A study of Effect of Web–Based Education Environment in Schools: With special reference to Satara District

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***Abstract*— Web-based teaching and learning is rapidly emerging as a predominant paradigm in the delivery of education in society. Internet is the ocean of knowledge. This ocean can be made available to all students as early as possible in their life. So Information Technology & related tools can be introduced in school education by using World Wide Web (WWW) as education delivery medium. The WWW is used to provide information with great prospect and extend learning outside space and time boundaries. The remarkable developments in IT and networking have opened the doors of education. In the era of IT e-learning / Web based learning (WBL) can be efficiently used for different types of education. Most of the population of India is in the rural areas where literacy rate is poor due to the lack of educational facilities. This paper discusses the present scenario of education and discusses that Web based education / learning has potential to meet the perceived need for flexible pace, place & face. To find the effectiveness of implementation of WBL in school education a survey was conducted in various schools of Satara District. Data was collected through questionnaires and group interviews for this research survey. At the end of the survey a very positive outcome occurs that if web based education will be implemented in schools along with traditional education it will have tremendous positive effect on teachers, students and school. This research paper focuses on effect of WBL in schools, to find effect of WBL between students and teachers lies in further research**

Index Terms— World Wide Web, Information Technology, Web-based education, Web Based Learning, Digital Versatile/Video Disc.

I. INTRODUCTION

The Indian Constitution resolves to provide quality education to all and in an effort to fulfill the educational needs of the country specifically for the diverse societies and cultures of the country the government has chalked out different educational categories: Elementary education, Secondary education, Higher education. Education gives us that powerful tool by which we can leave a life of worthiness it is only through improving the educational condition of a society that the multi-faceted progress of its people can be guaranteed. The scenario of the education in schools is changing. Now the schools are well equipped with all modern technically sound devices that facilitate the learning environment. The use of Information communication and technology tools like Liquid crystal displays (LCD) projectors, CD's, DVD's, smart boards and other modernized devices is an indication that India is also developing in an equal pace with the whole world. Apart from this, different international schools are also making their appearance in India. Impact of globalization can be seen in case of online technique of learning. This has become possible because of the Internet /World Wide Web. This has given rise to implement web based education in schools.

Basic Structure of Education:

Sr. No	Stage	Age Group	Classes
1	Pre Primary School (Kindgarten)	4 to 5 years	Jr. Kg. to Sr. Kg
2	Primary Education	6 to 10 years	1st Std. to 5th Std.
3	Upper Primary Education	11 to 13 years	6th Std to 8th Std
4	Secondary education	14 to 15 years	9th Std to 10th Std
5	Higher Secondary education (Junior College)	16-17 years	11th Std to 12th Std

Table 1: Basic Structure of Education in India

The main categories of schooling offered in India are:

Sr. No	Categories of schooling
1	The state government controlled schools
2	The Central Board of Secondary Education (CBSE), New Delhi
3	The Council for Indian School Certificate Examinations (ICSE), New Delhi
4	National Open School
5	International Schools

Table2: Categories of schooling in India

II. NEED FOR WEB BASED ENVIRONMENT IN SCHOOLS

In the presence of social diversity in India, it is difficult to change the social background of students, parents and their economical conditions. Therefore the only option left for us is to provide uniform or standardize teaching learning resources or methods. For high quality education throughout India there must be some nationwide network, which provides equal quality education to all students, including the student from the rural areas and villages. The solution to this is Web-Based Learning.

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Sr. No	Features of WBL
1	**Interactivity** between users students, instructors, and administrators
2	**Speed** of delivery
3	**Flexibility** in relation to time and location of use

Table 3: Features of Web based Learning

Web based learning facilitates, supports, consolidates and even replaces traditional classroom activities. Advantages of Web based learning based on various parameters are Hypermedia, Open, Flexible, Distributed, Dynamic, and Interactive & Archival.

The comparative study Traditional teaching and Web based teaching is as follows:

'Traditional' Model of Teaching	Web Based Model of Teaching	Technology Implications
Classroom Lectures	Individual Exploration	Availability of networked Computers with guided access to online information and learning Materials.
Teacher as Deliverer of Information	Teacher as a Guide	Teaching via programme websites and online learning environments; access to external experts over the Internet
Individual Work	Collaborative Learning	Access to email and online 'conferencing' tools
Face-to-face Teaching	Flexible and Distance Learning	Student access to networked computers for materials delivery and support
Consistent Content	Fast-changing Content	Availability of networks, web space and web publishing tools; sharing of computer based learning materials with other institutions

Table 4: Implications of New Technologies

III. RESEARCH METHODOLOGY

To find the effectiveness of implementation of WBL in school education a survey was conducted. Data was collected through questionnaires and group interviews for this research survey. The study was composed on three groups: Schools, Teachers and Students. This research paper focuses on effect of WBL in schools. So a research survey about the use of Web-based learning in education was conducted in selected schools of Satara district in Maharashtra state. There are about 664 schools in Satara District that are registered under MAHARASHTRA STATE BOARD OF SECONDARY AND HIGHER SECONDARY EDUCATION PUNE,DIVISION: KOLHAPUR **(Source: http:// mahresult. nic.in /ssc2011/Kolhapur.htm,School Wise Result Statistics Report,9th Nov 2011 11.30Am).** Out of 664 schools from Satara district 96 schools (Grantable & Non-Grantable together) were selected from both rural and urban areas **for the survey. T**he schools in Mahabaleshwar area especially Panchgani are co-educational and residential Schools. Different types of schools like residential schools, boarding schools, government schools, primary schools and secondary schools operate in the Satara District. Most of the schools have their own websites on which information of school is posted, online admission is possible, web mails are available, Student's and parent's have authorized user name and password for login for their communication etc.

