A SURVEY OF THE MISSING PHYSICAL FACILITIES IN GOVERNMENT PRIMARY SCHOOLS OF KHYBERPAKHTUNKHWA

Mohammad Rafique [1], Nazish Farid[2], Niaz Muhammad Aajiz[3], Kiramat Shah[4], Nasrullah Khan[5]

Department of Education, Sarhad University of Science & Information Technology, Peshawar, PAKISTAN.

mhsepeshawar@yahoo.com

ABSTRACT

The present study has been designed to investigate the missing physical facilities and actual needs of the public sector schools of Khyberpakhtunkhwa (KPK) province, Pakistan. Total 100 primary schools were selected from KPK for data collection including 50 male and 50 female primary schools. A checklist was designed to check the status of physical facilities in the sample schools. The data were analyzed using simple graph and percentile methods. The survey revealed that majority of the schools had problems such as shortage of furniture; lack of science, math, computer and English teachers; inadequate IT facilities; inadequate building; shortage of classrooms; playgrounds, washrooms, AV aids, Computers, inadequate light, drinking water and toilet facilities. The study concludes that there is a dire need for school improvement in terms of missing physical facilities to meet the actual needs. It recommended that school managers should carry out comprehensive assessment of the facilities to determine areas of need. This type of assessment will assist in policy formulation as it relates to facility management in schools. Effective teaching learning would not be possible without adequate physical facilities to the students and teachers. In order to improve current status of schools and making it a better place for effective teaching learning process, some implement able suggestions were made, when followed would help to provide suitable environment.

Keywords: missing facilities, actual needs, public schools, KPK.

INTRODUCTION

Since the very beginning, human beings have done a lot to facilitate their lives with all the physical facilities of the world. The first need aroused for the human beings was the physical comfort. Physical facilities provide and maintain, safe, clean, and creative educational environments that are conducive to high achievements of the students. Physical facilities strive to give students a comfortable atmosphere in which they work and learn. In developing countries, low levels of learning among children can partly be attributed to poor or inadequate facilities of the schools. Physical facilities are the fundamental factors in better learning and achievements of the students. All facilities must be provided to the schools for the students' better, concrete, and real experiences. The school facility is much more than a passive container of the educational process: it is, rather, an integral component of the conditions of learning. The layout and design of a facility contributes to the *place experience* of students, educators, and community members. Depending on the quality of its design and management, the facility can contribute to a sense of ownership, safety and

ISSN: 2307-3721, e ISSN: 2307-3713
www.erint.savap.org.pk

security, personalization and control, privacy as well as sociality, and spaciousness or crowdedness. When planning, designing, or managing the school facility, these facets of place experience should, when possible, be taken into consideration.

Schools exist for the purpose of teaching and learning. Human and material resources are deployed for this purpose. School facilities are the material resources provided for staff and students to optimize their productivity in the teaching and learning process. The realization that the transfer of knowledge does not only take place in the four walls of the classroom from the teacher to the students but rather that learning takes place through discovery, exploration, interaction with the internal and external environment has necessitated the creative and innovative development of teaching and learning facilities that reflect these changes. Schools exist to serve socio-economic and political needs of the ever-changing society; consequently, they are in constant interaction with their external environment.

School equipment's are available in various forms. The equipment may be fixed or movable and they serve various purposes in the educational system. They are used in the classrooms, laboratories, offices, workshops, cafeteria, toilets, laundry, and library and for sports etc. The supplies are the accessories for operation of various equipment. Furniture are also available in the classrooms, offices, cafeteria, laboratories and workshops, outdoor, residential halls, common rooms, and those designed for the physically challenged. Information and Communication Technology (ICT) facilities also include among others soft wares on classroom management, facility management, inventory control, maintenance management, online procurement, food services and general management. The application of the software requires that the school managers should be exposed to necessary in-service training to enable them make maximum use of the soft wares.

The responsibility of management of facilities requires collective efforts. Management processes, which involve planning, organizing, decision making, leading, coordinating and controlling are applied in facilities management. Broadened educational goals and objectives as a result of changes in socio-economic development have necessitated the involvement of several minds in the facilities management process. It requires expert input from a wide range of stakeholders. Collaborative efforts bring into facilities management new ideas and perspectives. Over the years, school managers have emphasized that physical facilities available for academic and non-academic activities are grossly inadequate. This issue is very sensitive and demanding because it bear direct relevance to the funding of education and most importantly to the quality of outputs of the educational system. Available facilities in most schools may well be regarded as obsolete in terms of quality and quantity. These facilities were provided when the student population in the school was reasonably low when compared to the population of the same school presently using the same facilities.

