
Impact of Co-Curricular Activities on the Academic Performance of Secondary School Level Students: An Ex-Post Facto Research Study

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Abstract

The aim of this ex post facto research study was to evaluate the effect of co-curricular activities on academic performance of secondary level students. Non-probability convenient sampling technique was used. The sample population was chosen from a federal government secondary level girl's school of Chaklala Cantt. There were a total of 52 students who participated in the co-curricular activities at secondary level. The population of interest was not large so all the population was selected as a sample. First term marks percentage was collected as a pretest score, because first term was conducted before the implementation of CCAs. And the second term result was considered as a posttest score because the second term was held after the co-curricular activities. After data collection, data was analyzed on SPSS. The normality tests shown that the data was not normal so the non-parametric testing has been applied to analyze the hypothesis. P value was 0.002. The results found that there was significant difference in the academic performance of secondary school level students before and after the participation of CCAs. Then the direction of difference was analyzed by Wilcoxon rank test. The results of statistical testing proved that there was a significant positive difference in the academic performance of secondary level students before and after the participation in CCAs. The findings of the statistical test had proved that the CCAs had positive impact on academic performance of secondary level students. It was highly recommended that in order to improve the academic performance of students there is a crucial need of students to participate in the CCAs. The awareness of positive impacts of CCAs should be spread among the students as well as in the teachers, to promote the participation of students in CCAs.

Keywords: Co- Curricular Activities, Academic Performance, Secondary Level Students

Introduction:

Education is an ongoing process, consists of all curricular and co-curricular activities. Curricular and co-curricular both activities help in the holistic development of students. Co-curricular activities include many activities such as writing competitions, declamations, sketching, painting, quizzes and sports etc. (Khanna,2019). Co-curricular activities contribute in the intellectual, social and emotional development of students. Actually these activities are not separate from the

curricular activities. These activities provide students the practical experience of the complementary basic curriculum, to inculcate creativity, boost confidence, teamwork and ethical development of students (shani, 2021).

Researches have been conducted to explore the benefits of student's engagement in co-curricular activities. Co-curricular activities improve the ability to concentrate, manage time effectively and self-discipline in students (Singh and shani, 2020). These activities improve the skills in students to improve the academic performance such as critical thinking, problem solving and communication skills (esa et al, 2015). In addition, the students who tends to participate in the co-curricular activities, are more confident, motivated and having higher achievement level (Fredrick and Eccles, 2006).

Research based evidences are available, which suggests that there is positive correlation between the co-curricular activities engagement and academic achievement of students. Students who participates in the extra-curricular activities achieve higher grades in their academics as compared to those who do not participate in the extra-curricular activities (marsh and kleitman, 2002). Similarly, a study conducted by darling et al. concluded that students participated in the activities other than curricular tend to have more positive attitude towards their academics and school. With reference to the developing countries like Pakistan, it's an essential need to merge the extra-curricular activities in the curriculum for the holistic and all-rounder development of children to meet the 21st century demands and meet the challenges (Hassan and akram, 2020).

It is crucial to investigate the impacts of extra-curricular activities on students' academic performance, for better understanding of how educational system can merge the curricular activities with co-curricular activities for a well-balanced approach to achieve educational objectives and wholesome development of students. The given research paper aims to investigate the co relation between participation of students in the co-curricular activities and their academic performance.

The education system of Pakistan is divided into three main categories; the public schools, private schools and madrassas. Three of them different from one another with respect to curriculum design, teaching methodology, provision of facilities and extra-curricular activities (rehman and khan, 2021). With respect to the provision of extra-curricular activities, public and private schools differ. The public schools due to lack of fund cannot organize the extra-curricular activities at the broader level. Lack of fund and inadequate facilities and infrastructure restrict and bound the institution for the extra-curricular activities (Malik and Salem, 2019). On the other hand, private schools, specifically those schools who follow the international standards and curriculum pay more focus on extra-curricular activities (Hassan and akram, 2020).

The madrassa system that is the religious education system gives less emphasis on co-curricular activities and out maximum stress on their academic religious teachings. However, the ministry of federal education and professional training recent reforms instructed the madrassas to include the co-curricular activities in their structured system to increase the holistic development of their students (government of Pakistan, 2022). These reforms show the national interests in the growth and development of youth. (Khalid, 2021). the national education policy (2017) and the single national curriculum (2021) considered the extracurricular activities as an important part of curriculum of school education. The mentioned extracurricular activities are sports participation and activity based learning, are crucial for the development of creativity and social responsibility in the students in other words necessary for the wholesome development of individuals (ministry of federal education and professional training, 2021). Rural and urban disparities are a separate issue (shah and jabeen, 2020).

