An Evaluative Study of Implementation of Information Technology at Secondary Schools, Sindh, Pakistan.

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Abstract
This study examined the implementation of Information Communication Technology (ICT) in Pakistani school specially stated the integration of computers into the curriculum. It investigated the level of availability of computer lab. and qualified staff in school, facilities provided in computer laboratories and the problem and challenges faced by the students, staff and administration. The descriptive survey design was used for the study. A self designed questionnaire has been administered for collecting data. Population of the study consisted of all the principals, teachers and students of schools in Hyderabad district. There are total 100 schools in Hyderabad District of Sindh Province in Pakistan. Information was collected from 18 secondary public schools of boys and girls located in Hyderabad district of sindh province.

Key Words: Information Communication Technology, Secondary Schools, Implementation

Introduction

With the rapid increase in the use of ICT in general and in education particular have created much pressure to evaluate the performance of ICT. According to Wyley (1996) some factors must be evaluated. Some of them are competition from funding, financial crisis of institutions, accountability of tax payers and justification of using of public funds.

Bandele (2006) describes that information communication technology (ICT) deals with use of computer, Internet telecommunication technology laboratories maintenance and other

related fields for the use of individuals in order to gain most of the benefits in modern time and through this ICT data related to every aspect of human life and discipline can be accessed easily.

ICT has great importance in education through which teachers students and administration can easily come close to each other in reference to know each other's demands and needs.

Hastrupt.T ad et.l shows great importance of ICT in teaching and learning in educational institution where quality of performance of both can be enhanced in developing country to motivate teachers and taught to sharpen their skill of learning and teaching through electronic communication.

ICT has great potential to devised strategies for the development of education for developing country at different level and different institutions and social life.

Studies reveal that use of modern technology in education has greatly affected performance of students in their performance as positive in all subject and enables students to gear up their computing and graphing skill for their better and speedup faculty of min d to increase level of performances (look 2005, Becta(2003)

In secondary school and higher secondary school (ICT) has targeted speedup of education reforms in 21st century when implemented properly will support educational skill, knowledge related to social problem and discipline to empower students in their life long specially active and collaborative learning. creative, integrated learning, evaluative learning.

In our National Educational Policy 1998-2010 it is clearly stated that "computer shall be introduced in secondary schools" and "Educational institutions shall be provided internet facilities". Therefore, the aim of this study is to evaluate the adoption/ implementation of ICT at the secondary school level. Therefore, research during this study will evaluate the problems/ causes of not implementing ICT at secondary School level.

Now a days many educational institutions and libraries are changing to ICT labs with a hope that they will provide more services and will make life easier by improving the methodologies and delivery

services. A performance evaluation does not mean to judge that they are providing the services or not but to see that either they are offering more effective and better services or not. (Lombo 1998: 61).

Present study has been designed for the secondary schools for the presence of computer labs in secondary Schools in Hyderabad district in Sindh and to propose future strategies in this area. The study is undertaken to examine the present status of Govt. schools with reference to the availability of computers in secondary schools.

Aims & Objectives:

This study was conducted to achieve the following objectives:

- To survey the availability of computer lab and qualified staff in schools under study.
- To examine what extent the laboratories are equipped.
- To identify the problem and challenges of implementation of computer in school.
- To give recommendations and suggestions for effective implementation of ICTs at Secondary Schools.

Research Method

Research is the scientific method of defining, collecting and analyzing the data to clear and understand the problem under investigation. It is the prime responsibility of a researcher to understand the problem, hypothesize it and reach to the findings and communicate them to others.

This study was aimed at examining and analyzing the implementation of computers at secondary schools in Hyderabad District. The study is a survey study and descriptive research in its nature. Convenient sampling methods have been used. The following methodology have been adopted for evaluating the factors responsible for the implementation of computers at secondary schools.

There are 100 Government Secondary Schools (Girls and Boys) in Hyderabad District out of which 18 Government secondary schools were selected with the help of purposive sampling. Teachers and students are included in this survey for the better evaluation of the problems regarding the computer availability.

