JETIR.ORG ISSN: 2349-5162 | ESTD Year : 2014 | Monthly Issue

JOURNAL OF EMERGING TECHNOLOGIES AND INNOVATIVE RESEARCH (JETIR)

An International Scholarly Open Access, Peer-reviewed, Refereed Journal

Appraisal of Physical environment of Inclusive Schools for Children with Hearing Impairment in Hyderabad.

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Abstract

Inclusive schools play a vital role in the education of hearing-impaired children. But despite adequate funding from the government so far, many of the existing inclusive schools are still a model for poor planning. Poor planning or planning of a deaf child's educational space can be one reason, and another is not implementing proper guidelines. The current study investigates the existing physical environment of nine inclusive schools in Hyderabad, primarily for hearing challenged children. The researcher used a checklist to estimate the physical environment of the nine inclusive schools through teacher and parent feedback. Research Design Cross-sectional Survey Design. Detailed statistical measures were used to collect and analyze the data.

Key words: Hearing impaired, Inclusive schools

Introduction

Education is the process of allowing a person to realize his strengths and understand his limitations. It is a tool that leads to independent living and helps create one's own identity to provide productivity in society. The place where formal education takes place is called the "school." This is an important place to learn as the child spends most of his life in the foundation years. The school environment should be comfortable for the children. The school environment must be designed to support the teacher's endeavor, but above all, it must be designed to stimulate and support the efforts of children with special needs (Birch and John Stone, 1975). Lack of sunlight, wind, inadequate furniture, and noise make classrooms a poor foundation for schools in poverty to learn. Special attention should be paid to classrooms and schools. 'The classroom's physical environment is not a determining factor in a child's learning, but it enhances or limits learning' (Lorton 1979).

The philosophy of Inclusive education has grown from the belief that education is a fundamental human right. UNESCO states that all students have the right to an education, regardless of their charitable status or impairments (2003). The goal of inclusive education is to eliminate all barriers to learning. Inclusive education challenges the prevailing system regarding the physical environment, human resources, curriculum, teaching and learning materials, attitudes, etc.

The Education for All (EFA) movement was launched at the World Conference on Education for all in Jomtien, Thailand, in 1990, which aims to give all children, young people, and adults the right to education. Being a part of the movement, India has launched many programs to provide education for all, and one such program is Sarva Shiksha Abhiyan (SSA). In 2002, the Indian government created the Sarva Shiksha Abhiyan to attain the Universalization of Elementary Education (UEE) aims. In 2007, India ratified the U.N. Convention on the Rights of Persons with Disabilities (UNCRPD). The implementation of the Right to Education Act of 2009 emphasizes the importance of education for all students, including those with special needs.

In recent times, every school has been open to enroll children with special needs. Many children with special needs have been attending regular schools in the name of inclusive education in India. However, the implementation has been only in the physical inclusion of children with special needs in traditional schools. Whether the teachers teaching these children are prepared and equipped with the necessary knowledge and

skills as per their needs and the availability of infrastructure is questionable. Singal (2006) contends that in India, Inclusive education is understood and practiced differently from in the western world. "There is a propensity to be "politically acceptable" by adopting contemporary western trends without a clear or shared knowledge of their meaning, resulting in a degradation of service quality" (kalyanpur, 2008). Ideally, "Inclusive education means attending the age-appropriate class of the child's local schools, with individually tailored support' (UNICEF 2007).

Review of Literature

In a research study by vijetha (2005), a rating scale was developed in special grade schools and administered to teachers, parents, and Principals of the five special schools. The Rating scale was able to bring out the strengths and weaknesses of special schools in a more systematic manner, and accordingly, grades were assigned.

The speech perception of a child with hearing impairment is influenced by their physical environment (Houtgast, 1981; Nabelek & Mason, 1981).

The school environment includes both physical environment and psychological environment. The physical environment of the school and classroom has facilities, space, lighting, ventilation, desks, and chairs, air pollution, etc., that provide safety and promote learning and student development (Cheng, 1994).

