

Exploring the Academic Benefits of Student Engagement: A Case Study of University of Peshawar

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Abstract

Education plays a critical role in the advancement of any nation, with student performance serving as a key indicator of the success of educational institutions. Various factors, including the availability of qualified teachers, study hours, and internet access, can influence academic outcomes. This study examines the impact of extracurricular activities on students' academic performance, utilizing data collected from 400 students at the University of Peshawar. The data were analysed using SPSS version 30, employing both descriptive and inferential statistical techniques. Descriptive analysis involved calculating and interpreting the percentages of different variable categories, while inferential analysis utilized the Chi-Square test for independence. The results suggest that gender and area of residence have a significant impact on student performance, whereas factors such as internet usage, home-based activities, part-time employment, and seminar attendance do not exhibit significant effects.

Keywords: Academic Performance, Extra-Curricular Activities, Students Engagement.

Introduction

Education is a fundamental pillar of human civilization's advancement. It equips a nation with skilled individuals, fosters national unity, and shapes public opinion. A country requires a diverse range of professionals, including engineers, teachers, administrators, economists, judges, and other technical experts. Education produces these essential skilled workers. Educated citizens are better equipped to understand their responsibilities and rights. To uplift society, individuals must be able to comprehend and relate to one another, fostering unity. As a result, education plays a vital role in promoting national cohesion. Additionally, it raises societal awareness, enabling people to challenge outdated traditions and practices.

Educated individuals can drive societal reform, discerning between what is beneficial and what is harmful, while preserving valuable traditions. Ultimately, education plays a significant role in enhancing human prosperity. Education stands as the cornerstone of human civilization's advancement. It not only provides a nation with a skilled workforce but also fosters national unity and shapes public opinion. A country requires a diverse range of professionals, such as engineers, teachers, administrators, economists, judges, and other specialists, all of whom are nurtured through education. An educated populace is better equipped to understand its duties and rights, which is essential for the elevation of human society. When individuals understand one another, unity flourishes, and education plays a pivotal role in achieving this cohesion. Moreover, education

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raises societal awareness, enabling people to challenge and discard outdated traditions and harmful practices. Educated individuals can lead societal reforms, distinguishing between beneficial and detrimental customs, while preserving valuable traditions. In essence, education plays a crucial role in significantly enhancing human prosperity and societal well-being. Pakistan's education system comprises 303,446 institutions, serving 47,491,260 students with the support of 1,723,790 teachers. The system includes 191,065 public institutions and 112,381 private institutions. The public sector educates 27.69 million students, while the private sector caters to 19.80 million. Interestingly, although private institutions represent only 37% of the total, they educate 42% of the students, indicating a higher per-institution enrolment in the private sector. Over the past decade, public trust in private institutions has grown, contributing to the gradual expansion of the private sector's share in education. Pakistan's education system spans various stages, from pre-primary to higher education, encompassing primary, middle, high school, higher secondary, bachelor's, master's, and M.Phil./PhD levels.