Sample Size

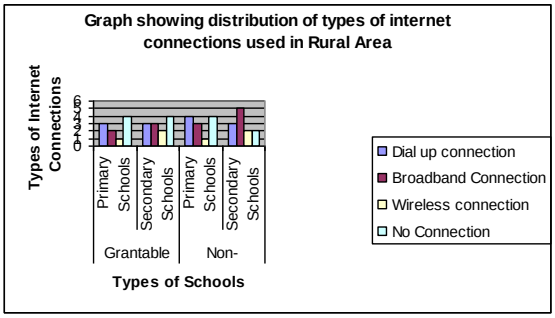
The sample of 96 school (Grantable and Non-grantable) were selected form the total universe from both rural and urban area. The students belonged to different Types. To find the effect of web based education in schools, questionnaire was circulated to the principal's of the schools. The questions in the questionnaire were regarding types of internet connections, likings about implementation of web based education in schools, barriers in implementation of WBE.

Types of Internet Connections	**Types of Schools**								**Total**
	Grantable Schools				Non - Grantable Schools				
	P.S.		S.S.		P.S.		S.S.		
	R	U	R	U	R	U	R	U	
Dial up connection	3	4	3	4	3	4	3	3	27
Broadband Connection	2	3	3	4	2	3	4	5	26
Wireless connection	1	3	4	3	4	3	4	4	26
No Connection	4	1	2	1	3	3	2	1	17
Total	10	11	12	12	12	13	13	13	96
Total	21		24		25		26		

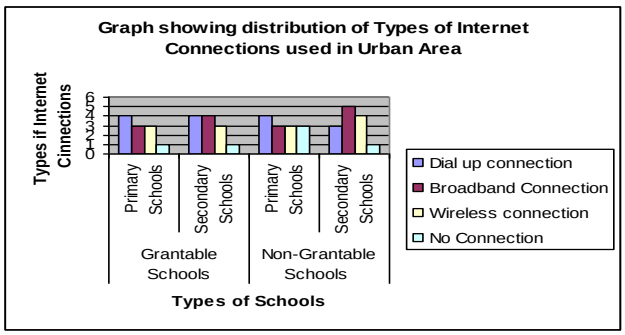
Table 5: Distribution of Schools based on Types of Internet Connection

In above table P.S. means Primary Schools, S.S means Secondary Schools, R represents Rural Area & U Represents Rural Area

The above table furnishes the information of distribution of schools based on types of internet connection. From the table it was found that 28% of the respondents in Rural Area use Dial up connections, 28% of the respondents in Rural Area use Broadband connections, 13% of the respondents in Rural Area use wireless connections and 30% of the respondents in Rural Area have no connections. It was also found that 30% of the respondents in Urban Area use Dial up connections, 30% of the respondents in urban Area use Broadband connections, 26% of the respondents in Rural Area use wireless connections and 12% of the respondents in Rural Area have no connections. Therefore we can say that there is quite awareness of Internet in the schools from urban area as compared to rural area. For Grantable schools it was found that 31% of the respondents use Dial up connections, 26% of the respondents use Broadband connections, 24% of the respondents use wireless connections and 17% of the respondents no connections. For Non- Grantable schools it was found that 25% of the respondents use dial up connections, 27% of the respondents use Broadband connections, 27% of the respondents use wireless connections and 33% of the respondents no connections. Therefore we can say that there is quite awareness of Internet in the Non- Grantable schools where there is majority in wireless connections as compared to Grantable Schools. Therefore we can say that there is great liking in implementation of WBL in Non Grantable schools as compared Grantable schools as majority of the respondents (39%) would like to prefer WBL and (29%) WBL with traditional learning in both rural and urban areas



Graph 1: Distribution of schools in Rural Area using Types of Internet Connections



Graph 2: Distribution of schools in Urban Area using Types of Internet Connections

IV. CONCLUSION

During this survey, researcher found a positive effect on implementation of web based education. In Schools, preliminary education can be easily delivered using web based education. Teaching using animations, power point presentations, CD's/DVD's or Audio Visuals have more impact on students mind compared to traditional teaching and they can understand the concepts more easily. In traditional teaching students can sometimes forget the concept of theory lecture delivered to them, but in WBE they can easily remember things or can easily get accessed to that particular lecture. Introduction of WBE at school level our children and youngsters will grow as "Computer kids". WBE is Platform independent, convenient in access, cost saving, easily updated contents and with emerging technologies it can be made more effective. The barriers in slow implementation of computing and communication technology in schools can be overcome and high quality education throughout can be delivered.

V. SUGGESTIONS

1) In the presence of social diversity in India, it is difficult to change the social background of students, parents and their economical conditions. Therefore the only option left for us is to provide uniform or standardize teaching learning resources or methods. For high quality education throughout India there must be some nationwide network, which provides equal quality education to all students, including the student from the rural areas and villages. The solution to this is Web-Based Learning.
2) To make WBE more successful, educators and content designers need to develop efficient ways to formulate teaching materials for WBI, while also considering the needs of students coming from diverse and dissimilar backgrounds.

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