



# Role of Technology in the Transformation of School Education

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## ABSTRACT

Nowadays in schools, stress is being laid on the use of technology and computer awareness. To reapfill benefits of the available technology high quality, meaningful and culturally responsive digital content must be made available to teachers and learners. Teachers must have the Knowledge and skill to use digital tools and resources to help out students for achieving higher academic standards. But what is the present status of the use of technological resources provided to the teachers as well as learner in schools? The present study attempted to find this answer. Students of classes IX and X from public schools of kapurthala district were taken and responses obtained were analysed. Results of the present study indicate that whatever the schools and authorities claim, the bitter truth is that even access to digital technologies is not being made available in the schools.

## INTRODUCTION

Technology is a major factor in shaping the new global economy and producing rapid changes in society. During the past decade technology has dramatically changed the way in which people communicate and do business. It has produced significant transformation in medicine, business, engineering and other fields. It also has the potential to transform the nature of education; where and how the learning takes place and the role of student s and teachers in teaching-learning process. To reap fill benefits of available technology, it is essential that teachers have basic technological based skills and competencies. The following essential conditions must be met in order to effectively harness the potentials of new technologies to improve teaching as well as learning ; Students and teachers must have sufficient access to digital technologies including internet in the classrooms, schools and institutions; High quality, meaningful, and culturally responsive digital content must be made available to teachers and learners; and teachers

must have the knowledge and skill to use the new digital tools and resources to help all students achieve high academic standards (UNESCO,2002a,p.10). Schools are facing with the challenges of preparing a new generation that can effectively explore these new learning tools. For integrating these concerns , school education system requires new technological resources, expertise and planning about how these resources should be used.

The computer considered as an engine of the mind has tremendous capacity to store and process data and to produce and disseminate information. With the emergence of diverse multimedia and networking possibilities, computers have emerged as tools for innovative teaching and learning. For the first time in the history of education, students are providing more adept than their teachers in mastering technology based delivery system. It is obvious that the monopoly enjoyed by schools and formal education providers will diminish dramatically hereafter with future educational exposure and experience is readily available

outside these institutions. The scope of the new technologies for transforming existing educational set-up is indeed enormous and includes the possibility globalization of education, adaption of foreign curricula, new teaching materials and the networking of schools.

### **REVIEW OF LITERATURE**

Bavakutty and Salih (1999) conducted a study at Calicut University and found that students, research scholars, and teachers used the internet for the purpose of study, research and teaching, respectively. Sinha (2000) conducted a study in Barka Valley, South Assam and found that internet has boosted the quality of research, academic activity for faculty and students or entire academic community and e-commerce for corporate sector/business group and enable them to get instant information for their varied purposes. Panda and Sahu (2003) conducted a study of the engineering colleges of Orissa. The study revealed that 50 percent, of the engineering colleges used dial-up connection. A majority of the colleges used the Internet to provide online demonstrations. Hanauer (2004) surveyed a diverse community colleges to assess the use of the internet by the students and found that although all the students had free internet access through their community college, only 97 percent of the students reported having access to the internet; 81 percent of the students reported accessing the Internet most for college work and 80 percent for e-mail/chat. Mishra, Yadav and Bisht (2005) conducted a research study to understand the internet utilization patterns of undergraduate students at the G B Pant University of Agriculture and Technology, Pantnagar. The findings of the study indicate that a majority of the students (85.7 percent) used the internet. The findings of the study also showed that 61.5 percent of the males and 51.6 percent of the females used the internet for preparing assignments. Kumar and Kaur (2005) conducted a study on students of engineering colleges of Punjab, Haryana and Himachal Pradesh and observed that the internet has become a vital instrument for teaching, research and learning process of these respondents. Khalid Abdullah (2009) conducted a study at RMIT University, Bandura, Australia and found that teachers have a strong desire for the integration of ICT into education but that they encountered many barriers like lack of confidence, lack of competence and lack of access to resources. Ms Ulka Toro (2013) by conducting

literature review and classification of articles from 2002-2012 in order to explore knowledge management technologies and applications have been developed in this period. From the findings it is clear that to facilitate more expressive exchanging, sharing and dissemination of knowledge and its management, effective implementation in higher education is required. The internet facility has enabled the teachers and the students to enhance their academic excellence by providing them the latest information and access to the worldwide information. The present study endeavours to provide an insight to students, teachers, researchers and academicians. The study as the researchers visualize, would not only be intellectually arousing but would also prove to be considerable value to the changes in rules and guidelines of education.

### **TITLE OF THE PRESENT STUDY**

The title of the present study is "Role of Technology in the Transformation of School Education" :- A Study of Public schools of Kapurthala District". The study had been carried out to know how far the students of Kapurthala district are aware of the usage of the internet and its applications.