Pre-primary education forms the foundation for a child's educational journey, laying the groundwork for their overall development. Globally, it is recommended that every child receive pre-primary education to prepare them for the subsequent stages of learning. In Pakistan, there are no distinct pre-primary institutions in the public sector, with a total enrolment of 8.745 million children at this stage. The public sector accounts for 4.532 million (52%) of this enrolment, while the private sector enrolls 4.212 million (48%) children. Unlike the public sector, where there is no separate allocation of teachers for pre-primary education, the private sector employs 2,785 dedicated teachers for this level of education. Primary education represents a crucial phase in a child's academic journey, as it can significantly influence their future educational success. It is during this stage that children are melded into learners, thinkers, and social beings. According to the National Education Management Information System (NEMIS), there are 145,829 primary schools in Pakistan, with 125,573 (86%) in the public sector and 20,256 (14%) in the private sector. The primary education stage enrolls 18.751 million students, with 11.461 million (61%) in public schools and 7.290 million (39%) in private institutions. Of the total enrolment, 10.471 million (55%) are boys, and 8.280 million (45%) are girls. The primary level is supported by 422,797 teachers, with 324,561 (77%) in public sector schools and 98,236 (23%) in private institutions. Middle education, spanning grades six through eight, serves as a transitional stage between primary and secondary education. In present-day Pakistan, middle schools were established in the early twentieth century and have since functioned as an educational bridge. NEMIS reports that there are 45,680 middle schools, with 16,862 (37%) in the public sector and 28,818 (63%) in the private sector. Currently, 6.445 million students are enrolled in grades VI-VIII, with 4.039 million (63%) in public institutions and 2.403 million (37%) in private schools. The middle school stage has a total of 394,231 teachers, with 139,191 serving in public schools and 255,040 in private institutions. Among these teachers, 123,936 (31%) are male, and 270,295 (69%) are female. Moving on to high school education, Pakistan's education system includes 31,740 high schools, with 12,732 in the public sector and 19,008 in the private sector. The total enrolment at the secondary level is 3.437 million students, with 2.227 million (65%) in public schools and 1.209 million (35%) in private institutions. Boys account for 1.961 million (57%) of the enrolment, while girls make up 1.475 million (43%). The secondary level is supported by 529,520 teachers, with 232,883 (44%) in public and 296,637 (57%) in private institutions. Higher secondary education, which includes grades 11 and 12, is provided by 5,470 higher secondary schools and intercollege in Pakistan. These institutions account for approximately 2% of the total educational infrastructure. Of these, 1,865 (34%) are in the public sector, while 3,605

(66%) are privately operated. The total enrolment at this stage is 1.697 million students, with 1.325 million (78%) in public institutions and 0.372 million (22%) in private institutions. Boys account for 1.022 million (60%) of the enrolment, while girls represent 0.674 million (40%). 123,061 teachers are working at the higher secondary level, comprising 55,342 (45%) in the public sector and 67,719 (55%) in the private sector. Male teachers constitute 46% of the workforce, while female teachers make up 54%. Undergraduate education in Pakistan refers to post-secondary education leading to a bachelor's degree. The graduation system is divided into undergraduate and postgraduate programs. According to NEMIS, there are 1,418-degree colleges in Pakistan, with 1,259 (89%) in the public sector and 159 (11%) in the private sector. The total enrolment at the degree college level is 0.937 million, with 0.808 million (86%) in public institutions and 0.128 million (14%) in private institutions.

Universities in Pakistan offer higher education and research opportunities, granting academic degrees across a wide range of disciplines. In addition to the traditional two-year bachelor's and master's programs, many universities now offer four-year Bachelor of Science (BS) programs, followed by MS, M.Phil., and PhD programs. According to NEMIS, there are 163 universities in Pakistan, with 91 (56%) in the public sector and 72 (44%) in the private sector. The total enrolment at the postgraduate level is 1.355 million students, with 1.141 million (84%) in public universities and 0.214 million (16%) in private institutions. Despite having fewer universities, the public sector enrolls a larger number of students compared to the private sector. Male students account for 0.753 million (56%) of the total enrolment, while female students make up 0.602 million (44%). The university level is supported by 83,375 teachers, with 66,532 (80%) in public universities and 16,843 (20%) in private institutions.

The education system in Pakistan faces numerous challenges. Poverty remains a significant barrier, preventing many parents from enrolling their children in schools. Instead, they often choose madrassas, where education is free. As of June 2016, the Ministry of Planning, Development, and Reform reported that 39% of Pakistanis lived in multidimensional poverty, with the rural areas experiencing higher rates than urban areas. Although national poverty rates decreased from 59% to 39% between 2004 and 2015, poverty remains a significant obstacle to education.

Another challenge is the limited allocation of funds for education. In Pakistan, only 1.5% to 2% of the total GDP is allocated to education, far below the recommended 7%. In the 2017-18 budget, the government allocated Rs. 902.7 billion to the education sector, an increase from the previous year. However, Utilization of these funds often falls short, particularly in Punjab and Sindh. Gender discrimination is another pressing issue, with a primary school enrolment ratio of 10 boys for every four girls. The rise of private schools has further exacerbated educational disparities. Language barriers also pose significant challenges. Students often face frequent changes in the medium of instruction, leading to difficulties in understanding course materials. Many students who complete their early education in Urdu-medium schools struggle when transitioning to English-medium instruction at higher levels, which affects their confidence and academic performance. A lack of guidance is another critical issue in Pakistan's education system. Many students receive little to no career counselling or academic guidance, leading to poor subject choices and a lack of interest in education. This is compounded by high expectations from families and a lack of professional training among teachers.

