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APPRAISAL OF PHYSICAL ENVIRONMENT OF THE SPECIAL SCHOOLS FOR VISUALLY IMPAIRED STUDENTS

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Abstract

This study made an attempt toevaluate the appropriate physical condition of special schools of learner with visual impairment. For this purpose three schools for visually impaired were selected purposively. A self-made checklist was used by researcher to collect the data. Results of the study showed that physical infrastructure of all the special school's needs improvement. Special schools do not have appropriate physical environment for teaching and learning visually impaired.

Key words: *Physical Environment, Special Schools, Learners Visual Impairment*

Introduction

Physical environment is an essential component of a school. Safe and healthy physical environment plays a significant role in determining whether the next generation is educated and healthy. Recent researches have noted changes in the perceived role of the physical environment in the learning process. There has been a gradual acceptance of the notion that the common-sense assumption that a "sense of place" does influence what goes on there. Identification of specific building and classroom factors that have a significant relationship to student achievement can help architects, facility planners, administrators, principals and teachers make improvements in instructional spaces that would help foster increased student learning and thus allow them to achieve higher scores on the new assessment instruments.

Many of students with visual impairment have difficulty in learning at mainstream schools due to their limitation related to lack of visual perception.Lowenfeld (1981), a noted educator of blind and pupils with visually handicapped, present a moderate position. He says that blindness "impose three basic limitations on the individual;

1. In the range and variety of experiences,

2. In the ability to get about,
3. In the control of the environment and the self in relation to it.

These three restrictions Lowenfeld views as "the objective effects of blindness". The way in which an individual behaves or learns to adjust to the environment is quite relevant with present study.

The physical environment of school related to buildings and specific classrooms with limited barrier and additional help are important factors in learning of student with visual impairment. Recent studies showed that specific physical factors play a significant role in influencing the achievement of learners with special needs. Architects of school, way of building construction may also be helpful for creating a barrier-free learning environment to the learners with visual impairment.

A positive school climate exist when all student feel comfortable, valued, accepted, and secure in an environment where they can interact with caring people they trust. A positive school climate affects everyone associated with the school, student, staff, parents, and the community. Improved school climate is a goal to pursue. Special educators need to constantly work towards improving their school climate, culture, and conditions so that student learning is improved.

Similarly, there was also increased emphasis on notions of integration, as special educators explored way of supporting previously segregated groups in order that they could find a place inmainstream schools. It is a major step in special education for developing inclusive schools.

Impact of School Building on Learning

A well-designed building will supports its users (Birch &Johnstone, 1975; Knirk, 1993) by addressing a broad spectrum of issues that include occupant related issues, such as creating a physically comfortable environment with adequate lighting, temperature and noise control, technology and equipment, and personal user access needs. These features address the requirements of the users of a particular space so that the classrooms work well for both teachers and students. A well-planned facility will be able to accommodate changes in use (e.g. class size, technology upgrades), be easy to maintain and upgrade, be energy efficient, and address the safety concerns of the occupants (Galluzzo& Bar, 1999; Sydoriak, 1993). However, more recent research has determined that the physical environment and the learning experience cannot be separated and are considered to be integral parts of each other (Taylor &Gousie, 1988).

Prior to this awareness of the relationship between the school environment and student learning, it was felt that the environment only affected the consciousness when it caused particular pleasure, harm, discomfort, or stress. One common topic in school facility planning concerns the relationships between school building conditions and student achievement, and student behaviour (Earthman &Lemasters, 2000). Although, both the physical environment and the building conditions have been documented as having animpact on student achievement and behaviour, there have been relatively few studies that examine this issue in great detail (Earthman, 1985; Faust, 1980).

Furthermore, researchers have found that positive school climate perceptions are protective factors for boys and may supply high-risk students with a supportive learning environment yielding healthy development, as well as preventing antisocial behaviour (Haynes, 1998; Kupermincet al., 1997).

Research related to school climate suggests that positive interpersonal relationships and optimal learning opportunities for students in all demographic environments can increase achievement levels and reduce maladaptive behaviour (McEvoy& Welker, 2000).