A simple well warded, easy to understand and self explanatory questionnaire comprising of ten (10) items was developed. Before finalization of the questionnaire a pilot testing was also made. Then improved questionnaire was distributed. And focus group discussion techniques were used for collection of the data.

Presentation of data

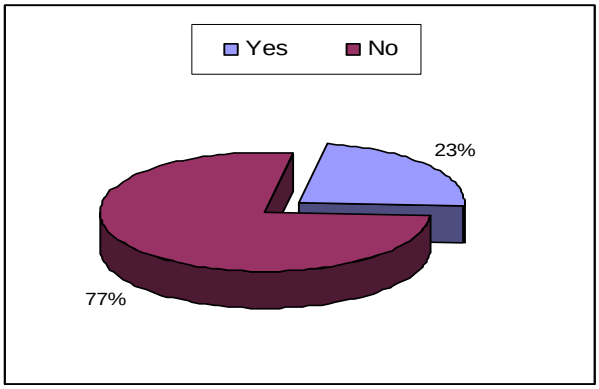
When survey was conducted in 18 secondary schools, only 4 schools were found having computers and staff.

Data Collection.

Table 1. Computer Lab in thirteen schools in Hyderabad District

Names of Schools	A	B	C	D	E	F	G	H	I	J	K	L	M	Total Yes No
Response	Yes	No	No	No	No	No	Yes	No	No	Yes	No	No	No	3 10

Graphical Representation of data:



About the availability of computer lab in schools, 77% schools answered no, while 23% schools had computer labs.

Table 2. Computers and Number of Students

No. of Schools	No. of Computers	No. of Students
1	10	60
2	20	200
3	15	40

After evaluation of the responses above percentage shows that in Govt. schools the strength of students is too much & computers are not sufficient in numbers to fulfill the need of students.

Table 3. Computer teachers and Lab Assistant

Names of School	A	B	C	D	E	F	G	H	I	J	K	L	M
No. of Teachers	0	0	0	0	0	0	2	0	0	3	0	0	0
Lab. Assistants	0	0	0	0	0	0	0	0	0	1	0	0	0

It is obvious from the data' that majority of schools do not have required number of staff.

Table 4. Establishment of Labs and Maintenance

Note: Computer Labs and Maintenance were found in three schools out of thirteen schools.

Responsibility of Establishment and Maintenance of Labs	No of Schools
Government	3
with the Collaboration of Private sector	N/A
School Funds	N/A
any other specify	N/A
Total	3

The above table shows that government is responsible for establishment and maintenance of the labs in the schools but there were only three schools having labs.

Table 5. Trained teachers in thirteen schools of Hyderabad District

Yes	No
1	12

It is pathetic condition that only in single school trained teachers were found out of thirteen schools.

Table 6. Time duration given to students in lab to use computer

No. of Schools	Response
1	No any fixed time
2	3 Hr /week
3	6 Hr /week

Note: Only three schools had labs out of thirteen schools.

On the analysis of this item of the questionnaire, it is evaluated that there is no proper schedule for using lab, only one school is given proper time.

Table 7. ICT facilities in thirteen schools of Hyderabad District

ICT Facilities	School No. 1			School No. 2			School No. 3		
	Available		No. of units	Available		No. of units	Available		No. of units
	Yes	No		Yes	No		Yes	No	
Video camera		✓	N/A		✓	N/A		✓	N/A
Overhead projector		✓	N/A		✓	N/A		✓	N/A
Multimedia projector		✓	N/A		✓	N/A		✓	N/A
Computer printer		✓	N/A		✓	N/A		✓	N/A
Scanner		✓	N/A		✓	N/A	✓		One
Internet		✓	N/A		✓	N/A		✓	N/A

It is clear from the data that majority of schools do not have any ICT facilities.

Data Analysis

Thirteen Schools were surveyed out of which only three schools had computer labs.

It is found through the study that only 23% schools have computer laboratory. It is also found that the strength of student is too much & computers are not in sufficient numbers to fulfill the need of students. It is obvious from the data that majority of schools do not have required number of staff. It is also found from the study that Govt is responsible for the establishment & maintenance of Computer laboratory.

It is evaluated that 66 % schools responded that they do not have trained teachers.