LITERATURE REVIEW

Research shows that availability of the physical facilities including drinking water, electricity, boundary wall, toilets, furniture, playgrounds, libraries, and dispensaries have a significant positive influence on the performance of the students and their achievement. The study undertaken by Shami and Hussain (2005) revealed that the availability of physical facilities in a school had a significance impact on students' performance. In the context to school facilities, environment in which the students learn is very crucial and without the suitable environment effective learning cannot take place.

ISSN: 2307-3721, e ISSN: 2307-3713
www.erint.savap.org.pk

Bruce (2006) has rightly called the learning environment as the third teacher but it is important that the environment is not an end in itself; we have to look at the settings. Space is an important factor in providing a rich environment for learning, but it is only significant to the degree that it assists in providing a suitable climate for learning. He further investigated that environment should provide a rich range of resources which is always available to children. This gives them scope to build on developing interests and to practice and apply what they have learned. Children then make their own learning. The room should be on the ground floor and has no hidden areas so that it can be easily supervised. It should also be adjacent to toilet facilities, approximately 40 to 60 square feet per child is recommended. He further stated both indoor and outdoor environments can tempt children to learn. Indoor and outdoor space may not only differ according to climate, location, and situation, but also in terms of the program to be developed. Moreover, the furniture in the classroom should be movable, durable, comfortable, attractive, child-sized, and storable. Specifically for chairs it is required that it should be light enough for child to handle, movable without noise, and with backs about 22 inches high. Chairs need to be varied sizes, from 15 to 20 inches high, depending on ages and sizes of children. Display rack and bookshelves need to be movable and to be easily accessible to child. Each class should have a clock with a large face. Clean environment has positive effect on child's personality.

Hussain (2003) supported this idea that influence of the environment starts much before the birth of the child. Child environment includes both home and school. Over the past three decades many hundreds of studies have been conducted to ascertain the effect of the physical environment on education outcomes. Some studies have been statewide in scope; others have focused on only one or two schools. Some have examined dozens of potential variables, while others have concentrated on single factors such as lighting or noise. Some have looked at the condition of school buildings, while others have focused more on individual classrooms. These studies conclude that adequate student capacity and appropriate acoustical conditions are important factors in a school environment (Fisher, 2001; Schneider, 2002; Earthman, 2004).

School buildings are of critical importance to the teaching and learning process. A study of 24 elementary schools in Georgia attributed quality of school design to a 14.2 percent difference in third grade achievement scores and a 9.7 percent difference in fifth grade achievement scores on the Iowa Test of Basic Skills (University of Georgia, 2000).

The OECD (2006) defines "educational spaces" as "a physical space that supports multiple and diverse teaching and learning programmes and pedagogies, including current technologies; one that demonstrates optimal, cost-effective building performance and operation over time; the future of the physical learning environment: school facilities that support the user and is in harmony with the environment; and one that encourages social participation, providing a healthy, comfortable, safe, secure and stimulating setting for its occupants". In its narrowest sense, a physical learning environment is seen as a conventional classroom and, in its widest sense, as a combination of formal and informal education systems where learning takes place both inside and outside of schools (Manninen et al., 2007). Manninen criticized traditional school teaching for conveying too much theoretical information and for preventing in-depth learning. He claims that inert knowledge is relevant for exams but not for real-world problems. This idea is posing new challenges and exerting pressure to bring about changes in physical learning environments.

The good proxy measure of the quality of facility management is that of building condition. School buildings deteriorate with age and since a building's age is a factor in building

ISSN: 2307-3721, e ISSN: 2307-3713

deterioration, the condition of older buildings depends to a large extent on the adequacy of maintenance and operations. High achievement was associated with schools that were air conditioned, enjoyed less noisy external environments, had less graffiti, and where classroom furniture and student lockers were in good repair. More recent reviews have consistently found relationships between building quality and academic outcomes (, 2004; Higgins, Hall, Wall, Woolner, & McCaughey, 2005).

These studies have also found that that design criteria and building conditions related to human comfort, indoor air quality, lighting, acoustical control, and secondary science laboratories have demonstrable impact on student achievement. The quality of school buildings has also been related to student behavior, including vandalism, absenteeism, suspensions, disciplinary incidents, violence, and smoking (Schneider, 2002).

There is now considerable empirical support for the argument that a variety of sustainable design characteristics that can have a significant influence on student behavior and academic achievement. Awareness of design options are a very important part of improving and evaluating educational settings; therefore, as efforts are made to build or renovate schools and educational facilities, urgency is created regarding understanding designs that represent the most effective learning environment (Schneider, 2002).