Finally, communication gaps between students, teachers, and parents hinder effective learning. These gaps often result in students being pressured to pursue paths that do not align with their interests or abilities, stifling their potential. Extracurricular activities, which fall outside the standard curriculum, play a vital role in students' overall development. These activities, voluntarily

undertaken by students, do not contribute to academic grades but offer numerous benefits. According to Massoni (2011), extracurricular activities promote positive behaviour, enhance learning, and aid in students' social development. Moreover, they provide an outlet for reducing academic stress, ultimately improving learning efficiency.

Objectives of the Study

1. To evaluate how participation in co-curricular and extracurricular activities affects students' academic performance.
2. To analyse how gender influences the relationship between participation in co-curricular and extra-curricular activities and academic performance.

Literature Review

Numerous studies have investigated the impact of co-curricular and extracurricular activities on academic performance. For instance, Gerber (1996) found that participation in extracurricular activities is positively correlated with academic achievement, emphasizing that school-related activities are more beneficial than external activities. Similarly, Hansen et al. (2003) emphasized that extracurricular involvement fosters personal development and academic performance by offering opportunities for identity formation and skill development.

Dumais (2009) and Al-Khader (1996) provide insights into how gender differences influence the relationship between extracurricular involvement and academic performance. Dumais (2009) found that males and females participate differently in extracurricular activities, with males more involved in sports and females in performing arts. This variance in participation can influence academic outcomes differently based on gender. Al-Khader (1996) also observed that female students typically achieved higher GPAs compared to their male counterparts, suggesting a potential link between gender and academic performance, particularly in extracurricular activities. Brown (2008) and Silliker and Jeffrey (1997) investigated the impact of specific types of extracurricular activities on academic outcomes. Brown (2008) reported that students participating in extracurricular activities achieved better grades and had a higher self-concept. Silliker and Jeffrey (1997) emphasized that extracurricular activities enable students to develop new skills, which can positively contribute to their academic performance.

Pascarella and Terenzini (2005) and van Houdt (2009) examined the broader effects of extracurricular participation on academic achievement. Pascarella and Terenzini (2005) found a positive correlation between participation in social activities and academic success. Van Houdt (2009) observed that students engaged in extracurricular activities had higher GPAs and lower absenteeism, indicating the potential academic benefits of regular involvement in such activities. Farooq et al. (2011) and Owoeye and Yara (2011) explored how socioeconomic and cultural factors influence the relationship between extracurricular activities and academic performance. They identified socioeconomic status and parental education as significant factors affecting academic performance, which could interact with the effects of extracurricular involvement. They noted regional differences in educational outcomes, suggesting that local contexts might impact how extracurricular activities influence academic performance. While studies specifically from the University of Peshawar may be limited, understanding the broader context through relevant literature can help draw parallels. Incorporating local studies or institutional reports from Peshawar can provide a more tailored understanding of how co-curricular and extra-curricular activities influence academic outcomes at your specific institution.

Al-Otaibi (1996) examined the influence of gender on students' performance, revealing that female students outperformed their male counterparts. He also found that female students' performance remained consistent across academic levels, whereas male students showed variability in performance between junior and senior classes.

Al-Khader (1996) identified a positive correlation between high school grades and GPA. His study also revealed that female students generally achieved higher GPAs than their male counterparts, and students in science disciplines had significantly higher GPAs compared to those in arts disciplines. Gerber (1996) suggested that participation in extracurricular activities has a positive impact on academic performance, with school-related activities being more beneficial for academic achievement than activities outside of school.

Silliker and Jeffrey (1997) highlighted that counsellors typically monitor both extracurricular activities and academic performance. They emphasized the importance of guidance modules, which include curriculum, individual planning, and system support. Participation in extracurricular activities helps students develop new skills and take on additional roles beyond the classroom.