Another major educational system in Pakistan's educational settings are federal directorate of educational development and federal educational institutions cantt and garrison. The given paper

is concerned with the federal government educational institutions, specifically an institution of Chaklala Cantt. The federal government educational institution system is operating under the army directorate. This system emphasized the extra-curricular activities the most. The co-curricular activities are mentioned in the academic calendar and the most students are given the chances of participation.

These institutions concerned the holistic development of students with the help of blended learning and the addition of the extracurricular activities (Naseer & Hussain, 2021). The co-curricular activities designed to improve the performance of individuals in all walks of life in future (directorate of FGEI, 2022). The curricular activities are of wide range. the included categories are English and Urdu essay writing, declamation, story writing, photography, quizzes, sports, singing, Naat and Qirat competitions, science models exhibitions etc. it is being considered that the co-curricular activities are the essential aspects of the curriculum, not the optional, all the students must take part in these activities. It's the right of the students (government of Pakistan, 2022).

The co-curricular activities develop so many characteristics and qualities in the students, it increases the self confidence in the students, increases the self-expression, make the student confident. These activities promote the leadership qualities and teamwork in the students (Fredrick and Eccles, 2006).

The research based evidences have shown that the co-curricular activities in the Pakistan educational systems, improves the performance and social skills in the students who participated (Ali and Raza, 2022). Moreover, there is crucial need to check the effect of CCAs on the academic performance of students who involved in these activities. There are very few researches have been conducted to explore the effects of co-curricular activities on students, in the federal government educational institutions. This research gap possibly can be filled with the given research paper.

Objectives of the Study:

The objective of the study was to explore the effects of CCAs on the academic performance of the secondary level students.

Hypothesis of the study:

H_{A1}: There is a significant positive difference in the academic performance of secondary school level students before and after the participation in CCAs.

Study Design:

The study design of given research was ex post facto research study design. To check and find the relation between two variables, that have already happened, and no any manipulation of variables maybe possible.

Population:

Secondary level students who participated in the co-curricular activities held at institution as well as regional level, were the target population of the given research study.

Inclusion Criteria:

The inclusion criteria of the sample population selected for the research study was as follows:

Studying at secondary level

Participated in the co-curricular activities in the academic year

Aged between 13-16 years

Sample:

The convenient sampling technique has been used in the given research study, which is a sub type of non-probability sampling. The sample population was selected from an institution of federal Government educational institutions, Chaklala Cantt. The sample size was 52.

Data Collection Method:

The given research study was employed the ex post facto research design to investigate the effects of co-curricular activities on academic performance of the secondary level students. The study was conducted in an institute of FGEIs Chaklala Cantt. The data of those students of grade 9th and 10th were collected for the research who had participated in the recent co-curricular activities, held in the institution. The results of first term of students had been marked as pretest data. After the first term the co-curricular activities had been conducted. After the CCAs the second term exams had been started, so the marks of second term result had been marked as the posttest data. A total of 52 students of secondary level were participated in the CCAs, so the sample size was 52. The record of students, those who participated in the CCAs, was fetched from the school CCAs register. After confirming the CCAs student's data, the pretest and posttest data of these students were collected from the school result register. The researcher has followed the ethical considerations, and gets the prior permission from the head of institution, before the collection of data from the school record.

Variables of the study:

The independent variable of the given research study was CCAs i.e. sports, declamation, essay writing, story writing, photography, naat, qirat, singing.

The dependent variable of the study was the academic performance i.e. evaluated from the marks percentage of first term and second term result of the participants.

Data analysis:

For data analysis SPSS have been used.

Descriptive statistics:**Table 1: Statistics of data**

		1st term percentage	2nd term percentage
N	Valid	52	52
	Missing	0	0
Mean		64.9038	67.9615
Minimum		45.00	49.00
Maximum		95.00	97.00

Table 1 showing the statistics of the collected data. It has been shown that, as the sample size was 52, all the responses were valid and no any data was missing.

