A subjective assessment of impact of physical facilities, and academic environment on students’ and teachers’ satisfaction/comfort level with special reference to primary schools

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Abstract

This paper has aimed at assessing the relationship between students’ and teachers’ satisfaction with physical facility, food facility (Mid Day meal) and finding a relationship between student’s and teachers’ satisfaction on Academic environment. It is an empirical paper to study the impact of physical facilities, food facilities and academic environment on students and teachers satisfaction level/comfort level. Data was collected by conducting survey method using various tools like questionnaire, Interview and Observation. Results revealed a good academic environment in the school and good cooperation between teachers and student which helps student in their study, but there was lack of proper physical facility as well as lack of quality food distribution in Mid Day Meal. Most of students expect better facility to be provided by the school.

Keywords: Physical facility, Food facility, Academic environment

INTRODUCTION

In The Classroom Design Manual (Allen et al, 1996), the authors from seven universities proposed three fundamental rights for students in their learning environment, whether grand lecture halls or intimate seminar rooms:

1. Students should be able to see anything that is presented visually
2. Students should be able to hear anything that is presented audibly, free from noise and distortion
3. Students should be comfortable in their learning environment, including air flow, room temperature and proper furniture

Physical facilities

Physical facilities of classroom are very necessary for effective teaching-learning process. Physical facilities affect students’ learning. Neuman (2003) has discussed some aspects of the changing scenario in school and classroom design projects. According to him, “although certain principles related to the design of classroom buildings have remained largely unchanged over the decades, a variety of trends are at work today, driving the ongoing evolution of classrooms and the buildings that house them.”

Food facility

Nutrition support to primary education is considered as a means to achieve the objective of providing free and compulsory universal primary education of satisfactory quality to all the children below the age of 14 years by giving a boost to universalisation of primary education through increased enrollment, improved school attendance and retention and promoting nutritional status of primary school children simultaneously.

Academic environment

Educational standards are continuously revised and often raised while competition for high-achieving students has intensified (Hu & Hossler, 2000; McPherson & Shapiro, 1998). The initiatives are intended to meet challenges stemming from increased demand for educational reforms and new programs. Indeed, the key to enhanced learning is the creation of an environment that encourages students to pursue educational activities in-and-outside classrooms (Graham and Gisi, 2000). Thus, at South Carolina State University (SCSU) School of Business, professional development programs, internship programs, and an office of student services have been created, integrated, and structured to attract, retain, and help students in their professional and academic development.
REVIEW OF LITERATURE

Taylor and Gousie (1980) noted the ill effects of poor lighting on neuron doctrine functions, hyperactivity, health, and on task behavior.

Lyons (2001) summarizes the importance of physical environment to educational achievement by detailing the existing links in the research literature between classroom conditions and learning. The significant effect of classroom environment on concentration levels, listening, and writing is supported by research results that have found higher test scores and more positive student outlooks in upgraded learning environments (Heschong, 2003, Englebrecht, 2003, Griffin, 1990, Banning, 1993, Vartabedian, 2002, Conway 2000, Troop, 2000, Siegel, 2003, Conway, 2000).

According to Harber & Davies (2002), the quality indicators are school expenditures, specific material inputs, teacher quality, teaching practices, in-service teacher training, classroom management, homework frequency, school management and student repetition of grade.

Aijaz (2002), basic teaching-learning model consisted of three types of factors, i.e. the teacher-related factors, the school-related factors and student-related factors.

Khera (2002) finds a 23% increase in enrollment following the introduction of school lunches in her 63 Rajasthan schools. Dreze and Goyal (2003) and an 18%, 11%, and 14% increase in enrollment in their Rajasthan, Chhattisgarh and Karnataka villages, respectively.

Earthman (2002, Young et al 2003) observed that building conditions such as lighting, temperature, student comfort, and classroom technology are significantly positively related to student outcomes, including performance and attitude (Fisher 2001, Hurst 2005). Ali (2005) identified twelve factors for high academic performance of students.

Shami and Hassain (2006), says about students’ achievement factors model, physical facilities such as drinking water, boundary wall, chalks and writing board play an important role in learning and academic achievement.

