students were from urban areas.

Table 2
Test of Normality

Variables	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Gender Disparity in Enrolment	.130	307	.000	.961	307	.000
Gender Disparity in the Classroom	.083	307	.000	.980	307	.000
Gender Disparity in Learning Environment	.093	307	.000	.986	307	.004
Gender Disparity in Communication	.091	307	.000	.986	307	.005
Gender Disparity in Residential Background	.088	307	.000	.983	307	.001
Accessible Resources	.103	307	.000	.974	307	.000
Flexible Instructional Methods	.102	307	.000	.976	307	.000
Supportive Classroom Climate	.121	307	.000	.965	307	.000
Collaborative Learning Opportunities	.124	307	.000	.971	307	.000
Equitable Assessment Methods	.106	307	.000	.962	307	.000
Policy and Institutional Support	.105	307	.000	.979	307	.000
Culturally Relevant Teaching Materials	.109	307	.000	.957	307	.000
Gender Disparity	.063	307	.005	.986	307	.005
Disparity in Learning Achievements	.081	307	.000	.980	307	.000

a. Lilliefors Significance Correction

Table 2 asserts the normality test of the variables. The calculated statistics presented that the data had not been normally distributed based on the significant values of Kolmogorov-Smirnov and Shapiro-Wilk. Hence, the data had been represented as non-parametric, and the further analysis had been based on the normality of the data.

Table 3
Kendall's tau_b Statistical Analysis

Var.	GDIE	GDIC	GDIL	GDIN	GDIR	DILA
GDIE	1.000	.418**	.348**	.228**	.191**	.154**
GDIC		1.000	.298**	.352**	.215**	.187**
GDIL			1.000	.268**	.220**	.051
GDIN				1.000	.267**	.220**

GDIR	1.000	.165**
DILA		1.000

Table 3 provides the Kendall's tau_b statistical analysis of the variables. The primary data analysis outlined that there was a moderate positive correlation (tau_b = .418) between gender disparity in enrolment and gender disparity in the classroom. The primary data analysis outlined that there was a moderate positive correlation (tau_b = .348) between gender disparity in enrolment and gender disparity in learning environment. The primary data analysis outlined that there was a weak positive correlation (tau_b = .228) between gender disparity in enrolment and gender disparity in communication. The primary data analysis outlined that there was a weak positive correlation (tau_b = .191) between gender disparity in enrolment and gender disparity in residential background. The primary data analysis outlined that there was a weak positive correlation (tau_b = .154) between gender disparity in enrolment and disparity in learning achievements. The primary data analysis outlined that there was a weak positive correlation (tau_b = .298) between gender disparity in the classroom and gender disparity in the learning environment. The primary data analysis outlined that there was a moderate positive correlation (tau_b = .352) between gender disparity in the classroom and gender disparity in communication. The primary data analysis outlined that there was a weak positive correlation (tau_b = .215) between gender disparity in the classroom and gender disparity in residential background. The primary data analysis outlined that there was a weak positive correlation (tau_b = .187) between gender disparity in the classroom and disparity in learning achievements. The primary data analysis outlined that there was a weak positive correlation (tau_b = .268) between gender disparity in the learning environment and gender disparity in communication. The primary data analysis outlined that there was a weak positive correlation (tau_b = .220) between gender disparity in the learning environment and gender disparity in residential background. The primary data analysis outlined that there was a weak positive correlation (tau_b = .051) between gender disparity in the learning environment and disparity in learning achievements. The primary data analysis outlined that there was a weak positive correlation (tau_b = .267) between gender disparity in communication and gender disparity in residential background. The primary data analysis outlined that there was a weak positive correlation (tau_b = .220) between gender disparity in communication and disparity in learning achievements. The primary data analysis outlined that there was a weak positive correlation (tau_b = .165) between gender disparity in residential background and disparity in learning achievements.

