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www.ctegujarat.org Email. jig_har@yahoo.com

Challenges in Developing E- learning Environment in the Government

Primary Schools of Gujarat

Ms. Bidyarani Gurumayum,

Ph.D Scholar (Full Time), HMPIETR,

Sardar Patel University

Vallabh Vidyanagar, Gujarat, (India)

Dr Nishant Joshi,

(Research Guide)

Assistant Professor

H M Patel Institute of English Training and Research

Vallabh Vidyanagar, Gujarat, (India)

Abstract

The decade 2010-20 has been announced as the decade of innovation promoting ICT enabled education. In a developing country like India, creating ICT competent generation is essential but very challenging task at the same time. Government of India is pumping in enormous amount of funds and strong efforts to generate and sustain use of ICT tools in primary schools which has attracted the attention of many Indian research scholars to analyse the implementation of e-learning tools in Indian primary education. Having done a pilot project on e-learning in a Government Primary school at Vallabh Vidyanagar (Gujarat), the researcher came across some realistic and practical challenges in facilitating e-learning in primary schools of Gujarat. The project focused on teaching of English only, however it has many general implications for developing e-learning environment in the primary schools of Gujarat. In this light, the present article elucidates the concept of e-learning, e-learning in India, Various e-learning schemes implemented by Gujarat Government in primary schools, challenges to e-learning in Primary schools of Gujarat and the possible solutions to overcome these challenges.

Keywords: e- learning, ICT, primary schools, Government of gujarat

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Ms. Bidyarani Gurumayum,

Ph.D Scholar (Full Time), HMPIETR,
Sardar Patel University
Vallabh Vidyanagar, Gujarat, (India)

Dr Nishant Joshi,

(Research Guide)
Assistant Professor
H M Patel Institute of English Training and Research
Vallabh Vidyanagar, Gujarat, (India)

Introduction

The charismatic device computer has been revolutionarily influencing human life for nearly past five decades. Needless to say that it is so dynamic that it has affected all walks of human life in the present era. Recent decades have witnessed significant augmentation in the multifarious usage of computer but the case was not the same in the span of 1960s. Owing to its high price then, it was an object to fancy for masses. It used to be luxury and hence its rampant use as a tool of education was almost unimaginable. But foresight of Suppes through, "in the future it would be possible for all students to have access to the service of a personal tutor in the same way that ancient royals were once served by individual tutors, but that this time the tutors would be in the form of a computer." (Suppes, 1964; 1966), confirmed the importance of computer in the field education. Having recognised the essential role computer could play in the field of education, educationists and scholars embarked on the discovery of various modes of delivering knowledge using computer. As an offspring of the efforts that are made to use computer as an aid to education, number of scholars coined out various approaches to learning which can be classified basically in two categories viz. software based/offline learning and internet based/online learning. Both can be identified under the umbrella of e-learning. Starting with grounding work of Suppes pertaining computer assisted learning and Bitzers introduction of PLATO, a time shared computer system allowing

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chatting, mailing and messaging using internet, e-learning has paved a long journey from its emergence to popularity in the present time. In the 21st century, e-learning has been globally accepted as an effective learning tool which can furnish individualised tutoring. Almost all the countries are pumping in an enormous amount of money to promote e- learning in various levels of education.

Concept of e-learning

The word 'e' in e-learning stands for electronic. By the name it clearly suggests that it is a type of learning which takes place with the help of electronic devices such as TV, radio, smart phones, tape recorder, smart boards, etc. This e-learning can be carried out both in offline and online mode. It helps the learners to gain access to learning from anywhere and at any time with the aid of learning tools like TV, radios, computers, smart phones, tablets, laptops, smart boards, internet, intranet, etc. The term E-learning has been defined and clarified by various scholars all around the world. According to Stockley (2003) E-learning is the delivery of a learning, training or education program by electronic means. E-learning involves the use of a computer or electronic devices (e.g. a mobile phone) in some way to provide training, educational or learning material. "E-learning is not just a trendy word. It is a new approach built on what we have learned from developing and instructing with thirty years of computer-based methods and on what we know about how to help people learn. The concept of e-learning is changing the way we instruct and learn. At the same time, e-learning is evolving, and it is likely that what we call e-learning today will be different in a few years. For example, it may be delivered through wireless devices in future. Could e-learning fade like video cassettes, audio cassette and other training technology? I don't think so, but as the method is absorbed into conventional learning designs through so- called blended learning solutions, the term itself may become extinct." (Broadbent, 2002)

E- Learning in India

Being one of the developing countries, India understands the importance of e-learning and considers it a major reformative entity. Hence, India has launched many projects for effective implementation of e-learning in higher education as well as at primary level. Ministry of Electronics and Information Technology of India considers e-learning as "thrust area for imparting education using educational tools and communication Media". Indian Government has aided various national level research and development projects to enhance e-learning such as Development of Personalised and Performance based E-Learning tool for existing e-resources (February 2013), MedSim – eLearning platform for Medical Simulation (March

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2013), Online Assessment and Evaluation System (OAES) for National Level Certification Examinations(March 2013), Online Labs (OLabs) for school experiments - Phase 2 (March 2013), Setting up ICT e-learning Centres in 204 schools in Srikakulam district of Andhra Pradesh (June 2014), Enhancing the outreach of Electronics System Design and training through eLearning (April 2014), ICT based Framework to enhance the teaching and learning experience in large Classroom (June 2014), and Rollout of OLabs (June, 2015) during its 12th plan period. Similarly, the state governments are also not far behind in research and development of e-learning and promotion and implementation of the same.