### **OBJECTIVES OF THE STUDY**

The present study has the following objectives:

- To know about the awareness of computer and internet among the school-going students
- To ascertain the usage pattern of Internet and Internet services by school going students.
- To find out the perception of students regarding the usage of computers.

### **RESEARCH METHODOLOGY**

The present study is Exploratory-cum-Descriptive in nature as it endeavours to find out the use of Technology in School Education as well as their usage patterns. Survey method has been applied for the present investigation, which has been carried out by administering questionnaire on the school-going students.

### **SAMPLE**

In the present study students of IX and X standard were randomly selected from the two schools of Kapurthala namely Lalvani Public school and St. Soldiers high school. From each school, randomly 100 students were selected by lottery method.

### **DATA COLLECTION**

Both primary and secondary data had been collected in this research. Secondary data had been

collected from journals, websites and research articles while primary data had been collected through the well-structured questionnaire. The students were requested to fill up the questionnaire. Eighty students (in total) did not show any interest and did not return the fill up questionnaires. Out of 120 questionnaires, twenty six questionnaires were found containing inadequate/anomalous information, hence they were rejected from further analysis. So the effective sample was 94 yielding a response rate of 47 percent.

### **DELIMITATION OF THE STUDY**

- The result of the present study are based on the opinions and experiences of the respondents. In opinion survey, there are always possibilities of individual bias. All possible precautions have been taken to solicit unbiased opinion. However, in some cases bias cannot be ruled out due to human nature.
- The present study covers only two schools of Kapurthala district and hence the results of the same may not be generalized for all India level.

### **DATA ANALYSIS AND DISCUSSION**

For analyzing the data, simple statistical tools have been used and percentages were calculated.

#### **COMPUTER AWARENESS AND USAGE**

The scope of the use of computers for providing education in schools is indeed enormous. 88.3 percent (83 students) respondents had used computers and out of these 62.7 percent (52 students) had done some sort of computer course. The preferred place for computer is home (44.7 percent) and school (35.1 percent) followed by cyber cafes (30.9 percent). Only 6.4 percent were using it in parents office and another 14.9 percent used computers at other places such as friends home. Personal computers have become one of the most preferred gadgets in recent times and this is verified by the present study. 62.8 percent (59 students) had personal computers at their homes. This is a symbol of rising standards of middle class as almost 78 percent of the students were from the income category of less than Rs 50,000 as monthly family income. Almost 72.9 percent (43 students) were using some version of Windows operating system. 8.5 percent (5 students) were using non-Windows operating system such as Linux or UNIX. Rest 18.6 percent (11 students) had no idea about their operating system. Out of the 59 students who had PC at their homes 83.1 percent

(49 students) were using MS-Office in their personal computers. Overall 66 students out of 94 (70.2 percent) had some idea about MS-Office and worked on it. Among them majority (61.7 percent) were comfortable on MS-Word, 30.9 percent had idea about MS-Excel and only 27.7 percent had idea about MS-PowerPoint software. The commonly given reason for purchase of personal computer is that it is required for academics and it will assist in learning. However, actually, seldom it is used for the above stated reasons. The results clearly shows that computers are used maximum for playing games (55.3 percent) and for listening music/watching movies (45.7 percent). Only 23.4 percent of the students were found to be using PC for their homework (that too related to computer related subjects). Usage of Personal Computers can be assessed by determining how many hours the students use computers. 62.8 percent (59 students) of respondents had personal computers at homes. Out of them 52.5 percent (31 students) used it daily for 2-3 hours while 37.3 percent (22 students) used it more than 3-5 hours.

#### **INTERNET AWARENESS AND USAGE**

52.1 percent (49 students) had never had any exposure to internet while 52.1 percent (49 students) had never had exposure to Internet while 47.9 percent (45 students) had worked on it. Out of these, 45 students, 62.2 percent (28 students) had started it just six months back. Another 20 percent (59 students) were using it from last one to two years. Out of 47.9 (45 students) who have used internet. 62.2 percent (28 students) used it occasionally while another 20 percent (9 students) used it frequently and only 17 percent (8 students) claimed to use it regularly. 22.3 percent (21 students) of respondents worked on internet from home and another 29.8 percent (28 students) availed this service in cyber cafes.

#### **PERCEPTION OF STUDENTS ABOUT INTERNET**

The students were asked about their awareness level regarding various applications of Internet i.e. downloading software, chatting, search engines etc. Previously, students used to spend their time in library searching for information in books and journals. Nowadays they use web search engines and figure out the websites containing the required information. In the present study 26.6 percent (25 students) have just heard about it from their teachers or parents, 45.7 percent (43 students) had no idea about search engines viz. Google

followed by Yahoo. Schools are expected to make students aware about computer by giving them certain assignments or tasks that necessitate computer usage, 29.8 percent (28 students) affirmed that they are given such assignment that require computers but generally it is only for computer-related subjects and ten percent reported that assignment for all subjects are given which requires computers. 59.6 percent (56 students) denied any such assignment given to them.