A good school facility supports the educational enterprise. Research has shown that clean air, good light, and a small, quiet, comfortable, and safe learning environment are important for academic achievement (Cotton 2001).

Bruce (2006) claimed that the indoor and outdoor environments should complement rather than duplicate each other. Simple and safe facilities, equipment, and furnishings permit freedom of activity and provide for creativity on the part of the child. Concept of the learning environment makes it essential that all physical facilities, equipment, and materials are considered carefully in their relationship to the total learning situation and those they are selected and used in accordance with the basic principles of child growth.

Naseer and Saeed (2007) found in the Pakistani context that there is a strong relationship among school size and class size and students' achievement. Class size research, most notably the longitudinal research represented by the Tennessee Student/ Teacher Area Ratio STAR Project and the follow up Lasting Benefits Study, points directly to a social and physical link to achievement.

DISCUSSION

Table 1 is about the usage of different facilities available in the classrooms. It is very clear that the facility makes a difference. The kids take a great deal of pride in being here. They've taken a pride not only in the facility, but there's more pride in their academic performance. The teachers were using chalks in the classrooms for writing, explanation and elaborating purposes by 96% of the teachers.

The charts were used by the teachers for teaching the students easily by 35% of the sample teachers. Models were used by 8% of the teachers and real objects were used by 47% of the teachers. Blackboards were by 95% teachers used for teaching learning and problem solving purposes. Flanned borads were used by 5% teachers and guide books by 30% teachers. Computer and internet facility were used by 8% and teaching kits by 13% of the sampled teachers. It means that majority of the teachers were using the three facilities very regularly which are chalks, blackboards and real objects for making the learners ease and explanation

ISSN: 2307-3721, e ISSN: 2307-3713

purposes. While the three least used facilities were models, fanned boards and computer internet facilities.

Table 1. Usage of different facilities available in the classrooms

S.No	*Item*	*Regular Yes%*	*Sometime No%*	*Never*
1	Chalk/markers	96	04	8
		96%	0%	4%
2	Charts	70	122	8
		35%	61%	4%
3	Models	15	125	60
		8%	63%	30%
4	Real Objects	5	75	30
		47%	38%	15%
5	Black board/ White board	190	0	10
		95%	0%	5%
6	Flannel board	10	23	167
		5.00%	12%	84%
7	Guide books	60	120	20
		30%	60%	10%
8	Computers/Internet	15	20	165
		8%	10%	83%
9	Teaching kits	25	108	67
		13%	54%	34%
10	Drinking water	10	23	167
		5.00%	12%	84%
11	Furniture	25	108	67
		13%	54%	34%

Students and staff in more comfortable learning environments whether that's a result of day lighting or thermal comfort or cleaner air tend to perform better, because they have their basic needs met and at that point they're able to focus on more complex tasks. school facilities have a measurable impact on the achievement of our children. From kindergarten through high school, the environment in which our students learn affects their performance and, ultimately, their future.at the end we can summarized that the teachers were using the available facilities well but need further efforts to be more strengthen and conducive the learning environment through facilities best usage. The costs of managing school facilities have historically received much less attention than facility planning. The percentage of the operating budget for the maintenance and management of school facilities has steadily decreased, creating a capital renewal crisis as a result of years of deferred maintenance at all levels of education.

CONCLUSION

In order for a school to develop into a dynamic physical learning environment, there needs to be a behavioral change in relation to planning and producing spatial solutions. Change cannot occur without input from teachers and students – the main school users. Teachers and students who conceived the study applauded the significant shift away from the traditional classroom and said how much they would like to work in a similar space. If a school provides a quality environment for students, this will facilitate the acquisition of skills that are

important for society. The choice of equipment is important: it should be versatile, resistant, durable and easy to repair. User-based innovative processes should be at the heart of designing the physical learning environment of tomorrow's schools. This process should take into account the global needs of students, teachers, school administrators and the community, while respecting the environment. A judicious selection of products and services that minimizes negative environmental impacts will also be of benefit to all. Socio- economic status, school attendance, and behavior. This comment comes from a recent report evaluating school facilities in Milwaukee completed by the Council of Educational Facility Planners International. While additional and more detailed studies will provide a better measure of the correlation, we already have enough evidence to conclude that a relationship exists. If we can agree that public education is a primary concern of the nation, why shouldn't we solve the problem of poor classroom conditions and improve our children's learning opportunities now? As with everything else, as long as the average citizen thinks schools are doing well, ignorance or apathy will continue to be pervasive. We need to inform ourselves about the condition of our school buildings-and appreciate the important difference a facility can make ineducating our children. School outlook and appearance does matter. It has been found that about one third of the schools have no proper boards bearing names of schools. Similar situation prevails about boundary walls and play grounds. In most of the elementary schools, students do not have adequate access to co-curricular activities. The government could hardly meet the provision of computers and computer teacher for the secondary and higher secondary schools. Schools have been asked for adequate plantation, but this target could not have met due to poverty in certain localities and schools inadequate resources. Of course, certain cases, lack of commitment has been seen one of the major reasons i.e. the head teachers and teachers have not duly taken it up the campaign of plantation.