Table 2 : Descriptive Statistics of data

	N	Minimum	Maximum	Mean	Std. Deviation
1st term percentage	52	45.00	95.00	64.9038	13.71311
2nd term percentage	52	49.00	97.00	67.9615	12.22335
Valid N (listwise)	52				

Table 2 showing the descriptive statistics of the pretest and posttest data. The mean score of pretest data i.e. the first term percentage was 64. And the mean score of posttest data was 67. And the standard deviation was 13.71311 and 12.223 respectively.

Table 3: Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
1st term percentage	52	100.0%	0	0.0%	52	100.0%
2nd term percentage	52	100.0%	0	0.0%	52	100.0%

Table 3 shows the case processing summary of the collected pretest and posttest scores.

Table 4: Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	df	Sig.
1st term percentage	.151	52	.005	.938	52	.009
2nd term percentage	.141	52	.012	.948	52	.023

Lilliefors Significance Correction

Table 4 shows the report of data normality tests. The pretest and posttest scores of Kolmogorov-smirnov and shapiro-wilk test shows that the data was nor distributed in a normal pattern. It clearly indicated that the non-parametric testing could be applied to hypothesis testing. Inferential statistics:

H_{A1}: there is significant positive difference in the academic performance of secondary school level students before and after the participation of CCAs.

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The median of differences between 1st term percentage and 2nd term percentage equals 0.	Related-Samples Wilcoxon Signed Rank Test	.002	Reject the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

The hypothesis test summary of table 5 clearly show that the non-parametric testing results reject the null hypothesis. So it had been accepted that there was a significant difference in the academic performance of secondary school level students before and after the participation of CCAs. In order to check the direction of the relation between the academic performance of the students and the participation of CCAs, the Wilcoxon signed ranks test has been applied.

Table 6: Wilcoxon signed Ranks

		N	Mean Rank	Sum of Ranks
2nd term percentage - 1st term percentage	Negative Ranks	11 ^a	25.86	284.50
	Positive Ranks	37 ^b	24.09	891.50
	Ties	4 ^c		
	Total	52		

- a. 2nd term percentage < 1st term percentage
- b. 2nd term percentage > 1st term percentage
- c. 2nd term percentage = 1st term percentage

Table 7: Test Statistics^a	
	2nd term percentage - 1st term percentage
Z	-3.119 ^b
Asymp. Sig. (2-tailed)	.002

- a. Wilcoxon Signed Ranks Test
- b. Based on negative ranks.

The table Wilcoxon signed rank test indicated that the negative ranks were 11 and the positive ranks were 37. There was a huge difference in the positive and negative ranks. The positive ranks were higher than the negative ranks, indicates that the statistically significant difference was positive. There was a positive significant difference in academic results before and after the CCAs participation. The hypothesis was accepted and it has been shown that the CCAs had positive impact on the academic performance of secondary school level students.

Recommendations:

After the analysis of the data in given research, and the findings of the related literature, the following recommendations have been proposed:

The co-curricular activities should be integrated into the curriculum and the academic calendar of the institutions. Structured activities should be included in the timetable to improve the academic performance of students.

The policies should be developed at government level to regulate the CCAs specially sports events across the institutions. The CCAs participation should be added in the quality indicator of school. The CCAs specific training should be given to the teaching staff of the school to promote these activities in the proper manner effectively, to enhance the outcomes of the said activities.

The government should invest funds to facilitate the institutions to promote the CCAs annually, monthly or weekly.

The students and teachers should be well aware about the benefits of co-curricular activities in enhancing the academic performance of the students. The students should be motivated to participate in these activities regularly. Parents should also facilitate their children in this regard. Further researches should be conducted to evaluate the findings of the research at the large scale with the large number of population and with more than one institute. The research should be conducted at the regional as well as zonal level to assess the effects.

References:

- Ali, F., & Raza, S. (2022). The role of co-curricular activities in students' academic achievement: Evidence from secondary schools in Lahore. *Journal of Education and Educational Development*, 9(1), 35–49. <https://doi.org/10.22555/joeed.v9i1.2345>
- Ali, F., & Raza, S. (2022). The role of co-curricular activities in students' academic achievement: Evidence from secondary schools in Lahore. *Journal of Education and Educational Development*, 9(1), 35–49.