Furthermore, school climate can play a significant role in providing a healthy and positive school atmosphere. Freiberg (1998) notes, the interaction of various school and classroom climate factors can create a fabric of support that enables all members of the school community to teach and learn at optimum levels.

It has been found that a positive school climate can yield positive educational and psychological outcomes for students and school personnel; similarly, a negative climate can prevent optimal learning and development (Freiberg, 1998; Johnson & Johnson, 1993, 1997; Kuperminc et al., 1997; Kuperminc, Leadbeater& Blatt, 2001; Manning &Saddlemire, 1996).

One most critical physical characteristics of the classroom of student with visual impairment is lighting. Appropriate lighting facilities play significant role in education of student with low vision. The importance of an appropriate visual environment for learning tasks deserves careful consideration. The visual environment affects a learner's ability to perceive visual stimuli and affects his/her mental attitude and thus performance. Dunn (1985) insisted that the lightning of a school should be considered an active element of the total educational environment. He found that the good lightning contributes significantly to the aesthetics and the psychological character of the learning space.

Instructional spaces such as classroom, resource room, libraries, laboratories and technical workshops are essential in teaching learning process of students with visual impairment.

The extent to which these spaces could enhance effective teaching and learning depends on their locations within the school premises, their structure and facilities. It is not unlikely that well planned instructional Spaces in terms of location, structure and facilities will facilitate effective teaching and learning process as well enhance good academic performance of the students with visual impairment.

While emphasizing the importance of instructional spaces to students' academic performance, Mark (2002), maintained that one cannot expect high level of students' academic performance where school buildings such as classrooms, libraries, technical workshops and laboratories are substandard. He emphasized that clean, quiet, safe, comfortable and healthy environment are important components of teaching and learning.

Similarly, Ajayi (2007) maintained that high level of students' academic performance may not be guaranteed where instructional spaces are structurally defective, not properly ventilated and not spacious enough for use. He further emphasized that structural effectiveness, proper ventilation and well located instructional space may lead to successful teaching and learning process.

Need and Significance of the Study

In the decade of 1990, there are many countries develop more equitable forms of schooling. United Nations strategy, 'Education for All', encouraged such initiative, focusing especially on the need to reach out to those with disabilities.

In 1994, UNESCO's argued that the development of mainstream schools with an inclusive orientation is the best mean of achieving 'Education for All'. This context of uncertainty provides the special education field with new opportunities for continuing its historical purpose of representing the interest of learners those who become marginalised within existing educational arrangements. At the same time, special educators in many countries argued for developed some special provision for children with visual impairment and other disability, who were excluded from educational plan.

Today, when so much development is being made in order to provide education for all, many special schools still remain models of poor in terms of school building, location, proper instructional space and other facilities. There are many reasons and one main reason could be either no planning or poor planning of the educational space for the special school particularly for the student with visual impairment. There are no special guidelines to plan for them.

Assessment of physical environment helps the school in knowing their area of strengths and weakness that in turn helps the school personnel and to identify the area where

improvements can be made. It helps in making requests for more resources to be granted accompanied by evaluative evidence.

There are limited tools available to assess the physical environment of special schools for children with visual impairment in India. Hence, an attempt is made hereby to prepare a checklist that can assess the physical environment of special schools for children with visual impairment that can help to identify strength weakness.

Physical environment of special school establish the boundaries where teachers teach and students learn. Within these boundaries, a multitude of variables impact the performance of the teacher and learner. In the present study investigator examined the appropriate physical condition of special schools. The purpose of this study was to identify the difficulties and facilities that determine the appropriate physical environment to student with visual impairment. This study addressed the variables of barrier-free environmental condition of a special school.

Students with visual impairment have many limitation related to visual perception which affect their learning and adjustment with the environment. Many teachers and other professionals are unaware about their limitation. There are so many factors related to physical environment, which influence appropriate learning condition. The present study focuses on those challenges.

Apart from that, there are very few efficacy studies in evaluating physical condition of special school in India and abroad. So, the present study can help many special educators along with other functionaries who are involved in the construction of school building for students with visual impairment.

The result of the present study also be helpful for the students with visual impairment themselves to know appropriate physical environment for them.