It is calculated that there is no proper schedule for using lab, only one school has proper time to use computer.(Q.No.9).It is found that majority of schools do not have ICT facilities.(Q.No.10)

After evaluating the result of Focal Group discussion the researcher found that lab was not used properly, students were complaining that lab is not in working condition and they are not allowed to use lab. They not able to learn anything from computers in their schools. Researcher asked how they will evaluate the use of computer in education. They replied that it is very essential and useful tool, but not easily available.

Conclusion:

The analysis of data has shown a very alarming situation related to computer availability and usage in Pakistani Government Schools. Inspire of efforts from public and N.G.O sector education through computer is still a problem. In many situations computers are not available but if they are present then trained and technical staff is not present. Many schools have been given computers but due to unavailability of technical staff those computers are not functional. In some cases computers are present but without networking or without internet support. Students are given some time for computers in time table but without internet they just only learn how to turn on and turn off the computer. Systematic computer Labs are rare and course outline for computers are absent.

Recommendation:

Availability of Computer Laboratories and Equipment:

1. Separate budget should be allocated for the establishment and maintenance of computer labs.
2. Second hand computer should be purchased for instance in the use of low-cost computer devices in education, there is a lack of evaluation of their impact (survey report of ICT use in India and Africa)
3. Educators and policy makers should be well known that what type of Computers should be available and decide that which type and configuration is necessary in programmes different type of. It is not necessary that always brand new equipment is essential for good educational outcomes. Through this consideration administration can manage the cost of computer.
4. If the Govt. has not enough funds to establish a separate lab in each school then it is possible to use a mobile unit in form of bases that travel school to school and locality and carry computers and other material for interested people.
5. Another possibility is the establishment of a common Hi-Tech lab. A Hi-Tech computer laboratory will be established in central place and other schools that are located in that area may share the same lab on rotational basis.

Fund's Generation and Fund Rising:

Through the Involvement of Private Sector & Donation from community and Parents

1. Facilitating community and parental usage of computers provide an opportunity to enhance school community relationships.
2. School can generate funds for establishment of lab through involvement of private sector, National and International NGO's, Intell Corporation.
3. Head of Schools can plan income generating activities if this is seen as a way of meeting the running costs of computer provision

Availability of human resources

Technical and qualified staff should be hired, Involve community and create parents teachers committees, and invite guest speaker from the community for delivering lectures at free of cost.

Training programs and refresher courses should be organized with a focus on educational computing strongly needed for in-service teachers, as was also suggested by a number of scholars (Bybee & Loucks-Horsley, 2000; Vrasidas & McIsaac, 2001). Training programs should be designed at different levels starting from basic computer literacy skills to professional skills for using computers in the classroom. In agreement with Liu and Szabo (2009)'s findings with US in-service teachers, these initiatives should be well-planned and efficient.

Teachers may be provided incentives to complete the computer literacy program and professional development programs at all levels. These incentives may include laptops,mobile phones having internet facility. (Liu & Szabo, 2009).

Teachers over a certain age need to be encouraged in more distinctive ways to be involved in in-service.

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APPENDIX:

Source: Educational District Office Hyderabad, Sindh, Pakistan

School Label	Full Name of School
A	Govt. Noor Muhammad High School
B	Govt. High School No.1
C	Govt Apwa Girls High School
D	Govt. Boys Comprehensive, Latifabad No.10
E	Govt. Girls Hani High School, Latifabad No:07
F	GBHS. Allama Iqbal, Latifabad No.9
G	GBHS. Islamia Modern High School
H	Govt. (N) Municipal H/S Hyderabad
I	Govt. Girls Marium Siddique, Latifabad No.11
J	Govt. Girls Double Section, Latifabad
K	Govt. Boys Majeed Darbari, Paratabad.
L	Govt. Girls Zeal Pak Model High School.
M	Govt. Girls High School, Noor Muhammad II
N	Govt.Girls High School Latifabad No:10
O	Govt.Girls High School Latifabad No:06
P	Govt.Shalatif High School Latifabad No:10
Q	G. (N) Muslim Boys High School Hyderabad.