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The Effectiveness of Co-curricular Activities on Academic Achievements of Secondary School Students in District Abbottabad Pakistan - A Case Study

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Abstract

This research was conducted to examine the effect of co-curricular activities on academic achievements of secondary school students in District Abbottabad. The research is experimental in nature, pre-test Post–test equivalent group design was selected for this purpose. In this study, an achievement test covering four chapters of mathematics and four lessons of English was used as measuring instrument. Depending upon pre-test scores, 200 students of 10th class were divided into two equal groups (n=100) named as experimental group and control group. The experimental group was involved in co-curricular activities and the control group did not participate in any activity beyond the classroom. There were two types of co-curricular activities. First physical i.e., games, athletics and P.T (physical training) etc and the other was debates, drama speeches etc. The experimental group carried out activities for forty minutes daily for twelve weeks. The post-test was administered after twelve weeks. The pre-test and post-test scores of the experimental and control groups served as data for this study. The analysis of data revealed that on the whole, experimental groups showed better performance than controlled group. Hence the ultimate results of the study indicated that co-curricular activities can contribute for enhancing academic achievements of the secondary school students.

Keywords: Co-curricular activities, Academics achievements

1. Introduction

Most of the classical and almost all modern educationists admit that education is not just the memorization of certain facts, figures and skills but it is all-round development of the students. So it is logical to think that co-curricular activities are the integral part of educational system. Kumar et. al (2004) commented that co-curricular activities hold a place of great importance in the field of education for the all round development of children. Mentions have been made in various educational books, commission reports and educational plan regarding the policy, programme, activities and significance of these activities. They further added that for social, physical and spiritual development co-curricular activities are prerequisite.

Co-curricular activities are the activities performed by students that do not fall in the realm of the ordinary curriculum of educational institution (wikipedia). Once these were regarded as extra-curricular activities but due to their recognition of their importance, now these are called co-curricular activities. Whether these activities have any relation with academic achievement or not, these are important in their own right due to many reasons. Many educationists believe that these active increase social interaction, enhance leadership quality, give a chance of healthy recreation, make students self disciplined and confident. Marsh and Kleitman (2002) tested whether participation in co-curricular activities influences academic outcomes even when the effects of a student's ability, school, personal and family characteristics, and numerous other factors are controlled. They find that joining more co-curricular activities and spending more time participating in them is associated with higher grades, more difficult courses selected, more time spent on homework, more colleges applied to, a higher likelihood of starting and finishing college, and a higher final degree earned, even when other factors are controlled. Size of the sample for this study was 12084 students which further increased the reliability of the results. Broh (2002) stated that researchers have found positive associations between extracurricular participation and academic achievement. Darling et al. (2005), compared the students who participated in co-curricular and who did not participate in these activities and

commented as, "students who participated in school-based extracurricular activities had higher grades, higher academic aspirations, and better academic attitudes than those who were not involved in extracurricular activities at all" Thompson and Austin (2003) found no significant relationship between co-curricular activities and the academic grades. Mahoney et al (2003) found a positive relationship between co-curricular activities and inter-personal competencies, high aspiration and better attention level. Hollway (2002) studied effect on motivation and found it positive too. Similarly Bauer and Liang, (2003) showed positive effect on critical thinking, social and personal maturity.

2. Research Methodology

The study aimed at examining the effect of co-curricular activities on academic achievement of secondary school students. The choice of suitable design for this experiment was the basic step in this research. Keeping in view the various factors affecting the internal and external validity of experimental design, pre-test post-test equivalent group design was considered a suitable research design for this experiment. In order to conduct this experiment, four high schools (a government boys, a government girls, a private boys and a private girls) having suitable conditions were selected in District Abbottabad. From each selected school 50 students of 10^{th} class were divided into two equivalent groups on the basis of pre-test scores using matched random sampling technique. In each sample school one group was regarded as experimental and other as control group. Thus the total population for this study was 200. For collecting data, the pre-test/post-test was constructed after a thorough review of the techniques of test contraction. This test was comprised on 100 objectives test items. The test was validated by pilot testing as well as judgmental validation. For the reliability of the test, split-half method was used and the reliability of the test was found to be 0.83. For treatment the experimental groups of all the four schools were engaged in co-curricular activities of their own choice. Time allocated for the activities was forty minutes daily throughout the week. No difference existed between any other variable i.e. teaching method, teachers, academic time etc. Control groups were allowed to do whatever they wanted during those forty minutes. After treatment of twelve weeks, the post-test was administered to all the experimental and control groups. Students' scores on pre-test and post-test served as data for this research. For data analysis, mean score, standard deviation and t–test were used as statistical tools.

3. Null Hypotheses of Study

Following hypotheses were tested in order to achieve the objectives of the study

H_{O1} There is no significant difference between the academic achievements score of the students involved in co-curricular activities as compared to those who do not take part in co-curricular activities in Govt school for boys.

H_{O2} There is no significant difference between the academic achievements score of the students involved in co-curricular activities as compared to those who do not take part in co-curricular activities in Govt school for girls

H_{O3} There is no significant difference between the academic achievements score of the students involved in co-curricular activities as compared to those who do not take part in co-curricular activities in private school for boys.

H_{O4} There is no significant difference between the academic achievements score of the students involved in co-curricular activities as compared to those who do not take part in co-curricular activities in private school for girls.