Based on the finding of this research studies, the administrator, teachers, parents peer to know what are common factor which affect the physical condition of special school for visually impaired student. They have opportunities to implement, modify and develop new approaches related to appropriate physical condition of special school. They discusseson how to remove difficulties of students with visual impairment.

The result of the study guides the school administrators in developing barrier free school environment, modification in classroom, adapted library and way of learning for students with visual impairment.

Study of appraisal of physical environment of special schools provides some preliminary data regarding the availability and use of assistive technology in maintaining appropriate

learning environment of school. When the learning process is at the core of design priorities, there is a significant likelihood that facility will positively influence performance (Blair, 1998). The correlation appears to be positive between facility design and learning.

Research Questions

The study was guided by the following research questions:

1. What were the appropriate physical conditions of special school buildings and classrooms for student with visual impairment in Lucknow?
2. What were the common views reported by the principals of special school?

Methodology

By seeing the nature of present study descriptive survey method was used.

Sample of the comprised of three special school for the visually impaired learners i.e.RajkiyaSparsh (Balak) Inter College, Lucknow, RajkiyaSparsh (Balika) Inter College, Lucknow, and NavJyoti Blind School, Lucknow. Principal working were in these school were selected purposively.The principal of special school were 'respondents' as they are the most important members acquainted with the school.

A self-made check-list was used by the researcher to collect the data.

Results

In this part of the study data collected from the principals of special school were tabulated and analysed by using average and percentage. As a result of the analyses are presented below.

School-A

Table-1 Average Scores and Percentage of Special School A

Areas	Total No. of Statements	Area wise total score	Average score	Percentage (%)
PART-I				
A-Noise	5	3	0.60	60
B-Location	4	4	1	100
C-Building	5	5	1	100
D-Instructional space	10	5	0.50	50
E-Basic care and hygiene	7	5	0.71	71
F-Furniture and Equipment	5	2	0.40	40
G-Residence and hostel	5	5	1	100
PART-II				
H-Facilities	21	13	0.62	62
Total	**62**	**42**	**5.83/8 =0.73**	**583/8= 73%**

The above table 1 shows that, the special school 'A' has better facility in areas as, *'Location',Building'*, and *'Residence and hostel'*.The results show that following areas need improvement:

Area *'Noise'* needs to give importance and measures must be taken to reduce the noise level. The areas, *'furniture and equipment'* shows very less important. The important areas of part-I which need improvement are *'Instructional space', 'Basic care and hygiene' and 'Furniture and Equipment'.*

In part-II, special school shows poor facilities.These results of the study correspond with the finding of *Mayron et.al. (1974), Ross (1978), Finitzo-Heiber and Tillman (1978), Plumley (1978), Evans and Maxwel (1999), Lackney (1999), Feth and Whitelaw (1999), Maltbby and Knight (2000), Fisher (2000), Stricherz (2000), and Schneider (2002).*Results of the study are represented by following graphs;

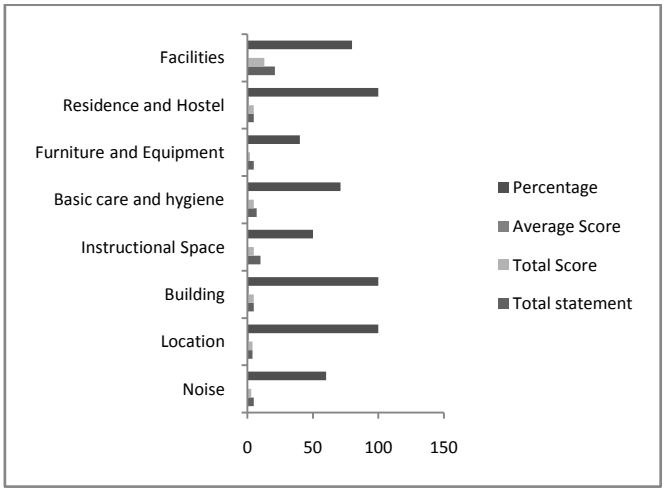


Figure-1 Average score and percentage physical facilities areasof Special School A School-B