Voorhis (2003) demonstrated that increased parental involvement with daily homework leads to more consistent completion of assignments. This study supports the notion that family participation has a positive impact on students' performance in middle grades. Hansen et al. (2003) outlined six developmental benefits of extracurricular activities: identity development, personal initiative, emotional and physical skills, social connections, social relationships, and extended social networks. These benefits contribute to improved academic performance. Daley and Leahy (2003) noted that involvement in extracurricular activities enhances self-perceptions, reduces stress, and promotes overall well-being. Participants in these activities reported higher self-esteem compared to non-participants.

Pascarella and Terenzini (2005) found a positive relationship between students' engagement in social activities and their academic achievement. Darling et al. (2005) conducted a longitudinal study indicating that participation in school-based extracurricular activities correlates with higher grades, better academic attitudes, and higher academic goals. Brown (2008) found that students involved in extracurricular activities tend to have better grades, higher educational achievements, regular school attendance, and an improved self-concept. Participants are also less likely to engage in negative behaviours.

Reeves (2008) found a strong link between extracurricular activity involvement and improved attendance, behaviour, and academic performance, with participants outperforming non-participants. Dumais (2009) examined gender differences in extracurricular activity participation and their impact on academic performance. The study found males were more involved in sports, while females participated more in stage and musical activities. The research indicated a positive relationship between these activities and academic goals. Van Houdt (2009) found that students involved in extracurricular activities had higher GPAs and lower absenteeism rates, with these benefits observed across various genders and socioeconomic backgrounds.

Burrows and McCormack (2011) suggested that extracurricular activities contribute to students' life balance, offering social interaction and stress relief, which may enhance academic performance. Further research is needed to validate these claims. Owoeye and Yara's (2011) study in Kenya found that qualified teachers have a significant influence on students' performance, with rural schools outperforming urban ones despite having fewer resources. Farooq et al. (2011) investigated the factors affecting academic performance, finding significant effects of socio-economic status and parental education, with female students generally outperforming their male counterparts.

Ogeed (2012) examined the impact of internet usage on the academic performance of Nigerian university students, finding that internet use has a significant effect on academic outcomes. Mushtaq and Khan (2012) investigated various factors affecting academic performance, concluding that communication, guidance, and learning facilities have a positive impact on performance, while family stress has an adverse effect. Rafiq et al. (2013) found that parental involvement has a significant positive impact on children's academic performance. Amin (2013) examined the impact of television watching on academic performance, finding significant differences between heavy and light viewers. However, gender differences in performance related to TV watching were not statistically significant.

Khan et al. (2013) identified cultural factors, among others, that contribute to higher academic achievement in students. Shamsdin et al. (2014) found a positive association between academic performance and participation in social extracurricular activities in their study in Malaysia. Bakoban et al. (2015) reported that involvement in extracurricular activities has a positive impact on students' GPAs. Honicke et al (2015) found a moderate correlation between academic performance and academic self-efficacy. Chan (2016) investigated the relationship between extracurricular activities, learning approaches, and academic outcomes, finding a positive relationship between activities and learning approaches, but no direct link to academic performance.

Singh et al. (2016) studied factors influencing academic performance, identifying significant effects of communication skills, learning facilities, and parental guidance on performance. Tanner (2017) examined the effects of extracurricular activities on academic success, highlighting both positive and negative impacts, as well as the complex relationship between physical activity and academic performance. Abed et al. (2017) found that female students generally performed better academically than male students, and that married students achieved higher academic outcomes compared to single students. Sabuj et al. (2018) found a negative but insignificant association between participation in extracurricular activities and academic performance among 270 students.

Methodology

The target population consists of 400 students both, male and female, currently studying at the University of Peshawar. There are 20 departments at the University of Peshawar. The list of academic departments at the University of Peshawar is given in Table 1.

Table 1: List of academic departments

S.no	Departments	S.no	Departments
1	Arabic	11	Management Science
2	Botany	12	Mathematics
3	Chemistry	13	Political science
4	Computer Science	14	Physics
5	Education	15	Psychology
6	Economics	16	Pak Studies
7	Electronics	17	Statistics
8	English	18	Sharia & Law
9	Geography	19	Urdu
10	Islamic Theology	20	Zoology

Sampling Procedure

From the 20 academic departments of the University of Peshawar, a sample of 6 departments was selected based on random numbers generated through a calculator. The list of the 6 selected departments is given in Table 2.