Table 4
Kendall's tau_b Statistical Analysis

Var.	ACRE	FLIM	SUCC	COLO	EQAM	PAIS	CRTM	GEDI
ACRE	1.000	.232**	.294**	.230**	.301**	.288**	.295**	.438**
FLIM		1.000	.506**	.410**	.418**	.299**	.344**	.577**
SUCC			1.000	.509**	.447**	.320**	.404**	.632**
COLO				1.000	.381**	.282**	.320**	.555**
EQAM					1.000	.470**	.435**	.620**
PAIS						1.000	.491**	.554**
CRTM							1.000	.603**
GEDI								1.000

Table 4 provides the Kendall's tau_b statistical analysis of the variables. The primary data analysis outlined that there was a weak positive correlation (tau_b =.232) between accessible resources and flexible instructional methods. The primary data analysis outlined that there was a

weak positive correlation (tau_b =.294) between accessible resources and supportive classroom climate. The primary data analysis outlined that there was a weak positive correlation (tau_b =.230) between accessible resources and collaborative learning opportunities. The primary data analysis outlined that there was a weak positive correlation (tau_b =.301) between accessible resources and equitable assessment methods. The primary data analysis outlined that there was a weak positive correlation (tau_b =.288) between accessible resources and policy and institutional support. The primary data analysis outlined that there was a weak positive correlation (tau_b =.295) between accessible resources and culturally relevant teaching materials. The primary data analysis outlined that there was a moderate positive correlation (tau_b =.438) between accessible resources and gender disparity. The primary data analysis outlined that there was a moderate positive correlation (tau_b =.506) between flexible instructional methods and supportive classroom climate. The primary data analysis outlined that there was a moderate positive correlation (tau_b =.410) between flexible instructional methods and collaborative learning opportunities. The primary data analysis outlined that there was a moderate positive correlation (tau_b =.418) between flexible instructional methods and equitable assessment methods. The primary data analysis outlined that there was a weak positive correlation (tau_b =.299) between flexible instructional methods and policy and institutional support. The primary data analysis outlined that there was a moderate positive correlation (tau_b =.344) between flexible instructional methods and culturally relevant teaching materials. The primary data analysis outlined that there was a moderate positive correlation (tau_b =.577) between flexible instructional methods and gender disparity. The primary data analysis outlined that there was a moderate positive correlation (tau_b =.509) between supportive classroom climate and collaborative learning opportunities. The primary data analysis outlined that there was a moderate positive correlation (tau_b =.447) between supportive classroom climate and equitable assessment methods. The primary data analysis outlined that there was a weak positive correlation (tau_b =.320) between supportive classroom climate and policy and institutional support. The primary data analysis outlined that there was a moderate positive correlation (tau_b =.404) between supportive classroom climate and culturally relevant teaching materials. The primary data analysis outlined that there was a moderate positive correlation (tau_b =.632) between supportive classroom climate and gender disparity. The primary data analysis outlined that there was a moderate positive correlation (tau_b =.381) between collaborative learning opportunities and equitable assessment methods. The primary data analysis outlined that there was a weak positive correlation (tau_b =.282) between collaborative learning opportunities and policy and institutional support. The primary data analysis outlined that there was a weak positive correlation (tau_b =.320) between collaborative learning opportunities and culturally relevant teaching materials. The primary data analysis outlined that there was a moderate positive correlation (tau_b =.555) between collaborative learning opportunities and gender disparity. The primary data analysis outlined that there was a moderate positive correlation (tau_b =.470) between equitable assessment methods and policy and institutional support. The primary data analysis outlined that there was a moderate positive correlation (tau_b =.435) between equitable assessment methods and culturally relevant teaching materials. The primary data analysis outlined that there was a moderate positive correlation (tau_b =.620) between equitable assessment methods and gender disparity. The primary data analysis outlined that there was a moderate positive correlation (tau_b =.491) between policy and institutional support and culturally relevant teaching materials. The primary data analysis outlined that there was a moderate positive correlation (tau_b =.554) between policy and institutional support and gender disparity. The primary data analysis outlined that there was a moderate positive correlation (tau_b =.603) between culturally relevant teaching materials and gender disparity.