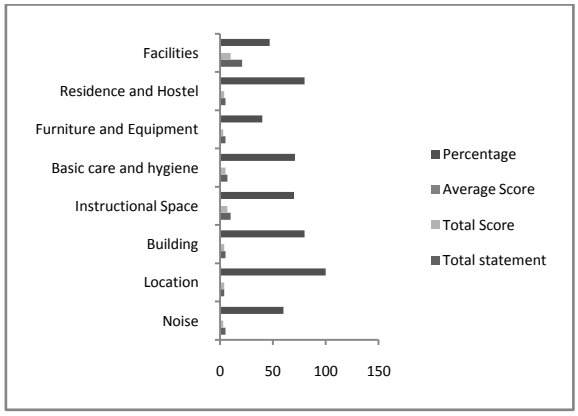
Table-2 Average Scores and Percentage of Special School B

Areas	**Total No. of Statements**	**Area wise total score**	**Average score**	**Percentage (%) score**
PART-I				
A-Noise	5	3	0.60	60
B-Location	4	4	1	100
C-Building	5	4	0.80	80
D-Instructional space	10	7	0.70	70
E-Basic care and hygiene	7	5	0.71	71
F-Furniture and Equipment	5	3	0.60	40
G-Residence and hostel	5	4	0.80	80
PART-II				
H- Facilities	21	10	0.47	47
Total	**62**	**40**	**5.68/8 =0.71**	**568/8= 71%**

The above table2 depicts that the special school 'B' have better facility in the area, *'Location'.* The above table (2) shows that following areas need improvement:

In part- I, area, *'Noise'* needs to be given importance and measures must be taken to reduce the noise level. Other areas like *'Buildings', 'Instructional space', 'Basic care and hygiene'* and *'Furniture and Equipment'*are to be improved. The areas *'Basic care and hygiene'* and *'Residence and Hostel'* needs to be importance.

In part-II, special school shows poor facilities and it needs improvement.These results agree with the finding of study conducted by *Mayron et.al. (1974), Ross (1978), Finitzo-Heiber and Tillman (1978), Plumley (1978), Heward&Oralansky (1984), Evans and Maxwel (1999), Lackney (1999), Feth and Whitelaw (1999), Maltbby and Knight (2000), Fisher (2000), Stricherz (2000),*and*Krogh &Slentz(2001).*Results are represented by following graphs;



Graph-2: Average scores and percentage of physical facilities areas of Special School B

Analysis of School-C

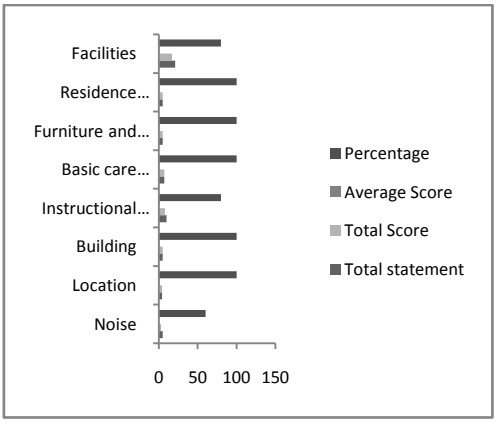
Table-3 Average Scores and Percentage of Special School C

Areas	Total No. of Statements	Area wise total score	Average score	Percentage (%) score
PART-I				
A- Noise	5	3	0.60	60
B- Location	4	4	1	100
C- Building	5	5	1	100
D- Instructional space	10	8	0.80	80
E- Basic care and hygiene	7	7	1	100
F-Furniture and Equipment	5	5	1	100
G- Residence and hostel	5	5	1	100
PART-II				
H- Facilities	21	17	0.80	80
Total	**62**	**54**	**7.2/8 = 0.90**	**720/8= 90%**

It emerges from above table 3 that the following areas of special school 'C' were having better facility, area *'Location', 'Building', 'Basic care and hygiene' 'Furniture and*

Equipment' and *'Residence and Hostel'.* The above table shows that following areas need improvement:

In part- I, First area, *'Noise'* needs to be given due importance and measures must be taken to reduce the noise level. Other area like 'Instructional space' is to be improved. In part-II, special school was having poor facilities and needs improvement. These results agree with the finding of researches conducted by *Mayron et.al. (1974), Ross (1978), Finitzo-Heiber and Tillman (1978), Plumley (1978), Evans and Maxwel (1999), Lackney (1999), Feth and Whitelaw (1999), Maltbby and Knight (2000), Fisher (2000), Stricherz (2000), and Schneider (2002).*Results of the study are represented by following graphs;



Graph-3: Average score and percentage of Special School C

Results related to all special schools

Table-4 Consolidated Percentage of All Special Schools (School 'A', School 'B' and School 'C') in different areas

Areas and Statements	Special Schools (Percentage (%) score)			Total (%)
	School A	School B	School C	
PART-I				
A- Noise (5)	60%	60%	60%	180%
B- Location (4)	100%	100%	100%	300%
C- Building (5)	100%	80%	100%	280%
D- Instructional space (10)	50%	70%	80%	200%
E- Basic care and hygiene (7)	71%	71%	100%	242%
F- Furniture and Equipment (5)	40%	40%	100%	180%
G- Residence and hostel (5)	100%	80%	100%	280%
PART-II				
H- Facilities (21)	62%	47%	80%	189%
Total Statements- 62	**583%**	**568%**	**720%**	

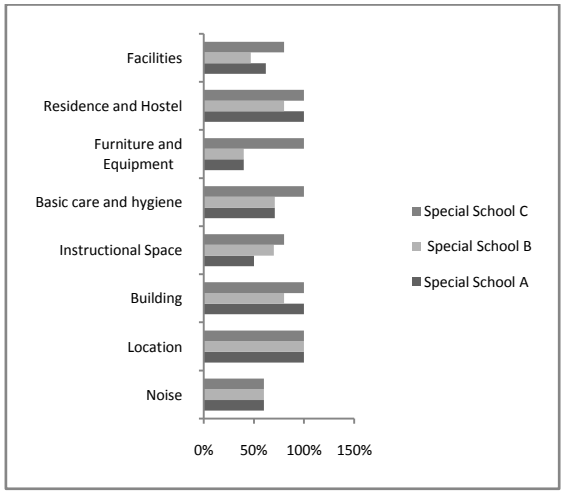
It emerges from above table 4 that all the special schools were having poor of physical environment. The areas '*Location', 'Building',* and *'Residence and Hostel'* have been rated

the highest by the principal of special school- A.The lagging areas are *'Instructional space', 'Basic care and hygiene',* '*Furniture and Equipment'* and other *'facility'.*

In special school-B, the lagging areas are '*Furniture and Equipment', 'facility', 'Instructional space'* and *'Basic care and hygiene'*. They need improvement.

In special school-C, the lagging areas are '*Noise', 'facility',* and *'Instructional space'.* They need improvement. The strength areas of special school-C are '*Location', 'Building', 'Basic care and hygiene',* '*Furniture and Equipment'* and *'Residence and Hostel'*.

From the above results it can be concluded that the checklist was effective in assessing physical environment of all the three major special school for student with visual impairment in Lucknow. The lagging areas must be worked upon to facilitate teaching-learning activities of student with visual impairment.The results are being presented in figure-4:



Graph 4: Consolidated average percentage of All Special School (School 'A', School 'B' and School 'C')

Conclusion

After making in-depth study investigator found that the appraisal of the physical environment of special schools needs improvements. Most of the special schools do not have appropriate physical environment for teaching and learning process.

The results of the study are that all the three special school for the visual impairment in Lucknow were not completely effective in terms of physical environment.

The important areas in school-A which needs improvement, are instructional space, basic care and hygiene and furniture and equipment. The school-A also shows poor facilities.

The lagging areas in school-B are building, instructional areas, basic care and hygiene and furniture and equipment. The important areas which need more focus are basic care and hygiene and residence and hostel. School-B also needs re concentration on facilities given

in the school to visually challenge. In school-C, the lagging areas were instructional space and noise level in the school. School-C also shows poor facilities.

Thus the policy maker and administrators can make necessary amendments in the existing policy for creating a better and appropriate physical environment of special school.

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