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Teachers' perception of school facilities and its impact on the academic achievement of the secondary school learners

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ABSTRACT

Present research intended to find out the perception of private and public sector school teachers regarding existing facilities of their schools and its impact on the academic achievement of secondary school students. Population of the research was comprised of all male and female teachers working in the public and private sectors schools of Rawalpindi and Islamabad. The results shows that teachers of private sector favorably perceived their school in relation to the facilities which these school are providing to maintain effective teaching learning environment. When achievement of private and public sectors schools was compared it was also found that students of private sector schools scores higher when compared with the public sector schools.

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Introduction

School is a place where learning takes place with appropriate plan and procedure, Effective teaching and learning takes place in those school buildings that are quiet, safe healthy and clean, schools that are improperly constructed or unmaintained can inhibit student learning outcomes due to inability to meet the students learning requirements. As far as the learning facilities are concerned which school supposed to provide include the proper ventilation and thermal comforts, proper lighting, acoustics, building age and quality, school building size, and classroom size, if not proper available these can become potential threat for effective teaching learning process. Effect physical school environment plays a very vital role not only for students, but also important for the teachers, staff, and administrators.

Effective school environment can achieve through physical improvement in the environment, in this regard quality air is one of the important factor which can minimized student and teachers absenteeism, because poor working conditions create health related issues that include asthma, respiratory problems, and sinus infections (EPA, 2006). All these illness are in association with poor indoor air quality, moreover proper ventilation and thermal quality are also vital that impact teaching learning environment. Most of the schools lack proper ventilation systems, students can be affected by poor ventilation systems because they breathe in a greater volume of air in proportion to their body weight compared to adults (Filardo et al, 2006). Due to poor ventilation conditions of schools, many students can suffer from increased headaches, drowsiness and inability to concentrate (Filardo, et al, 2006). Moreover it also decline students' performance in reasoning, typing, and mathematic (Schneider, 2002). Poor thermal quality can also effects students and teachers comfort, which in turn affects students and teachers by, reduced effort, lower effectiveness in class, low morale, and reduce job satisfaction (Moglia, Smith, MacIntosh, & Somers, 2006). Research shows that teachers that

claim to have the ability to control the temperature in their classroom, show higher satisfaction rates along with an increase in student performance. In classrooms setting, lighting plays a vital role for effective teaching learning environment. Research has proven that proper lighting, including daylight, improves test scores, reduces off-task behavior, and increases student achievement (EPA, 2006).

Academic achievement is significant in student life. It is also called success in that area which we learn educational goals. When a person set goals and do hard work after if then a person gets success in that area then it will call achievement. We can measure the academic achievement of the learner through their results of examination. Results can be good or bad on the basis of this we may label them as high achievers & low achievers students. High achievers can be position holders as well due to their hard work and performance in the class their schools also win the position in board of intermediate and secondary education.

Various factors are attached with the academic success of higher achievers or outstanding students it include parents education, economic status, learners study habits, social incentives, teacher qualification appearance and personality, relationship of student and teacher, physical facilities, attention and qualification of parents and motivation.

At along with the public sector, private sector also plays an important role in the attainment of quality education. Many private schools have effective learning environment spacious buildings and motivated young teaching staff than the public sector schools. Moreover private sectors schools are equipped with modern facilities as compared to public sector schools.

School facilities can also be psychological in nature that can improve the maximum productivity in the teaching-learning process. These facilities can affect teachers' abilities and student's learning to perceive knowledge and skills successfully. These facilities are signed to enhance the process of teaching and facilitate the learning process. “

Proper school facilities important for education because it enable a skillful teacher to achieve a level of instructional effectiveness that far exceed what is possible when they are not provided. Without sound school facilities an education program neither can be implemented effectively nor can achieve its objectives, as the process of teaching learning is not mere just to transfer information in a classroom but rather that it takes place with interaction with external atmosphere of the school intend of the present research was to explore the impact of school facilities on the academic achievement of the learners at the secondary level.