Table 5
Gender Disparity and Disparity in Learning Achievements

Variable		Gender Disparity		Disparity in Learning Achievements
Kendall's tau_b	Gender Disparity	Correlation Coefficient	1.000	.197**
		Sig. (2-tailed)	.	.000
		N	308	307
	Disparity in Learning Achievements	Correlation Coefficient	.197**	1.000
		Sig. (2-tailed)	.000	.
		N	307	307

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

Table 5 provides the Kendall's tau_b statistical analysis of the variables. The primary data analysis outlined that there was a weak positive correlation (tau_b =.197) between gender disparity and disparity in learning achievements.

Table 6
Chi-square Test (Disparity in Learning Achievements)

Independent variables	Chi-Square Value	df	Asymp. Sig. (2-sided)
Gender Disparity in Enrolment	1988.957[a]	1694	.000
Gender Disparity in the Classroom	2040.809[a]	1540	.000
Gender Disparity in Learning Environment	1889.773[a]	1540	.000
Gender Disparity in Communication	1988.403[a]	1463	.000
Gender Disparity in Residential Background	2178.465[a]	1540	.000
Accessible Resources	3528.899[a]	1694	.000
Flexible Instructional Methods	3490.940[a]	1771	.000
Supportive Classroom Climate	3231.273[a]	1540	.000
Collaborative Learning Opportunities	3415.465[a]	1617	.000
Equitable Assessment Methods	3797.354[a]	1771	.000
Policy and Institutional Support	3096.963[a]	1540	.000
Culturally Relevant Teaching Materials	3052.323[a]	1540	.000
Gender Disparity	5387.496[a]	4543	.000

Table 6 presents the chi-square test and disparity in learning achievements as the dependent variable. The data analysis revealed that there was an association (chi-square value = 1988.957) between gender disparity in enrolment and disparity in learning achievements. The data analysis revealed that there was an association (chi-square value = 2040.809) between gender disparity in the classroom and disparity in learning achievements. The data analysis revealed that there was an association (chi-square value = 1889.773) between gender disparity in the learning environment and disparity in learning achievements. The data analysis revealed that there was an association (chi-square value = 1988.403) between gender disparity in communication and disparity in learning achievements. The data analysis revealed that there was an association (chi-square value = 2178.465) between gender disparity in residential background and disparity in learning achievements. The data analysis revealed that there was an association (chi-square value = 3528.899) between accessible resources and disparity in learning achievements. The data analysis revealed that there was an association (chi-square value = 3490.940) between flexible instructional methods and disparity in learning achievements. The data analysis revealed that there was an association (chi-square value = 3231.273) between supportive classroom climate and disparity in learning achievements. The data analysis revealed that there was an association (chi-square value = 3415.465) between

collaborative learning opportunities and disparity in learning achievements. The data analysis revealed that there was an association (chi-square value = 3797.354) between equitable assessment methods and disparity in learning achievements. The data analysis revealed that there was an association (chi-square value = 3096.963) between policy and institutional support and disparity in learning achievements. The data analysis revealed that there was an association (chi-square value = 3052.323) between culturally relevant teaching materials and disparity in learning achievements. The data analysis revealed that there was an association (chi-square value = 5387.496) between gender disparity and disparity in learning achievements.

Conclusion

The study findings concluded that gender disparity in enrolment, classroom, and learning environment has a positive correlation and an association with disparity in learning achievements. Similarly, the primary data analysis indicated that a supportive classroom environment and gender disparity in residential background have a positive correlation and an association with disparity in learning achievements. Correspondingly, statistical analysis described that accessible resources have positive effects on disparity in learning achievements. Similarly, the study findings concluded that culturally relevant teaching materials, gender disparity in communication, and policy and institutional support have a positive correlation and an association with disparity in learning achievements. Likewise, the primary data analysis described that collaborative learning opportunities and flexible instructional methods have a positive correlation with disparity in learning achievements. Furthermore, equitable assessment methods have a positive association with disparities in learning achievements.

References

Ali, R., Zaman, M. A., & Shoaib, M. (2024). Trends of Research Visualization of Gender Inequality, Equality, and Equity: A Bibliometric Analysis from 1981 to 2020. *Pakistan Journal of Law, Analysis and Wisdom, 3*(8), 237–252.