OBJECTIVES:-

- Finding a relationship between students’ and teachers’ satisfaction on physical facility.
- Finding a relationship between students’ and teachers’ satisfaction on food facility (Mid Day meal).
- Finding a relationship between student’s and teachers’ satisfaction on Academic environment.

4.0 HYPOTHESIS

- Ho There is no significant difference between students’ and teachers’ satisfaction/comfort level on availability of physical facility
  H1 Students will be more satisfied than teachers on availability of physical facility

- Ho There is no significant difference between students’ and teachers’ satisfaction/comfort level on availability of food facility.
  H1 Students will be more satisfied than teachers on availability of food facility.

- H0 There is no significant difference between students’ and teachers’ satisfaction/comfort level in better academic environment.
  H1 Students are more satisfied than teachers in better academic environment.

Data Collection: 100 students and 100 teachers were administered questionnaires to measure their satisfaction with environmental conditions and infrastructure and also to compare students and teachers on the various hypotheses formulated.
Analysis and Results

Table No.1. Table is showing the size of sample, mean and value of t-test of physical facility

<table>
<thead>
<tr>
<th>Category</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student</td>
<td>100</td>
<td>24.0500</td>
<td>2.37254</td>
<td>.53052</td>
</tr>
<tr>
<td>Teacher</td>
<td>100</td>
<td>27.4000</td>
<td>2.68328</td>
<td>.60000</td>
</tr>
</tbody>
</table>

The size of the sample is 100 for both students as well as for teachers. The mean of students are 24.0500 and of teachers are 27.400.

Table No.2. Table is showing the size of sample, mean and value of t-test of food facility

<table>
<thead>
<tr>
<th>Category</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
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</thead>
<tbody>
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<td>Food</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student</td>
<td>100</td>
<td>3.9500</td>
<td>1.66938</td>
<td>.37329</td>
</tr>
<tr>
<td>Teacher</td>
<td>100</td>
<td>6.7000</td>
<td>1.45458</td>
<td>.32525</td>
</tr>
</tbody>
</table>

The size of the sample is 100 for both students as well as for teachers. The mean of students are 3.9500 and of teachers are 6.7000.

Table No.3. Table is showing the size of sample, mean and value of t-test of academic environment

<table>
<thead>
<tr>
<th>Category</th>
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<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student</td>
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<td>8.5000</td>
<td>1.00000</td>
<td>.22361</td>
</tr>
<tr>
<td>Teacher</td>
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<td>8.6000</td>
<td>.94032</td>
<td>.21026</td>
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</table>

The size of the sample is 100 for both students as well as for teachers. The mean of students are 8.5000 and of teachers are 8.6000.

<table>
<thead>
<tr>
<th>Levene's Test for Equality of Variances</th>
<th>t-test for Equality of Means</th>
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</thead>
<tbody>
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<tr>
<td>F</td>
<td>Sig.</td>
</tr>
<tr>
<td>Academic</td>
<td></td>
</tr>
<tr>
<td>environment</td>
<td>.193</td>
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</table>
Levene's Test for Equality of Variances  

<table>
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<th>F</th>
<th>Sig.</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
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<th>Std. Error Difference</th>
<th>95% Confidence Interval of the Difference</th>
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<td>.663</td>
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<td>98</td>
<td>.746</td>
<td>-.10000</td>
<td>.30694</td>
<td>-.72136</td>
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<td>-.326</td>
<td>37.857</td>
<td>946</td>
<td>-.10000</td>
<td>.30694</td>
<td>-.72144</td>
<td>52144</td>
<td></td>
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</tbody>
</table>