E-mails are considered to be most widely used Internet resource. It allows information to be sent between computers and people on the internet. In the present study, only 34 percent (32 students) were having e-mail id. However, out of these students 90.6 percent (29 students) claimed that they have created their e-mail id on their own. For the remaining 9.4 percent (3 students) their friends had created e-mail id for them. Regarding the purpose of e-mail id, 53 percent (17 students) of those who have e-mail id, reported that they used it for staying in touch with friends. 34.4 percent (11 students) claimed using e-mails, 53 percent (17 students) of those who have e-mail id reported that they checked e-mails occasionally and only 28 percent (nine students) claimed checking e-mails on regular basis.

Chatting and downloading anything from Internet are regarded as higher-level application of Internet. When asked about whether they used chat services 23 students (24.5 percent of sample) affirmed that they used chatting. This was quite unexpected from the students of classes IX and X. However, the students mentioned that the purpose of using chat services was talking to their distant relatives/friends. They used the popular software like skype for videoconferencing with their family members in abroad or in India. However chatting with their personal friends or unknown was not observed. The frequency of using chat service varied. 52.2 percent (12 students) used this service occasionally and another 30.4 percent (seven students) used it on regular basis. Remaining 17.4 percent (4 students) used it on frequent basis.

Downloading something from the internet is considered as a complex task for a student of class IX and X but 26 students (27.7 percent) asserted that they have used the downloading service. Out of these 26 students, 73 percent (19 students) downloaded study material, 50 percent (13

students) downloaded wallpapers and 46.2 percent (12 students) downloaded games. Another 34.62 percent (9 students) upgraded their antivirus using download facility.

## CONCLUSION

The present study was conducted with the objective of ascertaining the use of technology among the students of classes IX and X of Kapurthala district. Data analysis revealed the following facts:

Majority of students under study had used computers and out of these 62.7 percent had also done some sort of computer course. 62.8 percent had personal computers at their homes. Computers were used maximum for playing games (64.5 percent) and for listening music (58.3 percent). Almost half of the students had exposed to the internet. 46.67 percent students worked on the internet from home and another 44.4 percent availed this service in cyber cafes. 26.6 percent of the students have used the search engine and another 27.7 percent had just heard about them from their teachers or parents, 45.7 percent students had no idea about search engines. Google tops the list of most commonly used search engine. One of the concern areas of this study was how much schools are emphasizing on computer education and what measures they are taking to actually prompt students to use computers. Giving assignment to students that require computer assistance is one of the good practices that the schools of National Capital Region (NCR) are using. Are the schools of schools of Kapurthala using this pedagogical tool? On asking this question, 29.8 percent students affirmed that they are given such assignments that require computers but generally its only for computer related subjects and another ten percent reported assignment for all subjects.

Only 34 percent students were having e-mail id. 23 students (24.5 percent) affirmed that they used chatting. They used the popular software like skype for videoconferencing. Majority of the students (52.2 percent) used chatting service occasionally and another 30.4 percent used it on regular basis. 26 students reported that they have used the downloading service. Out of these, majority of downloads included study material (which includes last years question papers as well as results), followed by wallpaper games (mostly Flash games).

As regard the perception of students towards the Internet, cent percent students affirmed that Internet is quite informative, 84percent believed it to be timesaving, 77.66 percent perceived it as easy to learn and 72.34 percent found it easy to use but at the same 62.77 perceived it as a costly affair.

Overall it was observed that the schools of Kapurthala are now plentifully supplied with PCs and related technologies, still most of the systems are underutilized. The required level of awareness about computer and the internet is not there. The power of computer is revealed in the internet. But the results of present study show that the penetration of computer and internet is still far from desired. Whatever knowledge the students have, it is because of their family environment and initiation from parents and friend circle. The impetus from school to ignite students mind and making them at home with this mighty technology was not observed. The information on the internet is not usually available in a structured way and the students are often unable to get the precise information. Here the teachers, who have acquired a good understanding in the collection, organization and retrieval of the right information at the right time, can play an instrumental role and prompt the students to embrace this mighty technology.

Indian education system was developed more than a century ago to teach students the basic facts and survival skills they would need for jobs in industry and agriculture related jobs. But in this information age , communication is the main survival skill. Indian brain is regarded as the pioneer in majority of software development and in this competitive environment we can retain this position only by providing early start to our next generation.

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