Duke, D. L. (2017). Can Within-Race Achievement Comparisons Help Narrow Between-Race Achievement Gaps? *Journal of Education for Students Placed at Risk (JESPAR), 22*(2), 100-115. doi:10.1080/10824669.2016.1242071

Egalite, A. J., & Kisida, B. (2016). School size and student achievement: a longitudinal analysis. *School Effectiveness and School Improvement, 27*(3), 406-417. doi:10.1080/09243453.2016.1190385

Flores, R. L. (2017). The rising gap between rich and poor: A look at the persistence of educational disparities in the United States and why we should worry. *Cogent Social Sciences, 3*(1), 1323698. doi:10.1080/23311886.2017.1323698

Follmer, D. J., Patchan, M., & Spitznogle, R. (2022). Supporting College Learners' Study Time Calibration: Relations to Course Achievement and Self-Regulated Learning Skills. *Journal of College Reading and Learning, 52*(2), 75-96. doi:10.1080/10790195.2022.2033646

Ford, M. (2013). Achievement gaps in Australia: what NAPLAN reveals about education inequality in Australia. *Race Ethnicity and Education, 16*(1), 80-102. doi:10.1080/13613324.2011.645570

Friedman, C. (2024). Disparities in Social Determinants of Health Amongst People with Disabilities. *International Journal of Disability, Development and Education, 71*(1), 101-117. doi:10.1080/1034912X.2021.2004299

Gallagher, J. R., & Wahler, E. A. (2018). Racial Disparities in Drug Court Graduation Rates: The Role of Recovery Support Groups and Environments. *Journal of Social Work Practice in the Addictions, 18*(2), 113-127. doi:10.1080/1533256X.2018.1448277

Ganle, J. K. (2016). Ethnic disparities in utilisation of maternal health care services in Ghana: evidence from the 2007 Ghana Maternal Health Survey. *Ethnicity & Health, 21*(1), 85-101. doi:10.1080/13557858.2015.1015499

Garcia, D., Barnett, M. L., Rothenberg, W. A., Tonarely, N. A., Perez, C., Espinosa, N., . . . Jent, J. F. (2023). A Natural Helper Intervention to Address Disparities in Parent Child-Interaction Therapy: A Randomized Pilot Study. *Journal of Clinical Child & Adolescent Psychology, 52*(3), 343-359. doi:10.1080/15374416.2022.2148255

Garcia, E. M., Carris, P. S., & Goldsmith, P. R. (2023). Overcoming the Wall: Educational Achievement and Growth in School Districts on the U.S.-Mexico Border. *Journal of Latinos and Education, 22*(4), 1676-1692. doi:10.1080/15348431.2022.2030289

Geduld, B. (2024). Parental involvement in homework to foster self-regulated learning skills: a qualitative study with parents from selected higher quintile schools. *Cogent Education, 11*(1), 2343526. doi:10.1080/2331186X.2024.2343526

Gee, K. A. (2018). Minding the Gaps in Absenteeism: Disparities in Absenteeism by Race/Ethnicity, Poverty and Disability. *Journal of Education for Students Placed at Risk (JESPAR), 23*(1-2), 204-208. doi:10.1080/10824669.2018.1428610

Gertsakis, N., Kroustallaki, D., & Sideridis, G. D. (2021). How do classroom goal structures matter? The impact on grammar achievement, perceived autonomy support, flow, and affect. *International Journal of School & Educational Psychology, 9*(2), 172-188. doi:10.1080/21683603.2019.1694111

Gottfredson, D. C., Marciniak, E. M., Birdseye, A. T., & Gottfredson, G. D. (1995). Increasing Teacher Expectations for Student Achievement. *The Journal of Educational Research, 88*(3), 155-163. doi:10.1080/00220671.1995.9941294

Gouvias, D., Katsis, A., & Limakopoulou, A. (2012). School achievement and family background in Greece: a new exploration of an omnipresent relationship. *International Studies in Sociology of Education, 22*(2), 125-145. doi:10.1080/09620214.2012.700186