- Darling, N., Caldwell, L. L., & Smith, R. (2005). Participation in school-based extracurricular activities and adolescent adjustment. *Journal of Leisure Research*, 37(1), 51–76. <https://doi.org/10.1080/00222216.2005.11950040>
- Directorate of FGEIs. (2022). Annual report on educational activities 2021–2022. Federal Government Educational Institutions (Cantt/Garrison), Rawalpindi, Pakistan.
- Directorate of FGEIs. (2022). Annual report on educational activities 2021–2022. Federal Government Educational Institutions (Cantt/Garrison), Rawalpindi, Pakistan.
- Esa, A., Ibrahim, N., & Mohamed, A. (2015). Co-curricular activities and students' academic achievements: A case study. *Asian Social Science*, 11(9), 245–252. <https://doi.org/10.5539/ass.v11n9p245>
- Federal Directorate of Education. (2023). About FDE: Institutional overview and programs. Ministry of Federal Education and Professional Training, Islamabad, Pakistan. Retrieved from <https://fde.gov.pk>
- Fredricks, J. A., & Eccles, J. S. (2006). Is extracurricular participation associated with beneficial outcomes? Concurrent and longitudinal relations. *Developmental Psychology*, 42(4), 698–713. <https://doi.org/10.1037/0012-1649.42.4.698>
- Government of Pakistan. (2022). National Education Policy reforms and madaris integration initiatives. Ministry of Federal Education and Professional Training, Islamabad, Pakistan.
- Government of Pakistan. (2022). National Education Policy reforms and institutional performance review. Ministry of Federal Education and Professional Training, Islamabad, Pakistan.
- Hassan, S., & Akram, M. (2020). Influence of co-curricular activities on students' academic achievement at secondary level in Pakistan. *Bulletin of Education and Research*, 42(1), 45–58.
- Hassan, S., & Akram, M. (2020). Influence of co-curricular activities on students' academic achievement at secondary level in Pakistan. *Bulletin of Education and Research*, 42(1), 45–58.
- Javed, R., & Ahmed, S. (2022). Role of Federal Government Model Schools in promoting co-curricular activities: A case study of Islamabad region. *Journal of Education and Practice*, 13(5), 101–112.
- Javed, R., & Ahmed, S. (2022). Role of Federal Government Model Schools in promoting co-curricular activities: A case study of Islamabad region. *Journal of Education and Practice*, 13(5), 101–112.
- Khalid, A. (2021). Integration of co-curricular activities in religious education: Challenges and prospects in Pakistan. *Pakistan Journal of Islamic Research*, 17(2), 98–112.
- Khan, M. A., & Rehman, F. (2021). Educational practices and activity-based learning in FGEIs: An evaluative study. *Pakistan Journal of Educational Administration*, 11(2), 55–68.
- Khanna, V. (2019). Role of co-curricular activities in student's life: A study of secondary schools. *International Journal of Research in Social Sciences*, 9(2), 123–133.
- Malik, A., & Qureshi, S. (2020). The impact of co-curricular engagement on student performance in military-administered educational institutions. *Bulletin of Education and Research*, 42(2), 89–104.
- Malik, S., & Saleem, M. (2019). Comparative study of co-curricular opportunities in public and private secondary schools of Punjab. *Pakistan Journal of Social Sciences*, 39(2), 401–412.
- Marsh, H. W., & Kleitman, S. (2002). Extracurricular school activities: The good, the bad, and the nonlinear. *Harvard Educational Review*, 72(4), 464–514. <https://doi.org/10.17763/haer.72.4.051388703v7v7736>

- Ministry of Federal Education and Professional Training. (2021). Single National Curriculum framework 2020–2021 (Grades I–XII). Government of Pakistan.
- Naseer, M., & Hussain, T. (2021). Co-curricular activities and personality development among students of FGEIs (Cantt/Garrison). *Pakistan Journal of Educational Studies*, 38(2), 77–89.
- Naseer, M., & Hussain, T. (2021). Co-curricular activities and personality development among students of FGEIs (Cantt/Garrison). *Pakistan Journal of Educational Studies*, 38(2), 77–89.
- Rehman, A., & Khan, I. (2021). Educational systems in Pakistan: An overview of challenges and reforms. *International Journal of Education and Pedagogy*, 3(4), 22–30.
- Sahni, J. (2021). The role of co-curricular activities in enhancing students' academic performance and personality development. *Journal of Education and Practice*, 12(3), 14–22.
- Shah, N., & Jabeen, F. (2020). Disparities in co-curricular participation between urban and rural schools of Sindh. *Journal of Educational Research*, 23(2), 129–144.
- Singh, A., & Saini, R. (2020). Effect of co-curricular activities on academic achievement of senior secondary school students. *International Journal of Advanced Education and Research*, 5(1), 80–84.