4. Results and discussion

Developing the students mentally as well as physically creates an ideal learning environment and it also helps in achieving the aims of education. Physical development of the students may also be an objective of education and if the situation is thus that one i.e. co-curricular activities help in enhancing the other i.e. academic achievement. Limited time activities can help in improving the academic performance of the students. The findings of this study i.e. co-curricular activities have a significant effect on the academic achievement are supported by the findings of Elliott, (2009); Rashid and Sasidhar (2005); Guest, Andrew, and Schneider (2003) and Marsh and Kleitman (2002). While Broh (2002) ,found no relation of the above mentioned variables. The raw scores of the students of experimental and control groups were arranged and then analyzed by using mean score, standard deviation and t-test as statistical tools.

5. Conclusions

Participation in co-curricular activities is beneficial for government and private school as well as boys and girls. There was no significant difference between the achievement level of government boys (control and experimental groups), government girls (control and experimental groups) private boys (control and experimental groups) and private girls (control and experimental groups) on pre-test scores. An improvement was observed after the treatment in control and experimental groups of all the four types of schools. The performance of experimental groups of government boys, government girls and private girls was significantly better than the performance of control groups of respective schools. While there was no significant difference between the performance of experimental and control group of the private boys' school on post-test.

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Table 1: Comparison of mean scores of govt boys' school's experimental and control groups on pre-test

Group	N	Mean	S.D	t	P	df
Experimental	25	32.05	8.12			
				0.035	0.972	48
Control	25	31.97	7.98			
p>0.05				Critical value of t at 0.05 = 1.96		

Table 1 shows the comparison of mean score of govt boy school students. No significant difference was found between mean scores of experimental and control groups (p>0.05) on pre-test, Thus both the groups were at the same level of achievement before treatment.

Table 2: Comparison of mean scores of private boy's school's experimental and control groups on

pre-test

Group	N	Mean	S.D	t	P	df
Experimental	25	35.44	7.83			
				0.085	0.933	48
Control	25	35.25	7.96			
p>0.05			Critical value of t at 0.05 = 1.96			

Table 2 shows that there was no significant difference between mean scores of experimental and control groups (p<0.05) on pre-test, Thus both the groups of private school were at the same level of achievement before treatment.

Table 3: Comparison of mean scores of govt girl's school experimental and control groups on pre-test

Group	N	Mean	S.D	t	P	df
Experimental	25	30.51	8.32			
				0.158	0.875	48
Control	25	30.87	7.76			
p>0.05			Critical value of t at 0.05 = 1.96			

Table 3 shows the comparison of mean score of govt girls school's students. No significant difference was found between mean scores of experimental and control groups (p<0.05) on pre-test, Thus both the groups were at the same level of achievement before treatment.

Table 4: Comparison of mean scores of private girls school's experimental and control groups on pre-test

Group	N	Mean	S.D	t	P	df
Experimental	25	32.55	7.36			
				0.158	0.876	48
Control	25	32.89	7.89			
p>0.05			Critical value of t at 0.05 = 1.96			

Table 4 shows the comparison of mean score of private girls school's students. No significant difference was found between mean scores of experimental and control groups (p>0.05) on pre-test, Thus both the groups were at the same level of achievement before treatment.

Table 5: Comparison of mean scores of Govt boys school's experimental and control groups on post-test

Group	N	Mean	S.D	t	P	df
Experimental	25	46.55	9.68			
				3.22	.023	48
Control	25	37.42	10.33			
*p≤0.05			Critical value of t at 0.05 = 1.96			

Table 5 depicts the comparison of mean score of govt boy school students. There was a significant difference between mean scores of experimental and control groups. Mean scores of experimental group was (46.55) with standard deviation (9.68) whereas the mean of control group (37.42) and standard deviation (10.33), while the calculated value of t at 0.05 level is 3.22.

Table 6: Comparison of mean scores of private boy school's experimental and control groups on post-test

Group	N	Mean	S.D	t	P	df

Experimental	25	48.22	11.35			
				1.74	0.88	48
Control	25	42.38	12.34			

p>0.05 Critical value of t at 0.05 = 1.96

Table 6 depicts the comparison of mean score of private boy school students. There was a no significant difference between mean scores of experimental and control groups. Mean scores of experimental group was (48.22) with standard deviation (11.35) whereas the mean of control group (42.38) and standard deviation (12.34), while the calculated value of t at 0.05 level is 1.74.

Table 7: Comparison of mean scores of Govt (girls) school's experimental and control groups on post-test

Group	N	Mean	S.D	t	P	df
Experimental	25	43.23	11.56			
				2.59	0.0127	48
Control	25	34.44	12.43			

*p≤0.05 Critical value of t at 0.05 = 1.96

Table 7 depicts the comparison of mean score of govt girl's school students. There was a significant difference between mean scores of experimental and control groups. Mean scores of experimental group was (43.23) with standard deviation (11.56) whereas the mean of control group (34.44) and standard deviation (12.43), while the calculated value of t at 0.05 level is 2.59.

Table 8: Comparison of mean scores of private (girls) schools experimental and control groups on post-test

Group	N	Mean	S.D	t	P	df
Experimental	25	41.11	9.87			
				2.30	0.0259	48
Control	25	34.17	11.42			

*p≤0.05 Critical value of t at 0.05 = 1.96

Table 8 shows the comparison of mean score of private girl's school students. There was a significant difference between mean scores of experimental and control groups. Mean scores of experimental group was (41.11) with standard deviation (9.87) whereas the mean of control group (34.17) and standard deviation (11.42), while the calculated value of t at 0.05 level is 2.30.