Graham, M. A. (2023). Overcrowded Classrooms and their Association with South African Learners' Mathematics Achievement. *African Journal of Research in Mathematics, Science and Technology Education, 27*(2), 169-179. doi:10.1080/18117295.2023.2244217

Greenfader, C. M. (2023). What Is the Role of Executive Function in the Early Elementary School Achievement of Latino Students? *Journal of Latinos and Education, 22*(4), 1709-1727. doi:10.1080/15348431.2022.2043863

Grineski, S. E. (2009). Parental Accounts of Children's Asthma Care: The Role of Cultural and Social Capital in Health Disparities. *Sociological Focus, 42*(2), 107-132. doi:10.1080/00380237.2009.10571346

Grogan-Kaylor, A., & Woolley, M. E. (2010). The Social Ecology of Race and Ethnicity School Achievement Gaps: Economic, Neighborhood, School, and Family Factors. *Journal of Human Behavior in the Social Environment, 20*(7), 875-896. doi:10.1080/10911359.2010.494927

Gullo, D. F., & Ammar, A. A. (2022). Predicting third-grade academic achievement in low-socioeconomic children: developmental and socio-behavioural influences in kindergarten. *Early Child Development and Care, 192*(11), 1800-1815. doi:10.1080/03004430.2021.1939694

Gunderson, E. A., Park, D., Maloney, E. A., Beilock, S. L., & Levine, S. C. (2018). Reciprocal relations among motivational frameworks, math anxiety, and math achievement in early elementary school. *Journal of Cognition and Development, 19*(1), 21-46. doi:10.1080/15248372.2017.1421538

Guterman, O., & Neuman, A. (2019). Similar goals, different results: differences in group learning goals and their impact on academic achievements. *Journal of Further and Higher Education, 43*(6), 729-741. doi:10.1080/0309877X.2017.1394990

Hadjar, A., & Niedermoser, D. W. (2019). The role of future orientations and future life goals in achievement among secondary school students in Switzerland. *Journal of Youth Studies, 22*(9), 1184-1201. doi:10.1080/13676261.2019.1569216

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. (2023a, September 22). Galvanising Bourdieu's typology with Pakistani education and social class. *The Nation*, p. 4.

Shoaib, M. (2023b, December 05). Gender Differences in Academic Performance. *The Nation*.

Shoaib, M. (2023c). Leisure and Psychological Well-being of the Elderly: Nexus of Mass Media and Modern Technology. *Pakistan Journal of Law, Analysis and Wisdom, 2*(2), 1042–1053.

Shoaib, M. (2024a, January 09). Gender Disparity in Education. *The Nation*.

Shoaib, M. (2024b). Gender Diversity and Inclusion in Higher Education in Pakistan. *Pakistan Journal of Law, Analysis and Wisdom, 3*(1), 207-222.

Shoaib, M. (2024c, April 30). Gendered Space in Higher Education. *Daily Parliament Times*, p. 3.

Shoaib, M. (2024d). Gendering Bourdieu's Cultural Capital in Higher Education in Pakistan. *Pakistan Journal of Law, Analysis and Wisdom, 3*(2), 265-278.

Shoaib, M. (2024e). Tailoring Theoretical Lens and Nudging Bourdieu's Cultural Capital on Gender and Academic Performance. *Journal of Social Sciences Review, 4*(4), 87–101.

Shoaib, M. (2025a). Academic Achievement and Gender Inequality in Higher Education: A Systematic Review of Muslim Majority Nations. *Sociology & Cultural Research Review 3*(02), 373–380.

Shoaib, M. (2025b). A Systematic Review of Gender Disparities in Academic Achievement in Higher Education Across Muslim Countries. *Advance Social Science Archive Journal, 3*(02), 1622–1639.

Shoaib, M., & Bashir, Z. (2025). *Virtual Classrooms and Academic Performance of the Students in Higher Education during the COVID-19 Outbreak*. Paper presented at the 5th International Conference of PNQAHE and AGM on Stakeholder Engagement in Quality Assurance – Shaping Higher Education with Inputs from All Relevant Voices, Forman Christian College University, Lahore.