According to Ross (1978), both normal hearing and individuals with hearing impairment have difficulty understanding speech in the presence of noise.

During the teaching-learning process, many schools provide acoustically not a very comfortable environment that affects hearing aid users, and speech intelligibility is affected by noise and reverberation (Malty and knight, 2000). School building must be given importance as it is created by the administrator, the teacher, and the architect (Birch and Johnston, 1975).

The perception and consideration of crucial interactions between buildings and their surroundings, as well as the people who use them, is influenced, and this must be stressed (Birch and Johnstone, 1975). According to Lewin (1943), learning attitudes and behavior and students' characteristics are affected by the classroom environment.

"Today's children will become tomorrow's adults." They are entitled to inherit a world that is safer and healthier. There is no more vital responsibility than protecting the environment." The Healthy Environments for Children Alliance (HECA) emphasizes this message, focusing on the school environment as one of the most critical settings for enhancing every child's environmental health. WHO IS IN CHARGE (2003).

Different scales developed in assessing educational environments

Four environment indexes, based on Murray's Need-Press Model, were generated as reported in Pace & Stern (1958)

(a) The college characteristic Index
(b) The high school characteristic Index
(c) The Evening College Characteristic Index
(d) The Organizational Climate Index.

Research evidence states inclusive education where children with disabilities interact with children without disabilities has been associated with an increase in social and communication skills, IEP objectives have been achieved, parental expectations and attitudes are positive, and social contacts (Fryxell & Kennedy, 1995) and improved behaviors (Lee & Odom, 1996).

According to Elkins (1998), in mainstream classrooms, students with disabilities benefit from interacting and observing the social and academic behavior of students without disabilities.

To promote inclusive education, teachers' attitudes are influenced by factors such as the age of the child, the type of child's disability, the severity of the disability, the level of the support the teacher and the students receive from the school and local education authority, the other support services, their knowledge and skills about inclusion and in-service training courses received by the teachers (Sari, 2007).

Previous studies state teachers need additional support resources to include students with disabilities (Kuester, 2000).

In a research study by vijetha (2005), a rating scale was developed and administered to teachers, parents, and Principals of five special schools. The Rating scale was able to bring out the strengths and weaknesses of special schools in a more systematic manner, and accordingly, grades were assigned.

A study by Rajesh and vijetha (2008) assessed the physical environment of special schools. A checklist was prepared and administered to teachers and principals of four special schools. The "Physical environment - checklist" was able to bring out the strengths and weaknesses areas of the school's physical environment, and the order of improvement to be made was also suggested.

Need for the Study

Research on the process and efficacy of inclusive education in India is scarce. A qualitative study by Das & Kattumuri (2010), "Children with disabilities in private inclusive schools in Mumbai: experiences and challenges," contends that the "Inclusive education" policy has been introduced in India; however, the concept is in its infancy.

In India, Inclusive education is being implemented without any strong foundation in preparation and providing resources. In practice, it can be seen that there is a lot of pressure to promote inclusive education on one side. Still, on the other side, the appropriate physical environment, the barrier-free environment needed for children with hearing impairment, is hardly provided. If inclusion is successful, there are specific essential components like attitudinal changes in teachers, administrators, and the community, improving the teachers with necessary skills & knowledge, and providing a barrier-free environment.

The influence of the physical environment in Inclusive schools needs to be assessed from time to time to improve and sustain its quality. Hence, an appropriate approach is required to lead to suggestions for improvement. Assessment of the physical environment helps the school know its strengths and weaknesses, which helps the school personnel identify the areas where improvements can be made. It helps request more resources to be granted accompanied by evaluative evidence. It also helps make inclusive schools good places for teaching-learning attitudes.

As a result, the investigator was compelled to evaluate the physical environment of Hyderabad's inclusive schools for children with hearing impairment.

Aim of the Study

The present study is intended to assess the physical environment of inclusive schools for children with hearing impairment in Hyderabad and determine improvement areas.