Table 2: List of selected departments

S.no	Department	S.no	Department
1	Economics	4	Computer Science
2	Education	5	Arabic
3	Sharia & Law	6	Zoology

The table provides a list of academic departments, each with a corresponding serial number. Department 1, Economics, focuses on the study of economic systems, financial principles, and economic behavior, covering areas such as microeconomics, macroeconomics, and econometrics. Department 2, Education, is dedicated to exploring teaching methods, educational theory, and pedagogy, addressing curriculum development, educational psychology, and instructional techniques. Department 3, Sharia & Law, combines the study of Islamic jurisprudence with general legal principles, including Islamic law, legal theory, and comparative law. Department 4, Computer Science, centers on computational systems, programming, and technology, with subjects like algorithms, data structures, software engineering, and computer architecture. Department 5, Arabic, specializes in the Arabic language and literature, offering courses in linguistics, literary analysis, and translation. Lastly, Department 6, Zoology, focuses on animal biology, including anatomy, behavior, and ecology, covering a range of topics from molecular biology to ecosystem interactions. Each department represents a distinct field of academic study, providing specialized education and research opportunities in its area.

Research Instrument

Data for the study was collected using a 19-question questionnaire, which included both open-ended and close-ended questions. The researcher distributed 400 questionnaires among students in the selected departments, collected the completed ones, and expressed gratitude to the respondents.

Statistical Hypotheses

The null and alternative hypotheses are given below.

H_0 : The variables are independent

H_1 : The variables are dependent.

The null hypothesis was tested at a 0.05 percent level of significance.

Chi-Square Test

$$\chi^2 = \sum \frac{(O_i - E_i)^2}{E_i} \quad (1)$$

Where χ^2 is the Chi-square statistic, O_i represents the observed frequency for the category, and E_i represents the expected frequency for the category. The summation ($\sum$) is taken over all categories.

Results Analysis and Discussion

The chapter presents the analysis and discussion, which form the most crucial part of the study. The focus is on examining how co-curricular and extra-curricular activities influence students' academic performance. The section begins with a descriptive analysis, which is summarized in Table 3. This table offers a detailed overview of the key variables under study, including the frequency, mean, standard deviation, and other relevant statistics. The descriptive analysis serves as the foundation for understanding the general trends and patterns in the data, providing insights into how these activities correlate with academic outcomes. It sets the stage for the more in-depth analyses that follow, allowing for a comprehensive exploration of the relationship between students' participation in these activities and their academic performance.

Table 3: Key variables

Variables	Responses	Frequencies	Percentage	Variable	Responses	Frequencies	Percentages
Gender	Male	220	55	Area	Urban	140	35
	Female	180	45		Rural	260	65
GPA	Less than 2	80	20	Extra-curricular Activities	Yes	220	55
	2-3	120	30		No	180	45
	3-4	200	50		Watching TV	230	57.5
Interest in Politics	Yes	180	45	Social media	Yes	200	50
	No	220	55		No	200	50
Use of Internet	Yes	270	67.5				
	No	170	32.5				

The table provides a detailed breakdown of several demographic and behavioral factors among the respondents. Among the participants, 220 individuals (55%) are male, while 180 (45%) are female, indicating a higher proportion of male respondents in the sample. Respondents are predominantly from rural areas, with 260 individuals (65%) reporting their residence as rural, compared to 140 (35%) from urban areas, suggesting a significant rural representation in the sample. The academic performance of respondents varies across different GPA ranges. Specifically, 80 respondents (20%) have a GPA of less than 2.0, 120 (30%) fall into the 2.0-3.0 range, and 200 (50%) have a GPA between 3.0 and 4.0. This distribution shows a concentration of higher GPA scores among the majority of respondents. Engagement in extra-curricular activities is reported by 220 respondents (55%), indicating that more than half of the sample participates in such activities. In contrast, 180 respondents (45%) do not engage in extra-curricular activities. The interest in politics is fairly balanced, with 180 respondents (45%) expressing interest and 220 (55%) not showing interest, suggesting a slight majority of respondents are not interested in political activities. A substantial majority of respondents, 270 individuals (67.5%), use the Internet, highlighting its widespread adoption among the sample.

