

Original Article

Effects of Co-Curricular Activities on Academic Performance of Elementary School Students

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ABSTRACT

Background: Co-curricular activities (CCAs) have been increasingly recognized for their pivotal role in enhancing both academic performance and overall student development. These activities complement traditional learning by fostering a range of skills crucial for personal and academic growth.

Objective: This study aims to evaluate the effects of co-curricular activities on the academic performance of sixth-grade students at Government Girls High School Bharth, Sialkot, providing insights into how these activities influence educational outcomes.

Methods: A quantitative, experimental design was employed involving 98 sixth-grade students who were randomly assigned to either the experimental (n=36) or control group (n=36). The intervention included various CCAs such as drama, quiz, painting, and sports over two months. Data were collected using pre- and post-tests from the Urdu textbooks, with the results analyzed using SPSS version 25 to conduct t-tests and calculate means and standard deviations.

Results: The pre-test results showed no significant difference between the groups (experimental group mean=14.97, SD=2.560; control group mean=14.03, SD=2.667; $p=.131$). Post-intervention, the experimental group exhibited a significant improvement in scores (mean=16.69, SD=2.806) compared to the control group (mean=12.69, SD=3.206), with $p<.0001$ indicating a substantial impact of CCAs on student performance.

Conclusion: The study confirms that engagement in co-curricular activities significantly boosts academic performance among students, suggesting that such activities should be integral to educational curricula to promote comprehensive student development.

Keywords: Co-curricular activities, academic performance, student development, educational outcomes, experimental study, quantitative research.

INTRODUCTION

Co-curricular activities (CCAs), encompassing a variety of non-academic programs, have been recognized for their integral role in enhancing the holistic development of students within the educational landscape. These activities, which include sports, arts, debate clubs, and various competitions, serve as a complement to the academic curriculum, fostering a range of skills from teamwork to personal discipline(1,2,3).

Research into the effects of CCAs on student outcomes indicates a multifaceted impact on academic performance and personal development. For example, studies have shown that engagement in CCAs contributes positively to students' academic achievements, attendance rates, and emotional literacy. This is particularly evident in findings by Munir and Zaheer (2021), who noted that participation in such activities not only enhances students' sense of belonging to their educational institutions but also reduces dropout rates. Furthermore, Choi (2023) underscores the importance of physical education and university sports clubs in fostering functional and emotional skills that are crucial for academic and personal growth(4).

The historical roots of CCAs trace back to institutions like Harvard and Yale, where they originated as extracurricular activities. These activities have evolved from their initial forms of literary and debate clubs to include a diverse array of clubs and athletic teams, as

noted by Massoni (2011). This evolution reflects a growing recognition of the importance of providing students with opportunities to pursue interests outside the traditional academic curriculum(5).

The impact of CCAs on students with special educational needs has also been a focus of recent studies. Researchers like Esa and Izam (2015), and Farman et al. (2018) have found that CCAs significantly enhance the academic performance and social integration of students with learning disabilities. These activities provide a supportive environment where students can excel at their own pace and interact with peers in non-academic settings, which is essential for building self-confidence and social skills(6).

Additionally, the role of CCAs in supporting the educational trajectories of students cannot be overstated. Cottrell et al. (2017) examined the correlation between participation in extracurricular activities and reduced dropout rates, indicating that these activities are crucial not just for academic success but for fostering resilience and persistence among students. This is further supported by studies like those of Dunlosky et al. (2013), which demonstrate the positive effects of student involvement in CCAs on cognitive development(7).

In conclusion, the breadth of research underscores the significant benefits of co-curricular activities in shaping well-rounded individuals who are not only academically proficient but also skilled in various interpersonal and practical areas. The evidence points to a robust correlation between CCA participation and enhanced student performance, suggesting that these activities should be an integral component of educational programs to support both academic and personal development. This holistic approach is crucial in preparing students to meet the challenges of modern education and beyond(8).

MATERIAL AND METHODS

This study was designed as a quantitative, experimental investigation to assess the impact of co-curricular activities on the academic performance of students. Conducted at the Government Girls High School Bharth, Sialkot, the study involved a total of 98 sixth-grade students. These students were divided into two sections, each containing 50 and 48 students respectively(9).

A group sampling technique was employed to select participants for this research. Initially, students were organized into eight groups, each consisting of 12 members. From these, six groups were chosen through random sampling for the pre-test, resulting in a sample size of 72 students. Subsequently, these students were evenly divided into control and experimental groups, each comprising 36 students(10).

The instruments used for data collection included a pre-test and a post-test. The pre-test was constructed based on the last five chapters of the class 5 Urdu textbook, and included various question types such as question-answers, word meanings, word sentences, and fill-in-the-blanks, culminating in a total of 20 marks(11). The post-test mirrored this format but was derived from the first five chapters of the class 6 Urdu textbook. Both tests were meticulously reviewed by the respective Urdu teachers, Ms. Tasleem and Ms. Itrat, to ensure content validity(12).

The intervention consisted of a series of co-curricular activities including drama, quiz, painting, debate, singing, cricket, and ludo, which were facilitated by Ms. Zareena, the school's physical trainer holding a B.A. degree. These activities spanned a period of two months, with two sessions allocated weekly. To compensate for the time spent on these activities, a zero period of 10 minutes was conducted by Ms. Itrat and Ms. Tasleem for both the control and experimental groups to cover any potential academic gaps(13).

Data were collected at the end of the intervention through the administration of the post-test. Ethical considerations were strictly adhered to throughout the research process, with all procedures being conducted in accordance with the Helsinki Declaration. Informed consent was obtained from all participants' guardians, and the study ensured confidentiality and the right to withdraw at any time without consequence(14).