Statement of Problem

The problem of the study was to explore teachers 'perception of school facilities and its impact on the academic achievement of public and private sector secondary schools learners.

Objectives

1. To identify the difference in the physical facilities provided by the public and private schools.
2. To find out the students achievements level of private and public sector at the secondary level.
3. To determine the relationship between the physical facilities and student achievement.

Hypotheses

1. Private sectors schools are providing better physical facilities to their students than the government sector schools.
2. Private sector schools focus on physical and learning environment than government sector schools.
3. Curriculum of the private sector schools is applied and based on holistic development (cognitive, physical, emotional, social and spiritual) of child than the curriculum of public sector.
4. Public sector does not offer proper facilities as per child need than the private sector.
5. Private sector provides more challenging learning opportunities to students than public sector.

Population

The population of the study comprised of all teachers and students of the private and public sectors schools of Rawalpindi and Islamabad.

Sample

In research, for the sample selection, the technique of randomization was used. A satisfied random sample of 100 school teachers was selected from 10 schools of Rawalpindi and Islamabad. Five public sector schools and five private sector schools was selected for data collection. Data was collected through the personal visited of the schools with help a research questionnaire the detail description of the instrument is under.

Research Instrument

In this study for measurement of the perception of teachers regarding schools facilities a questionnaire comprised of 29 items and six sub scales, was developed. For the measurement of the academic achievement of the learner the school secondary results of three years were taken to measure the achievement. The detail description of the research instruments is as under,

Facilities for Physical Development

It consists of 5 items (1, 2, 3, 4, and 5)

Facilities for Social Development

It contains 8 items (6, 7, 8, 9, 10, 11, 12, and 13)

Facilities for Emotional Development

It consists 3 items (14, 15, and 16)

Facilities for Academic Development

It has 5 items (17, 18, 19, 20, and 21)

Facilities for Spiritual Development

It contains 3 items (22, 23, and 24)

Facilities for Cognitive Development

It consists of 5 items (25, 26, 27, 28, and 29)

Results

Table 1
Alpha Reliability Coefficient Scale of School Facilities Scale (N 100)

Sub- scales	Alpha coefficient
Facilities for Physical Development	.377
Facilities for Social Development	.713
Facilities for Emotional Development	.308
Facilities for Academic Development	.552
Facilities for Spiritual Development	.339
Facilities for Cognitive Development	.475
Total	.839

Table 1 describes the alpha reliability coefficient of school facilities. From this table it can be seen that all sub scales highly enough Alpha level.

Table 2
Inter-Scales Correlation of Respondents Score on School Facilities (N 100)

Sub scale	Physical	Social	Emotional	Academic	Spiritual	Cognitive
Physical						
Social	.277					
Emotional	.328	.312				
Academic	.026	.115	.262			
Spiritual	.269	.537	.307			
Cognitive	.530	.504	.111	.31	.550	
Total	.472	.782	.431	.543	.651	.685

Table 2 represents the inter scales correlation of school facilities scale. The ranged from .111 to .530. The results show that all sub scales are correlation with each other and significant correlation with the total scale. The high inter scale correlation exists between cognitive and physical. The highest score is 530 and lowest score is 111 exists between emotional and cognitive

Table 3
Ranks Respondents Score on School Facilities (N 100)

Percentile	Scores
5	81
10	91
15	96
20	98
25	99
30	100
35	101
40	102
45	103
50	106
55	108
60	111
65	112
70	112
75	122
80	125
85	125
90	129
95	135

Table 3 represents the percentile ranks of the school facilities scale. This table explains the ranges of score as score ranged from 81 to 35. The score of 99 falls on 25th percentile considered as less facilities provided by the institutions, score of

106 falls on 50th percentile characterize as moderate facilities provided by the institutions and the score of 122 falls 75th percentile as adequate number of facilities provided by the institutions.