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, 53*(9), 1039-1063. 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., & Zaman, M. A. (2025). Evaluating Academic Performance in Higher Education during COVID-19 A Study of Virtual Learning Environments. *Pakistan Journal of Law, Analysis and Wisdom, 4*(4), 64-78.

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, 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., Ali, S. R., & Abbas, Z. (2024). Self-Fulfilling Prophecy of Learning Skills Among Students in Higher Education. *Pakistan Journal of Law, Analysis and Wisdom, 3*(7), 164-177.

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, A., & Iftikhar, I. (2025). Engagement of Students in Learning in Higher Education: The Role of Academic Library Spaces. *The Regional Tribune, 4*(3), 311-328.

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., 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., Rasool, S., & Anwar, B. (2021). Evaluating Research Support Facilities to University Students during COVID-19. *Library Philosophy and Practice, 4953*(1), 1-18.

Shoaib, M., Shamsher, A., & Iqbal, S. (2025). A Systematic Review of Academic Library Spaces as Facilitators of Student Engagement in Higher Education Learning. *The Knowledge, 4*(1), 123-134.

Shoaib, M., Shamsher, A., & Iqbal, S. (2025). Understanding Student Engagement in Higher Education: The Contribution of Academic Library Spaces. *ProScholar Insights, 4*(1), 245-257.

Shoaib, M., Shehzadi, K., & Abbas, Z. (2023). Contemporary Research on Learning Spaces and Teacher Effectiveness in Higher Education. *Pakistan Journal of Law, Analysis and Wisdom, 2*(03), 352–369.

Shoaib, M., Shehzadi, K., & Abbas, Z. (2024a). Inclusivity and Teachers' Aptitude in Higher Education in Pakistan. *Pakistan Journal of Law, Analysis and Wisdom, 3*(6), 219-237.

Shoaib, M., Shehzadi, K., & Abbas, Z. (2024b). Inclusivity, Teacher Competency, and Learning Environment at Higher Education: Empirical Evidences. *Pakistan Journal of Law, Analysis and Wisdom, 3*(5), 244-261.

Shoaib, M., Tariq, I., & Iqbal, S. (2025a). Extracurricular Activities in Higher Education: Diversity and Inclusion. *Regional Lens, 4*(1), 174-187.

Shoaib, M., Tariq, I., & Iqbal, S. (2025b). Intersectionality and Student Inclusion in Higher Education: A Study of Class, Residence, Culture, and Extracurricular Participation. *Journal of Social Horizons, 2*(1), 1-14.

Shoaib, M., Tariq, I., Rasool, S., & Iqbal, S. (2025). The Role of Extracurricular Activities in Fostering Diversity and Inclusion in Higher Education: A Systematic Review. *Advance Social Science Archive Journal, 3*(2), 1377–1392.

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., 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., Waris, T., & Iqbal, S. (2025). A Review-Based Examination of Gender Dynamics in Virtual Learning Environments in Higher Education. *Sociology & Cultural Research Review, 3*(02), 448–454.

Shoaib, M., Waris, T., & Iqbal, S. (2025). A Review-Based Examination of Gender Dynamics in Virtual Learning Environments in Higher Education. *Sociology & Cultural Research Review, 3*(02), 448–454.

Shoaib, M., Waris, T., & Iqbal, S. (2025). Virtual Learning Environments and Gendered Spaces in Higher Education in Pakistan: A Quantitative Approach. *Regional Lens, 4*(2), 65-78.

Shoaib, M., Waris, T., & Iqbal, S. (2025a). Assessing Gendered Participation Spaces in Online Learning Environments in Higher Education in Pakistan. *The Knowledge, 4*(2), 63-74.

Shoaib, M., Waris, T., & Iqbal, S. (2025b). Gender Dynamics in Online Higher Education: Insights from Empirical Evidence. *The Regional Tribune, 4*(2), 89-102.

Shoaib, M., Zaman, M. A., & Abbas, Z. (2024). Trends of Research Visualization of Gender Based Violence (GBV) from 1971-2020: A Bibliometric Analysis. *Pakistan Journal of Law, Analysis and Wisdom, 3*(7), 203-216.

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.