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# Comparative Study of Availability and Quality of Physical Facilities in Public and Private Schools in the Punjab

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## Abstract

This study was aimed at finding out the availability and quality of physical facilities in public and private Elementary schools in Punjab. The sample of the study was drawn from 04 Districts of Punjab. The data were collected from 36 randomly selected A.E.O Marakiz, (nine Marakiz from each selected district and all the elementary schools from each selected Markiz), in this way 167 public elementary schools and 119 private schools were included in the sample. Total respondents were 575. Two questionnaires (one for Teachers and other for Heads of institutions were administered for data collection. Data were collected and presented in the form of tables for comparison both quantitatively and qualitatively. Some facilities like school buildings, natural lighting and ventilation were comparatively batter in public sector schools whereas some facilities like electricity, artificial lighting in classrooms, drinking water and wash rooms facilities were better in private sector schools.

**Keywords:** Physical facilities, private schools, public schools, facilities in elementary schools.

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## Introduction

It is considered a human right to provide not only education but quality education to each and every citizen. Researches indicate that the quality of education is impossible without the quality of physical facilities in the schools (National education policy, 1998-2010).Earthman (2004) reviewed so many studies on school building impact and concluded that condition of school building affect the student performance. A number of researchers (Al-Enezi, 2002; Anderson, 1998; Ayres, 1999; Cash 1993;Cervantes, 2000; Earthman et al, 1995; Edward, 1992; Gubes, 1996; Lanham, 1997; Lewis, 1999; O'Neill, 2000; Philips 1997; and Schneider, 2000;) found that no doubt, students learn according to their abilities but, all of them agree that students with better school buildings gain better scores as compared to the students of poor school buildings. Philips (1997) conducted a research to know the impact of condition of school buildings on student's achievement in specific subjects. He found that students of quality buildings show much better performance in mathematics as compared to the students of poor buildings. The findings of a number of studies ( Cash 1996; Earthman1998;Hines 1996; Lemasters 1998; and Plumy 1978;) show that the students of better school buildings earn higher scores but some studies show that impact in terms of achievement scores varies from subject to subject. For example Philips (1997) found higher scores in the subject of mathematics in schools with better physical facilities, but Edward (1992) found that in the subject of social studies the scores remained low. Lewis (2000) concluded from the data of 139 schools that the facilities have major effects on student learning. Srticher (2000) found that although the school facilities have impact on student achievement but it is difficult to decide that student performance rises on improving the facilities well beyond the norm. Philips (1997) found that classroom lighting plays a major role in student achievement .Dunn et al.1985; and Myron et al. 1974concluded that students are unable to perform properly without proper class room lightings. Both the researchers agreed that better lighting increases the capacity of students for better scores by decreasing the off-task behavior, thus plays a major role in students' efficiency. Baily and Nicholas (1995) investigated the effect of natural lighting on the performance of middle school students. They found that there exist a positive relationship between appropriate lighting and student's achievement. Although school building and classroom lightings are essential for quality of education but other factors like availability of clean drinking water, student furniture, and class room temperature and humidity and space within classrooms to perform different activities are also important. Dawood and Misk (1998) found through their research that due to non-availability of drinking water in schools most of the students slip away from schools when they go away for water. Kings and Marans (1979) conducted a study to investigate the effect of temperature and humidity on student performance. They found that due to increase in temperature and humidity level, students

not able to pay their attention on their studies and thus show poor performance. It is also found that increase in temperature and humidity level not only affects the student's performance but it also affects the teachers' ability and damage their moral as well. Mc. Guffy (1982) reviewed eight researches on physical environment and student achievement and concluded that in classrooms without proper ventilation students are unable to perform according to their abilities. Kennedy (2001), Mc Govern and Moore (1998) found that the classrooms need good ventilation because children use more oxygen than older ones require according to their body weight. Mc Guffy (1982) through his research on physical facilities found that quality buildings, better lighting ,better classroom temperature, better air quality, availability of washrooms and drinking water have positive relationship with student performance. Earthman and Lamasters (1996, 1998) have also found the same effects of physical facilities on student achievements.