Table 4
Age Wise Comparison of Respondent Scores of School Facilities Inventory (N 100)

Age Sub scales	20-30		31-40		41-50		above50	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Physical Facilities	18.82	3.768	20.06	3.301	17.53	3.339	20	3.266
Social Facilities	30.33	4.982	29.28	4.848	26.84	7.267	23	5.598
Emotional Facilities	10.96	2.747	9.06	3.202	8.95	2.718	8.25	2.872
Academic Facilities	17.04	7.444	16.53	3.707	15.79	2.394	18.75	5.62
Spiritual Facilities	12.36	1.51	11.97	1.257	11.47	1.541	11.75	0.957
Cognitive Facilities	20.76	2.069	19.91	3.031	16.68	4.282	17.25	2.50
Total	110.27	13.439	106.81	11.939	97.26	12.534	99	16.31

Table no 4 shows the difference in the perception of different age group teachers score on the schools facilities. From this table it can be seen that perception of younger teachers are more positive towards the existing facilities provided by their respective schools (Mean, 110). The older teachers have low scores towards the existence of schools facilities (M. 99).

Table 5
Gender Wise Comparison of Respondent Scores of School Facilities Inventory (N 100)

Gender	Female		Male	
	Mean	SD	Mean	SD
Physical facilities	19.18	3.424	18.62	4.013
Social facilities	29.97	4.551	26.76	7.361
Emotional facilities	10.1	2.967	9.28	3.15
Academic facilities	7.07	6.386	15.83	2.765
Spiritual facilities	12.27	1.393	11.48	1.43
Cognitive facilities	19.97	2.586	18.59	4.476
Total	108.56	12.785	100.55	14.279

Table no 5 shows the gender wise comparison of the perception of teachers regarding existing schools facilities. From this table it can be seen that female's teachers have the higher mean score as compared with male. As for as different dimensions of school facilities are concerned, on physical facility the females' mean score is 19.18 and the male score is 18.62, in the social female have the mean score is 29.97 and male score is 26.76. In the emotional female have the mean score is 10.1 and male have 9.28. In academic female have the mean score is 7.07 and male score is 15.83 and in other dimensions like spiritual and cognitive are also higher than male.

Table 6
Marital Status Wise Comparison of Respondent Scores of School Facilities Inventory (N 100)

Marital Status Sub scales	Single		Married	
	Mean	SD	Mean	SD
Physical Facilities	19.58	3.945	18.7	3.37
Social Facilities	30.75	5.022	28.08	5.818
Emotional Facilities	10.72	3.086	9.37	2.909
Academic Facilities	17.28	8.29	16.39	3.279
Spiritual Facilities	12.47	1.183	11.8	1.524
Cognitive Facilities	21.08	2.183	18.72	1.524
Total	111.89	14.176	103.06	12.372

Table no 6 shows different perceptions of single and married teachers on school facilities. From this table it can be seen that perception of single teachers are more positive towards the existing facilities provided by their respective schools (Mean, 111.89). The married teachers have low scores towards the existence of schools facilities (M.103.06).

Table 7
Income Wise Comparison of Respondent Scores of School Facilities Inventory (N 100)

Income Sub scales	10,000-30,000		31,000-50,000		Above 50,000	
	Mean	SD	Mean	SD	Mean	SD
Physical facilities	18.8	3.611	19.45	3.675	19	1.414
Social facilities	29.58	5.003	28.15	6.806	26	5.657
Emotional facilities	10.37	2.875	8.85	3.163	10	2.828
Academic facilities	16.62	6.417	16.82	3.795	18	0
Spiritual facilities	12.2	1.427	11.73	1.485	20	0
Cognitive facilities	20.23	2.579	18.42	4.176	17	0
Total	107.8	12.909	103.42	15.139	102	4.243

Table no 7 is showing that the teachers who are under 10,000-30,000 income have higher mean score on school facilities (M.107) the teachers who are above the 50,000 income they are low mean score (M.102).