RECOMMENDATIONS

On the basis of analysis of data, discussion and findings, following recommendations were made:

1. The schools facing shortage of furniture may be allowed to get repaired the damaged furniture present in the stores from the already available funds. The furniture which is in a very bad or poor condition should be auctioned, and the amount obtained so may be utilized for repair of other furniture or equipment.
2. The heads may be directed to get the roofs and outlet drainage points cleaned and clear.
3. Provision of toilets is necessary. Schools having no such facility should generate their resources, but where such opportunity cannot be explored, the government needs to provide funds to meet this basic need.
4. Schools should have adequate facility of drinking water. This problem may be temporarily overcome by encouraging students to bring water bottles from their homes, but the schools should make efforts to make permanent solution of this problem either generating their own resources or asking help from the government or community.
5. Regarding whitewash and general repair of the building, if a school has no funds, then this problem can be overcome through exploiting the role of school council.
6. If IT lab is not available, but other facilities like computers and teachers are available then some science labs may temporarily be used as computer lab. If lab and essential equipment exist, but teacher is not available then for the time being any science

ISSN: 2307-3721, e ISSN: 2307-3713

teacher having some know-how of the computer skills may be given this assignment or some volunteer from the community may be requested to take this responsibility.

7. Teachers' shortage problem can be overcome to a large extent by proper rationalization of teaching staff in schools. The School Education Department has already taken up this issue.
8. School councils may also play their pivotal role to launch enrolment campaigns and look for resources for proper boundary walls of schools.
9. Plantation campaigns should be launched in schools and media should also play its role in this regard. The head teacher should keep liaison with the Forest Department to seek advice and help. The schools may get plants on nominal rates.
10. Designated head teachers of grade 17 should be appointed in all the government primary/elementary schools of Punjab.
11. Government should take the initiative to settle down the problem of rented buildings. Either they should be purchased or community may be motivated for free land and the government should provide funds for construction of building and buy necessary equipment.

ISSN: 2307-3721, e ISSN: 2307-3713

REFERENCES

[1]. Bruce, T. (2006). *Early Childhood Education: A guide for students*. London: SAGE Publications.

[2]. Cotton, K. (2001). *New Small learning Communities:* Findings from Recent Research.

[3]. Portland, Retrieved from: http://www.nwrel.org/scpd/sirs/nslc.pdf on 03/03/15

[4]. Earthman, G.I. (2004). *Prioritization of 31 criteria for school building adequacy.* Baltimore, MD: American Civil Liberties Union Foundation of Maryland.

[5]. Fisher, K. (2001). *The impact of school infrastructure on student outcomes and behavior*. Canberra, Australia: Department of Education.

[6]. Higgins, S., Hall, E., Wall, K., Woolner, P., & McCaughey, C. (2005). The impact of school environments: A literature review. London, United Kingdom: The Design Council. Retrieved from http://www.designcouncil.org.uk/resources/assets/assets/pdf/Publications/The% 20Impact%.

[7]. Hussain, M. (2003). Role of Environment in the Development of Personality of the Child, *Pakistan Journal of Education*, *20*(1), pp. 73 & 74. Islamabad:

[8]. Salfi, N.A., & Saeed, M. (2007). Relationship among school size, school culture and students achievement at secondary level in Pakistan, *International Journal of Educational Management, Vol. 21*(1), 2007, Emerald MCB UP Limited, Bradford, UK.

[9]. Schneider, M. (2002). Do school facilities affect academic outcomes? National Clearinghouse for Educational Facilities. Retrieved from http://www.edfacilities.org/pubs/outcomes.pdf. on 20-04-15

[10]. Shami, P. A., & Hussain, K. S. (2005). *Quality of Education. Islamabad: Ministry of Education,* Academy of Education Planning and Management.

[11]. Manninen, A. et al., (2007). *Introduction to the learning environment thinking, in support of learning environments.* Helsinki: Board of Education.(In Finnish)

[12]. OECD (Organisation for Economic Co-operation and Development) (2006), CELE Organising Framework on Evaluating Quality in Educational Spaces, www.oecd.org/edu/facilities/evaluatingquality