Conversely, 170 respondents (32.5%) do not use the Internet. The table shows that 230 respondents (57.5%) watch TV, while 170 (43.5%) do not, indicating that TV watching is a common activity among the majority of the respondents. The use of social media is evenly distributed, with 200 respondents (50%) using social media and 200 (50%) not using it. This balance reflects an equal division in social media engagement among the sample. Overall, the data presents a clear picture of the respondents' demographics and behaviors, including their gender, geographical location, academic performance, participation in extra-curricular activities, interest in politics, and usage of

the Internet, TV, and social media.

Inferential Analysis

For inferential analysis of the collected data, a chi-square test of independence was used. The results of the chi-square tests are presented in Table 4 to Table 9.

Table 4: Gender Differences in GPA Distribution

Variable		GPA			Total	Chi-Square	P-value
		Less than 2	2-3	3-4			
Gender	Male	50	70	100	220	22.725	0.000
	Female	40	80	60	180		
Total		90	150	160	400		

The analysis examines the relationship between gender and GPA using a Chi-square test of independence. The data are categorized into three GPA ranges: less than 2.0, 2.0-3.0, and 3.0-4.0, with separate counts provided for male and female students. The results show that among males, 50 students have a GPA less than 2.0, 70 students have a GPA between 2.0 and 3.0, and 100 students have a GPA between 3.0 and 4.0, totaling 220 male students. For females, 40 students have a GPA of less than 2.0, 80 students have a GPA between 2.0 and 3.0, and 60 students have a GPA between 3.0 and 4.0, totaling 180 female students. The Chi-square statistic calculated is 22.725, which is relatively high, indicating a significant deviation from what would be expected if there were no relationship between gender and GPA. The associated p-value is 0.000, which is well below the conventional threshold of 0.05 for statistical significance. This p-value suggests that the likelihood of observing this association by chance is extremely low, providing strong evidence that there is indeed a significant relationship between gender and GPA. This finding implies that GPA distribution differs significantly between male and female students in the sample analyzed.

Table 5: Area Type vs GPA

Variable		GPA			Total	Chi-Square	P-value
		Less than 2	2-3	3-4			
Area Type	Urban	45	55	40	140	9.701	0.008
	Rural	40	60	160	260		
Total		85	115	200	220		

The Chi-square test of independence reveals a significant relationship between area type (Urban vs. Rural) and GPA. The analysis shows that 45 urban students have a GPA less than 2.0, 55 fall between 2.0 and 3.0, and 40 between 3.0 and 4.0. For rural students, 40 have a GPA less than 2.0, 60 are between 2.0 and 3.0, and 160 are between 3.0 and 4.0. The Chi-square statistic is 9.701, with a p-value of 0.008, indicating that the difference in GPA distribution between urban and rural students is statistically significant, with rural students more likely to have higher GPAs.

Table 6: Co-Curricular and Extra-curricular Activities vs GPA

Variable		GPA			Total	Chi-Square	P-value
		Less than 2	2-3	3-4			
Extra-curricular activities positively affect academic performance.	Yes	30	98	92	220	5.729	0.057
	No	40	50	90	180		
Total		70	148	182	400		

The Chi-square test of independence was conducted to examine the relationship between students' beliefs about whether extra-curricular activities positively affect academic performance and their GPA. Among students who believe in the positive impact, 30 have a GPA less than 2.0, 98 fall between 2.0 and 3.0, and 92 have a GPA between 3.0 and 4.0. Conversely, among those who do not believe in the positive impact, 40 students have a GPA less than 2.0, 50 fall between 2.0 and 3.0, and 90 have a GPA between 3.0 and 4.0. The Chi-square statistic is 5.729, with a p-value of 0.057. Although there is a moderate association between students' beliefs and their GPA, the p-value slightly exceeds the conventional significance level of 0.05, indicating that the relationship is not statistically significant by a narrow margin.