Table 8
Nature of Job Wise Comparison of Respondent Scores of School Facilities Inventory (N 100)

Nature of job Sub scales	Contract		Permanent	
	Mean	SD	Mean	SD
Physical facilities	18.8	3.611	19.45	3.675
Social facilities	29.58	5.003	28.15	6.806
Emotional facilities	10.37	2.875	8.85	3.163
Academic facilities	16.62	6.417	16.82	3.795
Spiritual facilities	12.2	1.427	11.73	1.485
Cognitive facilities	20.23	2.579	18.42	4.176
Total	107.82	1.912	103.42	23.1

Table no 8 shows different perceptions of contract and permanent teachers on school facilities. From this table it can be seen that perception of contract teachers are more positive towards the existing facilities provided by their respective schools (Mean, 107.82). The permanent teachers have low scores towards the existence of schools facilities (M.103.42).

Table 9
Educational Qualification Wise Comparison of Respondent Scores of School Facilities Inventory (N 100)

Educational qualification Sub scales	Intermediate		Bachelors		Masters		M.Phil	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Physical facilities	16.75	3.304	18.11	3.975	19.42	3.201	20.67	4.967
Social facilities	32.25	0.5	31.57	5.203	32.58	5.407	29.17	10.98
Emotional facilities	11.75	0.5	11.29	2.8	9.31	2.773	7.67	4.633
Academic facilities	15.5	6.137	15.32	4.155	17.48	6.201	16	3.899
Spiritual facilities	12	0	12.14	1.604	12.03	1.293	11.67	2.582
Cognitive facilities	19.75	1.258	19.75	2.977	19.37	3.403	20.67	4.633
Total	108	9.764	108.18	14.466	110.19	12.623	105.83	23.676

Table no 09 shows that the teacher who are Master's degree holders have a positive perception of school facilities as compare to the teachers who have below Master's Degree. Mean of Master's Degree holders are 110.19 as compare to the others who have mean score of 108.18, 108 and 105.83

Table 10
Job Experience Wise Comparison of Respondent Scores of School Facilities Inventory (N 100)

Job experience (years)	5-10		10-15		15-20		Above20	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Physical facilities	19.24	3.902	18.96	2.722	18.87	4.224	18.36	3.107
Social facilities	29.76	4.856	28.91	5.41	29.47	6.578	25.36	7.567
Emotional facilities	10.24	3.057	9.74	2.958	9.67	3.222	8.64	2.803
Academic facilities	15.75	3.934	18.78	9.313	15.73	2.815	18.18	3.516
Spiritual facilities	12.27	1.537	11.78	0.951	11.87	1.506	11.73	1.737
Cognitive facilities	20.71	2.138	19.17	2.918	17.87	5.37	17.45	1.737
Total	107.96	11.512	107.35	15.686	103.47	15.245	99.7	15.551

Table no 10 shows that the teacher who have 5 to 10 years of service have a positive perception of school facilities as compare to the teachers who have above 10 years of experience. Mean of 5 to 10 year experience teachers is 107.96 as compare to the other teachers who have mean score of 107.35, 103.47 and 99.73.

Table 11
Institution Wise Comparison of Respondent Scores of School Facilities Inventory (N 100)

Name of institution	private		public	
	Mean	SD	Mean	SD
Physical facilities	19.63	4.157	18.39	2.797
Social facilities	32.18	3.369	25.78	5.753
Emotional facilities	10.47	3.355	9.22	2.527
Academic facilities	16.57	7.114	16.86	3.44
Spiritual facilities	12.57	1.188	11.49	1.488
Cognitive facilities	21.43	2.166	17.63	3.14
Total	112.84	11.692	99.37	12.162

This table is showing the institution wise comparison of respondents' of school facilities. It is showing that (M=106.24) the private institutions have good school facilities because their mean score is on school facilities as compare to public but the public (M=13.66) it is showing that the public institutions are providing less school facilities.