Method

For the present study, "Appraisal of the physical environment of inclusive schools for children with Hearing Impairment in Hyderabad", the research design used is a 'Cross-sectional survey design'. The study included administering the checklist to teachers and parents of children with hearing impairment in respective Inclusive schools.

Sample

Those schools specifically where children with hearing impairment studying along with typically developing children in and around Hyderabad were selected. There were nine inclusive schools for children with hearing impairment in Hyderabad. To administer the checklist, each inclusive school was named Inclusive school 1, Inclusive school 2, inclusive school 3, Inclusive school 4, Inclusive school 5, Inclusive school 6, Inclusive school 7, Inclusive school 8, and Inclusive school 9, respectively. All the teachers working in the school, particularly parents of children with Hearing Impairment in nine inclusive schools, were selected as 'respondents' as they are the most essential members acquainted with the school. Perceptions of the teachers and parents about the physical environment would provide an appropriate base to understand the school environment. Hence their opinions were given a significant place.

Tool

To assess the physical environment in inclusive schools for children with hearing impairment, an adapted version of the "Physical environment – checklist" prepared by Rajesh & Vijetha (2008) (Appendix-I) was used to collect data from participants. The checklist was split into two pieces, with the first containing 11 survey questionnaires. The second section contained 60 statements for each of the seven categories: location, noise, building, instructional space, equipment and furniture, primary care and hygienic, and amenities. The operational definitions of the areas, according to the checklist, are as follows:

Noise: Noise is the unwanted and unpleasant sounds produced within or outside the school, often disturbing the teaching-learning process. (For example, Rail, Road, Aircraft, kitchen sounds etc.)

Location: The school's location is essential because it directly influences the Teaching-Learning process. The area of a school has a crucial role in inclusive education, especially for children with hearing impairment. The teachers, parents, outsiders, students, everyone is influenced by it. (For example, Bus facility, Auto facility, etc.)

Building: Even though Building an inclusive school is hardly essential. Its construction and sound absorption feature significantly impact children's learning process with hearing impairment. (For example, The walls of the school building are thick & strong, providing for sound absorption)

Instructional space: Instructional space refers to classrooms. Classrooms in the school play a vital role. The classrooms' appearance, maintenance, and arrangement directly impact the teaching-learning

process of children with hearing impairment. (For example, displaying teaching-learning materials like charts, models, etc., to promote aesthetic sense.)

Primary care & hygiene: The safety, cleanliness, and maintenance of all the regularly used places in the schools are essential, which directly impact the children's health, especially in schools where children spend most of their time. (For example, Toilets are thoroughly cleaned regularly)

Furniture & Equipment: The furniture & Equipment directly impacts the teaching-learning process, especially in inclusive schools for hard-of-hearing children. (For example, The school provides 'Group hearing aids' working in good condition like F.M system, Induction loop system, etc.)

Facilities: These facilitate the smooth functioning of all activities in the school. They promote enthusiasm in carrying out the activities and retain the interest (For example, Laboratory facilities, Library, Computer lab facilities)

The checklist consisted of two options, 'Yes' or 'No', to indicate the respondents' opinions.

Procedure for data collection

The researcher did the following

1) A covering letter (Appendix –II) was given to the Principals of selected inclusive schools seeking permission to conduct the study and administer the checklist.
2) The prior appointment was taken to distribute the checklists to teachers. Parents were contacted informally. The questionnaires were only distributed to those parents who participated. The checklists were only provided to those parents who participated.
3) Standard instructions required and clarifications for filling up the checklist were given to the teachers and parents. The filled checklists were collected personally after 30 days by the researcher.
4) A total of 144 checklists were given to the teachers and parents in 9 Inclusive schools. But only 110 completed checklists were received by the researcher.
5) The data collected thus was compiled in the score sheets and was further analyzed.

Procedure for scoring

The checklist provided two options 'Yes' or 'No.' If the respondents mark 'Yes', the scoring would be '1' (one), and if the respondent mark 'No' scoring would be '0' (zero).