Although physical facilities in schools have been discussed frequently in various policies and plans of the government but, there is hardly any empirical study in Pakistan, that has investigated the contribution of physical facilities in school in the achievement of students. The private sector claims that it has better physical facilities than public sector elementary schools, therefore they are providing better education to the public. This study was planned to find out the actual position in the field in elementary schools in Punjab. The comparison was made to achieve the following objectives:

1. To investigate the availability of physical facilities in public and private sector schools of Punjab.
2. To collect the data on the quality of physical facilities in public and private sector schools
3. To compare the physical facilities in both sectors

## Method of the Study

All the elementary schools running in private and public sector in 35 Districts of Punjab constituted the population of this study. Four districts were selected as sample of the study. For sampling purpose target population was stratified into four groups on the basis of participation rate as described by E.M.I.S (2001). From each stratum one district was selected randomly. From these districts, 36 Assistant Education Officer (A E O) marakiz (nine from each selected district) were selected randomly. All the schools included in these selected Marakiz; 167 public and 119 private schools were included in the study. The data were collected through Head of the institution and science teacher of each school. In this way total 572 respondents participated in the study.

**Tools of Research**

Two questionnaires, one for head of institutions/managers of school and the other for teachers of elementary schools, were used as a tool of research. The respondents were asked about the availability of classroom, its lighting, furniture, ventilation, fans, and AV Aids etc. The respondents were required to rate the available facilities on a four point scale; very satisfactory, satisfactory, unsatisfactory, and very unsatisfactory. The questionnaires were tried out on three school heads and teachers, for language and clarity, and were finalized.

**Collection of Data**

The questionnaires were administered and collected back from the concerned respondents through the Deputy District Education Officers and Assistant Education Officers of the concerned Tehsils and Marakiz. To verify the data the researcher personally visited 40 schools, 10 from each district and collected the same data through observation.

**Analysis of Data**

Data collected through the questionnaires was scored assigning 4 to very satisfactory, 3 to satisfactory, 2 to unsatisfactory, and 1 to unsatisfactory. As a result of personal observation of the researcher, it was found that the respondents of the Public schools tended to score their facilities lower, while the respondents of the private schools scored their facilities higher than that of the observations by the researcher. A correction formula was derived for each type of facility and was applied for the correction of data. Mean scores for both the groups (Public schools and Private schools) were calculated. Following criterion was developed to judge the quality of different facilities:

**Table 1**
*Criteria for quality of physical facilities*

| Degree of Satisfaction | Mean of scores |
|---|---|
| Very satisfactory | 3.5---4 |
| Satisfactory | 2.5 ---- 3.5 |
| Undecided | 1.5---- 2.5 |
| Unsatisfactory | <1.5 |

**Table 2**

*Comparison of Data for School Building*

| Responses | Public Sector Schools | | Private Sector Schools | |
|---|---|---|---|---|
| | Number | % | Number | % |
| Own Building | 164 | 98 | 72 | 61 |
| Rented Building | 3 | 2 | 47 | 39 |
| Total | 167 | 100 | 119 | 100 |

Table reveals that (98%) public schools have their own buildings whereas only (61%) private schools are running in their own building.

**Table 3**

*Comparison of Availability of Electricity between Private and Public Schools*

| Responses | Public Sector Schools | | Private Sector Schools | |
|---|---|---|---|---|
| | Number | % | Number | % |
| Available | 142 | 85 | 118 | 99 |
| Not Available | 25 | 15 | 1 | 1 |
| Total | 167 | 100 | 119 | 100 |

Table reveals that (15%) of public schools are without electricity facility whereas only one (01%) of private sector schools have no facility of electricity.

**Table 4**

*Comparison of Quality of Artificial Lighting between Public and Private Schools*

| Responses | Public Sector Schools | | | Private Sector Schools | | |
|---|---|---|---|---|---|---|
| | Number | Score | % | Number | Score | % |
| Very Unsatisfactory | 24 | 24 | 14 | 4 | 1 | 3 |
| Unsatisfactory | 15 | 30 | 9 | 9 | 18 | 8 |
| Satisfactory | 78 | 234 | 47 | 50 | 150 | 42 |
| Very satisfactory | 50 | 200 | 30 | 56 | 224 | 47 |
| Total | 167 | 488 | 100 | 119 | 393 | 100 |
| Mean of scores | | 2.9 | | | 3.3 | |

Table shows that artificial lighting in (77%) schools of public sector schools is satisfactory whereas (89%) private schools have satisfactory artificial lighting. The quality of artificial lighting in both sectors is satisfactory.

**Table 5**

*Comparison of Quality of Natural Lighting between Public and Private Schools*

| Responses | Public Sector Schools | | | Private Sector Schools | | |
|---|---|---|---|---|---|---|
| | f | Score | % | F | Score | % |
| Very Unsatisfactory | 3 | 3 | **2** | 9 | 9 | 8 |
| Unsatisfactory | 7 | 14 | **5** | 10 | 20 | 8 |
| Satisfactory | 77 | 231 | 46 | 44 | 32 | 37 |
| Very satisfactory | 80 | 320 | 48 | 56 | 224 | 47 |
| Total | 167 | 568 | 100 | 119 | 385 | 100 |
| Mean of scores | | 3.4 | | | 3.2 | |

The table reveals that only seven percent public whereas 16% private schools are dark due to non availability of natural lighting. The quality of natural lighting in majority of schools of both sectors is satisfactory.