Table 12
Comparison of Public and Private Sectors on School Facilities (N 100)

Total	Sum of squares	df	mean square	F	Sig.
Between groups	4538.107	1	4538.107	31.917	.000
Within groups	13934.133	98	142.185		
Total	18472.240	99			

Comparison of public and private sectors on school facilities significant

Table 13
Results of Private Sector for the Last Three Years

Year wise Results	Appeared	Percentage of pass	A	B	C	D	E	F
Year2009	252	99.3%	130	83	39	25	-	2
Year2010	350	98.5%	165	133	40	7	-	5
Year2011	357	96.9%	146	127	62	11	-	9

Table 13 shows the results of the private sector schools for the last three years, it appears from the table that in the year 2009 total 252 students were appeared and 130 secured A grade, 83 students achieved B grades , 39 gain C grades , 25 students achieved D, whereas only 2 were unsuccessful total percentage of pass was 99.3%.

In the year 2010 total 350 students were appeared and 165 secured A grade, 133 students achieved B grades, 40 gain C grades, 7 students achieved D, whereas only 5 were unsuccessful total percentage of pass was 98.5%.

The table shows In the year 2011 total 357 students were appeared and 146 secured A grade, 127 students achieved B grades, 62 gain C grades, 11 students achieved D, Whereas 9 students were unsuccessful total percentage of pass was 96.9%.

Table 14
Results of Public Sector For Last Three Years

Year wise Results	Appeared	Percentage of pass	A	B	C	D	E	F
Year 2009	427	87.8%	201	94	62	18	-	46
Year 2010	447	81.4%	158	101	73	32	-	72
Year 2011	412	91.2%	170	86	94	26	-	38

Table 14 shows the results of the public sector schools for the last three years, it appears from the table that in the year 2009 total 427 students were appeared and 201 secured A grade, 94 students achieved B grades , 62 gain C grades , 18 students achieved D, whereas 46 were unsuccessful. Total percentage of pass was 87.8%.

In the year 2010 total 447 students were appeared and 158 secured A grade, 101 students achieved B grades, 73 gain C grades, 32 students achieved D, whereas 72 were unsuccessful total percentage of pass was 81.4%.

The table shows In the year 2011 total 412 students were appeared and 170 secured A grade, 86 students achieved B grades, 94 gain C grades, 26 students achieved D, Whereas 38 students were unsuccessful total percentage of pass was 91.2%.

Discussion

Present study was designed to explore the impact of schools facilities on the academic achievement of secondary schools students of public and private sector. This was a descriptive study which was carefully designed to achieve its objectives through empirical data collections from 100 respondents of 10 schools through a research questionnaire. In order to reach conclusion various statistical analysis were performed such as, Alpha reliability coefficients, mean, SD, Correlation.

The result of study shows that school facilities have a positive impact on the academic achievement of the secondary school students. When results analyzed on the basis of demographic variations it was discovered that this variation also effect on the perception of schools facilities of the schools teaches. Age was one of variable of the study it was found that young teachers perceive school facilities more favorably than the older ones (young teachers Mean 110.27 and older teacher mean 99.09). This may be due to this factor that young teachers are familiar with the modern techniques of teaching and they know that without modern school faculties it is not possible to use the modern techniques of teaching. They also know that school facilities are a source of learning and development. They are fresh and they have a positive point of view regarding their workplace as compared to younger teacher the older teachers are not familiar with the advantages and impact of school facilities. They are not aware of the modern teaching techniques and the impact of facilities on student's achievement. They may have different attitude toward life and work due to their experience they may want to see perfection in everything around them.

As gender is one of the important variable of comparison for this study and when the responses of male and female teachers were analyzed it was found that female teachers

perceive schools facilities positively as compared with male teachers (female, M . 108.56, Male 100.55).

During the study it was also found that the private school teachers have higher mean score on school facilities as compare to public school teachers. It is because of the availability of school facilities in private schools and they experience of using the facilities and experiencing their impact on student's achievement. The score of public school is low because they are unaware of the importance of school facilities and they have not experienced the impact of school facilities on the achievement of students.