1. There were seven areas on the checklist; the score for all areas put together is '60', and the minimum score is '0'.
2. As the maximum score was different for all areas, the average score for each area of all the teachers and parents was calculated.
3. The Average percentage was calculated for each area of all teachers and parents.
4. The overall percentage of each Inclusive school was to be calculated separately.

RESULTS AND DISCUSSION

The present study 'Appraisal of the physical environment of Inclusive schools for children with hearing impairment in Hyderabad, was aimed at assessing the physical environment of the Inclusive schools by administering the checklist on inclusive schools in Hyderabad. It was also aimed at giving the 'order of importance' for improvement. A 'Physical environment - Checklist' was used by the researcher. The checklist was administered in 9 Inclusive schools in Hyderabad. The analysis of the data collected, results and related discussion are presented in this chapter.

Analysis of Inclusive School 1

Table Average and Percentage Scores of 7 Teachers of Inclusive School 1

Areas and Total statements	*Total Questions*	*Teachers*							*Average*	*Average Percentage*
		1	*2*	*3*	*4*	*5*	*6*	*7*		
Location	*3*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*0.33*	*33.33*
Noise	*6*	*5*	*3*	*5*	*4*	*5*	*4*	*2*	*0.67*	*66.67*
Building	*6*	*2*	*2*	*2*	*2*	*2*	*2*	*3*	*0.36*	*35.71*
Instructional space	*8*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*0.13*	*12.50*

Furniture & Equipment	*8*	*1*	*1*	*1*	*1*	*1*	*1*	*2*	*0.14*	*14.29*
Basic care & Hygiene	*7*	*3*	*3*	*3*	*3*	*3*	*3*	*4*	*0.45*	*44.90*
Facilities	*22*	*9*	*7*	*9*	*10*	*9*	*10*	*9*	*0.41*	*40.91*
Total	*60*	*22*	*18*	*22*	*22*	*22*	*22*	*22*	*0.36*	*35.71*