Data analysis was performed using SPSS version 25. The statistical methods applied included the calculation of means, standard deviations, and t-tests to compare the academic achievements of the control and experimental groups. Correlational analyses were also conducted to explore the relationships between participation in co-curricular activities and academic performance(12).

The results were interpreted to assess the effectiveness of co-curricular activities in enhancing academic outcomes, providing a comprehensive understanding of their role in educational settings.

RESULTS

The analysis of the study provides insight into the impact of co-curricular activities on the academic performance of the students participating in the experiment. Initially, both the experimental and control groups were equally distributed with 36 students each, as shown in Table 1. The distribution was carefully balanced to ensure validity in the comparison of results(15).

Before the intervention, the pretest results for both groups indicated that the students' performance was relatively similar. The control group had an average score of 14.03 with a standard deviation of 2.667, while the experimental group scored slightly higher with an average of 14.97 and a standard deviation of 2.560, as detailed in Table 2. The t-test results for the pretest data showed a t-

value of -1.527 with degrees of freedom (Df) calculated at 70 for the control group and 69.927 for the experimental group, both resulting in a significance (Sig.) value of .131. These results suggest that there were no significant differences in the academic performance between the two groups at the onset of the study(16).

The intervention involving co-curricular activities was then implemented over a period of two months. Following this period, the posttest scores were significantly different. The control group's posttest results showed a decrease in performance with an average score of 12.69 and an increased standard deviation of 3.206. In contrast, the experimental group exhibited a notable improvement, achieving an average score of 16.69 with a standard deviation of 2.806. The t-test for the posttest scores demonstrated a significant difference, with a t-value of -6.073. The degrees of freedom for the control group were 70, and for the experimental group, it was slightly lower at 68.797, both with a significance value of .000, indicating highly significant differences post-intervention (Table 3).

Table 1: Student Distribution after Pretest

S.No	Groups	Students in Group
1	Experimental Group	36
2	Control Group	36

Table 2: Comparison of Means and Standard Deviations of Experimental and Control Group on Pretest

Groups	N	Mean	S.D	T	Df	Sig.
Control Group	36	14.03	2.667	-1.527	70	.131
Experimental Group	36	14.97	2.560	-1.527	69.927	.131

Table 3: Comparison of Mean and Standard Deviations of Control Group and Experimental Group on Posttest

Groups	N	Mean	S.D	T	Df	Sig.
Control Group	36	12.69	3.206	-6.073	70	.000
Experimental Group	36	16.69	2.806	-6.073	68.797	.000

These findings underscore the positive impact of co-curricular activities on students' academic outcomes. The experimental group's enhanced performance in the posttest highlights the benefits of integrating such activities within the educational framework, suggesting that these activities not only complement but also enrich the academic curriculum by potentially boosting students' learning capabilities and performance(17).

DISCUSSION

The discussion of the study's findings underscores the pivotal role of co-curricular activities (CCAs) in enhancing students' academic performance and overall development. The observed enthusiasm and motivation among students participating in CCAs reflect a positive behavioral shift, which correlates with improved academic outcomes. This aligns with previous research, such as that conducted by Ferman et al. (2018), which similarly concluded that CCAs significantly impact students' academic achievements(18). The quantitative data from the experimental and control groups revealed that the experimental group, which engaged in various CCAs, exhibited marked improvement in post-test scores compared to the control group, which did not participate in such activities. This disparity in performance underscores the effectiveness of CCAs in fostering not only academic success but also in developing critical life skills and motivation among students. Studies by Nonis & Hudson (2010) and Ananya (2017) have supported these findings, suggesting that CCAs contribute positively to academic success and student engagement(19).

Despite the clear benefits, the study faced limitations such as the small sample size and the short duration of the intervention, which might affect the generalizability of the results. Additionally, the study focused solely on one educational institution, which may not represent the diverse educational settings across different regions(20).

The positive correlation between CCAs and academic performance highlighted in this study reinforces the necessity for educational policies to integrate these activities into the school curriculum. This is particularly relevant for developing countries like Pakistan, where educational reforms can significantly influence the socio-economic development of the country. The integration of new teaching methods and technologies, as suggested by current educational trends, could further enhance the effectiveness of CCAs(21).

From the findings, several recommendations can be drawn. Firstly, it is imperative that schools allocate specific times for CCAs within the school timetable to ensure that all students have the opportunity to engage in these beneficial activities. Hiring specialized staff

to oversee and report on the progress of these activities can also emphasize their importance and ensure their effective implementation. Moreover, the development of a supportive environment where students are neither forced into participation nor discouraged from taking part is crucial. Each student's interests and preferences should be considered to maximize the benefit of CCAs(22).

Additionally, maintaining a balance between regular academic schedules and CCAs is vital, as excessive involvement could detract from academic pursuits. A strategic approach to scheduling and time management can mitigate potential negative impacts on students' academic responsibilities(23).

Overall, the study confirms that co-curricular activities play a crucial role in shaping well-rounded individuals by enhancing both their academic performance and personal development. These activities not only complement traditional academic learning but also prepare students to meet various challenges, thereby contributing to their holistic growth and readiness for future responsibilities(24,25).

CONCLUSION

The study conclusively demonstrates that co-curricular activities significantly enhance academic performance and personal development among students. This has profound implications for human healthcare, emphasizing the importance of a holistic educational approach that includes physical, mental, and social development activities. By integrating co-curricular activities into the educational system, we can foster healthier, more resilient individuals who are not only academically proficient but also better equipped to handle life's challenges, ultimately contributing to a healthier society.

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