**Table 6**

Comparison of Classroom Ventilation between Public and Private Schools

| Responses | Public Sector Schools | | | Private Sector Schools | | |
|---|---|---|---|---|---|---|
| | f | Score | % | F | Score | % |
| Very unsatisfactory | 10 | 10 | 6 | 29 | 29 | 24 |
| Unsatisfactory | 23 | 46 | 14 | 29 | 58 | 24 |
| Satisfactory | 85 | 255 | 51 | 24 | 72 | 20 |
| Very satisfactory | 49 | 196 | 29 | 37 | 148 | 31 |
| Total | 167 | 507 | 100 | 119 | 307 | 100 |
| Mean of scores | | 3.03 | | | 2.57 | |

The table reveals that (80%) school buildings of public schools are appropriately ventilated whereas only (51%) buildings of private sector have satisfactorily ventilated.

**Table 7**

*Comparison of Quality of Drinking Water Facility between Public and Private Schools*

| Responses | Public Sector Schools | | | Private Sector Schools | | |
|---|---|---|---|---|---|---|
| | Number | Score | % | Number | Score | % |
| Not at all | 10 | 10 | 6 | 2 | 2 | 1 |
| Unsatisfactory | 23 | 46 | 14 | 2 | 4 | 1 |
| Satisfactory | 79 | 237 | 47 | 25 | 75 | 22 |
| Very satisfactory | 55 | 220 | 33 | 90 | 360 | 76 |
| Total | 167 | 513 | 100 | 119 | 441 | 100 |
| Mean of scores | | 3.07 | | | 3.7 | |

Table reveals that drinking water facility in (80%) public schools is satisfactory whereas (90%) private schools are providing satisfactory drinking water facility.

**Table 8**

*Comparison of Availability and Condition of Washrooms Facility between Public and Private Schools*

| Responses | Public Sector Schools | | | Private Sector Schools | | |
|---|---|---|---|---|---|---|
| | Number | Score | % | Number | Score | % |
| Not at all | 24 | 24 | 14 | 1 | 1 | 1 |
| Unsatisfactory | 35 | 70 | 21 | 4 | 8 | 3 |
| Satisfactory | 73 | 219 | 44 | 26 | 78 | 22 |
| Very satisfactory | 35 | 140 | 21 | 88 | 352 | 74 |
| Total | 167 | 453 | 100 | 119 | 435 | 100 |
| Mean of scores | | 2.7 | | | 3.7 | |

Table reveals that in (65%) public schools the washroom facility is satisfactory whereas (96%) private schools are providing this facility satisfactorily.

## Findings

Following findings were drawn on the basis of interpretation of data.

1. Ninety eight (98%) public school had their own buildings where as only (61%) private schools were running in their own buildings. Public schools are better in terms of building facility.
2. Eighty five (85%) public school had the facility of electricity whereas it was present in (99%) schools of private sector. Private schools are better in terms of electrification.
3. Artificial lighting facility in both sectors public (77%) and private (89%) was satisfactory.
4. Natural lighting in 94% class rooms of public schools and (84%) private schools class rooms was satisfactory.
5. Ventilation in 80% public and 51% private schools was satisfactory. Ventilation is far better in public schools as compared to private schools.
6. Drinking water facility was satisfactory in 80% public and 98% private schools.
7. Schools of both sectors public 65% and private 96% had satisfactory wash room facility.

## Conclusions Regarding Physical Facilities

Following conclusion are drawn from the results of the data:

1. Almost all public schools were running in their own purpose build buildings where as about half 47% of private schools were running in rented buildings build for residential purpose.

2. Almost all schools of private sector had a facility of electricity where as mentionable number of public sector schools are without this facility.
3. Artificial lighting in majority of the schools of both sectors was satisfactory.
4. Majority of public and private were lit satisfactorily with natural lighting, however public schools are far better than private schools
5. Class room ventilation in majority of public sector schools was satisfactory but in half of private schools ventilation was not satisfactory.

## Recommendations

On the basis of conclusions following recommendations were suggested.

1. Electricity facility should be provided to all schools
2. New class rooms should be constructed in those schools which were facing the shortage of class rooms.
3. Wash rooms are necessary with a hygienic point of view and for the safety of time therefore wash room facility should be provided to those schools where it was missing and take necessary steps for those schools where this facility was unsatisfactory.
4. Drinking water facility should be provided to all schools.

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