When responses of the respondents were analyzed on the variable marital status it was found that unmarried teachers perceived their schools facilities more favorably as compare to married ones Mean, 111.89) as compare to married teachers who have 103.06 mean score on school facilities. This may be due to the factor that the unmarried teachers are young and they have the energy and positive view point regarding their workplace as compare to married teachers. They may have different attitude toward life and work due to their energy and eagerness to learn they may want to see perfection in everything around them. Married teachers have a busy family life so that may be a factor of low mean score

Job nature is an another important variable of comparison for this study and when the responses of contract and permanent teachers were analyzed it was found that contract teachers perceived their schools facilities more favorably as compare to permanent teacher. Mean of contract teachers is 107.82 as compare to permanent teachers who have 103.42 mean score on school facilities. This is due to the factor that the contract teachers are more conscious about the student's achievements and they know that student's achievement is not possible without proper school facilities. In order to get the permanent job they need to have good class result which is not possible without proper facilities. Permanent teacher have a job security and they are less bother about the students as compare to the contract teachers.

Next important variable is the experience of the teacher. During the study it was found that the teacher who are Master's degree holders have a positive perception of school facilities as compare to the teachers who have below Master's Degree. Mean of Master's Degree holders are 110.19 as compare to the others who have mean score of 108.18, 108 and 105.83. The score of Master's Degree holders are high because they have more exposure and know the importance of school facilities. They also know that school facilities are a source of learning and development. The teacher who less education are not familiar with the importance of the school facilities. They are unaware of impact of school facilities on student achievement. They have limited education so their approach and thinking is limited.

During the study it was also found that the less experienced/new teachers have higher Mean score, 107.96 on school facilities as compare to the teachers who are more experienced (Mean score of 107.35, 103.47 and 99.73). It is because of the reason that the new teachers have eager to grow in their field and they are familiar with the new teaching techniques. They know that without the school facilities application of modern teaching techniques are not possible. The new/ less experienced teachers are energetic and hardworking as compare to the experienced teachers too. They want a change in the teaching methodology too. The experienced teachers are

reluctant to change and happy to continue with the old teaching methodology so school facilities do not matter for them.

Findings

1. Students of private sector schools are high achiever as compared to the students of the public sector schools.
2. Percentage of failure is high in the students of public sectors schools.
3. There is a positive correlation between schools facilities and academic achievement of learners.
4. Facilities enhance learning abilities of the learners.
5. Teachers of private sector perceive their Schools facilities favorably as compared with the teachers of public sector secondary schools.
6. Younger teachers perceived their schools more favorably than the older teachers.
7. Female teacher have higher mean score as compared to the male teachers, female mean score is 108.56 and the male mean score is 100.35.
8. Unmarried teachers have higher mean score as compared to the married teachers, unmarried Mean score is 111.89 and married mean score is 103.06.
9. The teacher are under 10,000-30,000 have higher mean score 107.8 the teachers who have above the 50,000 income they are low mean score mean 120.
10. Contract teacher's perception is higher on school facilities mean score is 107.8 and the permanent teachers have low mean score on school facilities 103.42.
11. Private institution has good school facilities because their mean score is 106.24 but the public have low mean score 13.66.

Conclusion

On the basis of the findings, following conclusions were drawing.

1. There is a positive relationship between the school facilities and students achievement.
2. Results of private schools students are better than public schools.
3. School facilities play an important role in the implementation of modern teaching techniques.
4. Private schools are providing better facilities as compared to public schools so Teachers of private. School perceives the school facilities more positively.
5. Young teachers value the school facilities as compared the old age teachers.
6. Job nature effects the perception about school facilities. Contract staff perceives the school facilities more positively.
7. Unmarried teachers perceive the school facilities more positively.

Recommendations

1. Public schools may improve their existing facilities.
2. The available facilities may be properly utilized in the public schools.
3. Public schools may use innovate methods and provide challenge learning environment to the students.
4. Public schools may improve and update their curriculum.
5. Public school may upgrade the science laboratories and computer labs.
6. Public schools should hire train and competent staff and existing staff may be equipped with required trainings.
7. Playground facilities may be upgraded at public school.
8. Playground facilities may be provided in provides schools.
9. Teachers' performance may be evaluated regularly and proper feedback should be provided in public schools.

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