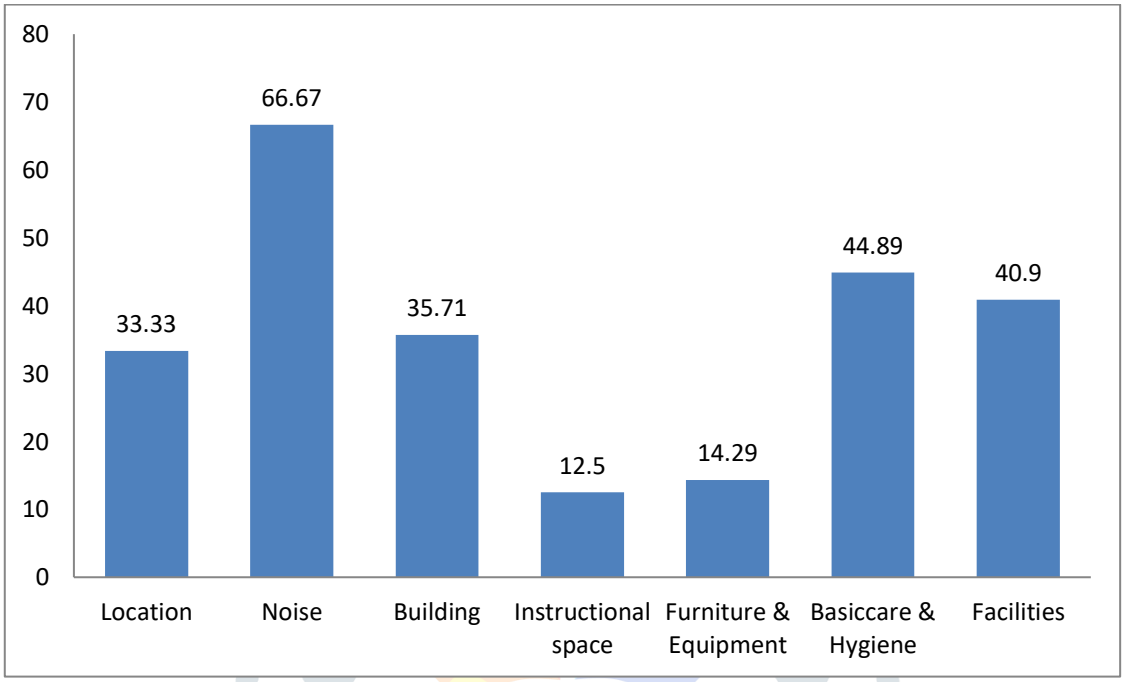

Figure Average and Percentage Scores of 7 Teachers of Inclusive School 1

The above figure depicts that the area' *Instructional Space'* has been rated the lowest (12.5%) by the teachers of inclusive school 1. It can be observed that the teachers of this Inclusive school rated the Instructional space low when compared to other areas like Furniture & Equipment, location, Building, etc., the inclusive school 1. However, they perceive the area of *'Noise'* as relatively high (66.67%). From the above rating, it can be clearly said that all the areas mentioned herein need improvement if the school's physical environment has to be effective. The lagging regions pointed out and to be worked upon from the perceptions of teachers for enhancements of the physical environment in inclusive schools are as follows

- First, area' *instructional space'* has to improve.
- Second, the area' *Furniture & Equipment* needs concentration
- Third, area *'Location'* needs to be improved.
- Fourth, area *'building'* needs concentration
- Fifth, area *'facilities'* may be given importance.
- Sixth, the area *'primary care & hygiene* is given importance.
- Seventh, the last is *'Noise'* may be given importance.

SUMMARY AND CONCLUSIONS

Education is the right of every individual. Schools are the proper places where learning occurs, and the school environment has a more significant impact on all the children studying. In a country like India, where the number of children with special needs is growing, and resources to meet their needs are scarce, inclusive education is the best alternative. The condition of the hour is to find what is best for the child in every given situation. Most of the mainstream educational setup fails to meet the needs of the children with special needs and thus excludes them from the standard format. It makes no sense to bring them back unless changes have been made. For Inclusive Education to be successful, many factors need to be given importance, and one among them is the physical environment. The physical environment of the classroom is not the determining factor in a child's learning, but it can enhance or limit understanding (Lorton, 1979)

If children with special needs are enrolled in inclusive schools without a barrier-free environment, it might lead to children's poor performance. Therefore, assessing the physical environment of schools regularly with a motto to improve the weak areas may provide a barrier-free environment that includes various types of furniture and Equipment like audio-visual aids, toilets, etc.

According to the RTE - 2009 act, implementing inclusive education at various stages like primary and secondary education through central and state governments has become mandatory. There is hardly any assessment of the physical environment of inclusive schools in India to promote effective and functional educational activities. Hence, the present researcher attempts to assess the physical environment due to this.

The present study mainly aimed to administer the adapted Physical Environment Checklist on teachers and parents of inclusive schools for children with hearing impairment in Hyderabad and discuss the order of improvements to be made as per their opinions.

The results of the study depict that all 12 inclusive schools for children with hearing impairment in Hyderabad. Physical environments to promote inclusion in different areas are ineffective in schools. The checklist pointed out lagging areas and strengths from teachers' and parents' perceptions, which may be worked upon to improve the physical environment of the schools to become role model inclusive schools. It is also discussed that four inclusive schools have a better location. Remaining inclusive schools need improvement in furniture and Equipment, facilities, and instructional space.

Limitations of the study:

1. The checklist for students was not prepared considering the problem children face with hearing impairment in reading and marking the statements.
2. Even though the details of other variables like gender, age, teaching experience, and qualification were collected, discussions were made based on 'areas' only.

Recommendations:

1. Checklists to assess different other areas could be prepared.
2. The strengths and weak areas in terms of the physical environment brought out by the checklist may be introspected for improvement.
3. Checklists for school administrators and other stakeholders may also be prepared.

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