Table 7: GPA Distribution by Political Participation

Variable		GPA			Total	Chi-Square	P-value
		Less than 2	2-3	3-4			
Do you take an interest in/participate in politics?	Yes	30	70	80	180	1.795	0.408
	No	40	80	100	220		
Total		70	150	180	400		

Table 7: GPA Distribution by Political Participation shows that out of 220 respondents, 15 students who participate in politics obtained a GPA of less than 2.0, compared to 25 students who do not participate in politics with a GPA below 2.0. Additionally, 37 students who participated in politics achieved a GPA between 2.0 and 3.0, while 47 students who did not participate in politics fall into the same GPA range. Furthermore, 33 students who participated in politics received a GPA between 3.0 and 4.0, whereas 63 students who did not participate in politics achieved this GPA range. Since the p-value is greater than 0.05, the null hypothesis is accepted, leading to the conclusion that there is no significant association between academic performance and participation in politics.

Table 8: GPA Distribution by TV Watching Habits

Variable		GPA			Total	Chi-Square	P-value
		Less than 2	2-3	3-4			
Watching TV influence the study of students.	Yes	40	100	80	220	2.422	0.298
	No	40	70	70	180		
Total		80	170	150	400		

Table 8: GPA Distribution by TV Watching Habits presents the results of a Chi-square test examining the impact of TV watching on students' GPAs based on their belief that TV watching influences their studies. Among students who believe that TV watching affects their studies (Yes), 40 have a GPA of less than 2.0, 100 have a GPA between 2.0 and 3.0, and 80 have a GPA between 3.0 and 4.0, totaling 220 students. In contrast, among students who do not believe TV watching influences their studies (No), 40 have a GPA of less than 2.0, 70 have a GPA between 2.0 and 3.0, and 70 have a GPA between 3.0 and 4.0, totaling 180 students. The Chi-square statistic is 2.422, and the p-value is 0.298. Since the p-value is greater than 0.05, there is insufficient evidence to reject the null hypothesis, suggesting that there is no significant association between students' perceptions of TV watching's impact on their study and their GPA.

Table 9: Internet Usage and Its Impact

Variable		GPA			Total	Chi-Square	P-value
		Less than 2	2-3	3-4			
The use of the internet influences the study of students?	Yes	40	90	100	230	2.650	0.266
	No	40	70	60	170		
Total		80	160	160	400		

The table presents the results of a Chi-square test of independence examining the relationship between Internet usage and GPA. Among students who use the Internet (Yes), 40 have a GPA of less than 2.0, 90 have a GPA between 2.0 and 3.0, and 100 have a GPA between 3.0 and 4.0, totalling 230 students. In contrast, among students who do not use the Internet (No), 40 have a GPA of less than 2.0, 70 have a GPA between 2.0 and 3.0, and 60 have a GPA between 3.0 and 4.0, totalling 170 students. The overall totals are 80 students with a GPA of less than 2.0, 160 students with a GPA between 2.0 and 3.0, and 160 students with a GPA between 3.0 and 4.0, across a total of 400 students. The Chi-square statistic is 2.650, and the p-value is 0.266. Since the p-value is greater than 0.05, the null hypothesis is accepted, indicating that there is no significant association between Internet usage and GPA.

Conclusion

The purpose of this study was to investigate the impact of co-curricular and extracurricular activities on students' academic performance. The study is an empirical examination of generally held beliefs regarding the impact of extracurricular and co-curricular activities on students' academic achievement. Most people believe that extracurricular activities, such as reading books, participating in debates and discussions, taking tests, and participating in class activities, have little bearing on students' academic achievement. However, the research concludes that academic success is independent of co-curricular and extracurricular activities, defying widespread assumptions that are founded on an illogical and uninformed perspective. It is hypothesized that these kinds of exercises hinder pupils' capacity to learn. Instead, these kinds of exercises improve pupils' capacity for learning. Students can gain a variety of firsthand experiences through activities such as using the internet, watching TV, reading newspapers, attending seminars, and engaging in group discussions. Students' personalities are positively impacted by it. Students' confidence levels, interpersonal and communication abilities, and communication skills are all improved by these exercises. The pupils' academic achievement greatly depends on each of these abilities.

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