The value of t is -.326

**INTERPRETATION**

First hypothesis tells that there is no significant difference between students’ and teachers’ satisfaction level on availability of physical facility but, our result reveals that there is a significant difference between both satisfaction/comfort levels regarding availability of physical facility. Calculated value of t-test is -4.183 which is more than the tabulated value of t i.e, 1.67 and 2.03 at df 98. Hence, our null hypothesis is rejected and alternative hypothesis is accepted but in inverse way because our calculated value is negatively significant hence, we can interpret that students are less satisfied than teachers on availability of physical facility (as shown in figure), this may be because of poor physical facility of school can decrease the performance of students as they will not be motivated to work hard. Classroom lighting plays a particularly critical role in student performance (Phillips 1997). Jago and Tanner (1999) cite results of seventeen studies from the mid-1930s to 1997. The consensus of these studies is that appropriate lighting improves test scores, reduces off-task behavior, and plays a significant role in the achievement of students. Lemaster's (1997) synthesis of 53 studies pertaining to school facilities, student achievement, and student behavior reports that daylight fosters higher student achievement. The study by the Heschong Mahone Group, (1999) covering more than 2000 classrooms in three school districts, is perhaps the most cited evidence about the effects of daylight. The study indicated that students with the most classroom daylight progressed 20% faster in one year on math tests and 26% faster on reading tests than those students who learned in environments that received the least amount of natural light as also pointed by Plympton, Conway and Epstein (2000). One of the most critical physical characteristics of the classroom is lighting (Phillips,1992). Dunn (1985) insisted that the lightning of a school should be considered an active element of the total educational environment. Luckiesh and Moss (1940) found in their study of 5th and 6th grade students in well-lighted classrooms over regular (poorly lighted) classrooms that significant increases in the scores on the New Stanford Achievement Test were demonstrated by the students in the well-lighted classrooms. Concomitantly, Horton's (1972) research suggested that the ability of individuals in school to concentrate on instructions was strongly influenced by factors such as lighting. In the same way, LaGuissa (1974) concluded that many schools by modifying the existing lighting system could reduce systems costs while providing an improved learning environment through better vision, visual impact and comfort. Olson & Kellum (2003) conclude that two elements of sustainable building design, day lighting and indoor air quality, have direct effects on students’ performance. According to Earthman...
(2002),“ethnographic and perception studies indicate that poor school facilities negatively impact teacher effectiveness and performance,and therefore have a negative impact on students’ performance.” (see EPA 2000; Kennedy 2001; Leach 1997; Smedje and Norback 1999; Rosen and Richardson 1991.Teachers are more satisfied than students because teachers are getting their salaries and they are only considered with their salaries. They are ready to work in a poor physical facility also. Hanushek, Kain and Rivkin (forthcoming) found "teachers are willing to work in a poor physical facility"

- Second hypothesis tells that there is that there is no significant difference between students’ and teachers’ satisfaction level on availability of food facility. But, our result tells that there is a significant difference between both satisfaction/comfort levels regarding availability of food facility
  Our calculated value of t-test is -5.54 which is more than the tabulated t value of t i.e,1.67 and 2.03 at df 98.hence ,our null hypothesis is rejected and alternative hypothesis is accepted but in inverse way because our calculated value is negative significant. hence, we can interpret that students are less satisfied than teachers on availability of food facility(as shown in figure) because of poor quality ,less quantity and bad taste of food(mid day meal). If good quality of food is provided to students they may be more satisfy and this will motivate them to increase their marks and to perform better in school. The teachers are more satisfied because they do not eat mid day meal so they do not care for the quality and taste of the food. They are satisfied with this only that mid day meal is provided in their school.

- Third hypothesis tells that there is that there is no significant difference between students’ and teachers’ satisfaction level in better academic environment. But, our result also tells that there is no significant difference between both satisfaction/comfort levels in better academic environment.
  Our calculated value of t-test is -.326 which is less than the tabulated t value of t i.e,1.67 and 2.03 at df 98.hence ,our null hypothesis is accepted and alternative hypothesis is rejected. Hence, now we can interpret that there is no significant difference between students’ and teachers’ satisfaction/comfort level in better academic environment

**CONCLUSION**

At last it can be concluded that there is a lack of proper physical facility as well as lack of quality food distribution in Mid Day Meal. most of students expect better facility to be provided by the school. Students have a lot of complaint about the quality of food materials supplied to them in Mid Day Meal programme. There is a good academic environment in the school and our result also tells that there is a good cooperation between teachers and student which helps student in their study. But at some extent, student absenteeism hinders the learning of students which can be amended if there would be availability of proper physical facility and distribution of quality food materials in mid day meal programme

**REFERENCES**

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