ICT Initiative taken by the Government of Gujarat for the Government Primary Schools

Narrowing down the accentuation to e-learning in the state of Gujarat, the Gujarat Council of Educational Research and Training aims at implementing cost and energy efficient ICT labs in 15493 state-run schools under Sarva Siksha Abhiyan (SSA) program. The Computer Aided Learning (CAL) Project of Gujarat Government is one of the largest e-learning Projects in India with an objective to attract the students and to improve the quality of education through introduction to ICT and educational applications such as multimedia based educational content. Under this program each school is allotted IT enabled Laboratories with a set of 11 computers and peripherals, furniture, 42" LED TV, Q Band Dish Antenna and a school coordinator. The nexus is set among 224 Block Resource Centres (BRC) and 4268 Cluster Resource Centres (CRC) providing with internet facility. Using the Internet facility for live telecast of teaching learning program on TV and knowledge sharing among the primary teachers and students has become possible which has banished the barrier of distance creating the virtual network. Further, soft copies of text books are available on the GCERT website and so students and teachers can access it regardless of place and time as a barrier.

Further, Gujarat Government also works on a project named Smart School which aims at helping rural students learn through ICT to bridge the rural divide between government and private schools. With the concept of smart school, the state government aspires smart class with the use of the latest technology of audio visual mode for teaching and learning. Under this program, computers, printers, projectors, LED TV, pen drive, broadband internet facility and routers for wireless connections are allotted to the beneficiary schools. CDs/DVDs containing teaching learning materials and practice tasks from IL & FS skill development are prepared and allotted to the school management for effective ICT based education. Besides,

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many ICT based resources and guidelines are shared with the teachers for each subject. It enhances grasping power and creates long lasting image in the brain of students. It furnishes active communication between teachers and students. Rs 2006 lakhs as funding for the same has been approved by the government.

Moreover, the Government has also commenced the SCOPE program for improving English language competence among the students of Gujarat. The SCOPE software comprises of self learning program for improving English language. It has both learning modules and an online assessment tool.

My School e School is one more project of Gujarat government wherein the government introduces ICT in primary schools to bridge the lacuna in the levels of education and to transform schools into e schools to propel the benefits from internet. This project aims in improving administration and education simultaneously in government primary schools. 224 beneficiary schools get internet support under public private partnership mode. Using internet connectivity sharing the school updates, submitting reports and peer learning for students is emphasised.

E- learning in Government Primary Schools of Gujarat: Challenges and its Possible Solutions

Over the period of last five decades Indian Government has provided a strong policy support and requisite funding to create the world's largest system of e-learning of primary schools. But somehow Government has not been able to maintain high standards of education as per its predefined objectives and goals. Government faces numerous challenges which need to be addressed to develop an effective e-learning environment. The major hurdles in the e-learning implementation and its possible solutions are:

➤ **Apprehension and Lack of Confidence among Teachers:**

Number of primary teachers lacks the basic knowledge of computer and its functioning. As a result of which an apprehension to using the e-learning tool gets generated which stimulates teachers to execute pessimistic attitude towards e-learning tools. They suffer from low confidence and hence avoid using e-learning tools for teaching learning. Thus, number of students gets deprived of e-learning.

Possible Solution:

Drilling for the usage of e-learning tools can be the best possible solution to extract the apprehension and lack of confidence among the teachers. Government must

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organise easy and meaningful task based workshops for teachers. Then repeatedly they use it, the improved will be the confidence of teachers.

➤ **Lack of in-service E-learning Training and ICT awareness among Teachers:**

Although government organises many programs for teachers' training, there are very few programs pertaining the e-learning Training. Moreover, the trainings miss the quality deliverance so teachers avoid exhibiting enthusiasm and interest. The ratio of teachers with sound knowledge of ICT particularly hardware and software both is very low and therefore it becomes challenging to avail ICT based learning to all the students.

Possible Solution:

Comprehending the importance of the e-learning tools is essential for developing the interest for promoting use of e-learning tools. Awareness programs for promoting e-learning can be taken up to instil enthusiasm among the teachers. Online weekly training can be the best for teachers to solve the real life problems related to deliverance of e-learning.

➤ **Time Constraint:**

Primary Teachers have multiple responsibilities. They are burdened with not only teaching all the subjects but they also have to engage in non teaching works such as record maintenance, attendance, school premise maintenance and so on. Therefore, they find it difficult to find time to design and facilitate e-learning. So they consider it as an extra burden and in turn they become prone to e-learning.

Possible Solution:

E-learning should be an inevitable part of effective schedule as a part of school curriculum. School management, record maintenance and data submission should be made online process so time can be saved and teachers can spend their maximum time in teaching learning activity. It would help avoid waste of time and increase the utilization of e-learning tools.

➤ **Problem of Maintaining and Updating the E-Learning tools:**

This is the most common problem. ICT tools and software require timely maintenance and updating but Government system doesn't allow any technician for the maintenance of the ICT systems. Hence, in case of malfunctioning of the system

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school authority has to find a local IT solution which is comparatively costlier so many schools avoid mending and updating the ICT system. And if there is any, the technician has to manage number of schools which ultimately results into late and irregular maintenance.

Possible Solution:

Government should provide strong maintenance of e-learning tools in order to promote flawless usage if it. One technician for each CRC should be allotted for rapid solution in e-learning blockade. Besides, a renewable contract with the supplying agency for maintenance may prove a good practice.

➤ **Lack of post purchase funding:**

After establishing an ICT lab, it becomes very important to upgrade it but Government finds difficult to suffice the funding required for modernising the ICT facilities of primary schools. The ICT devices become outdated with passage of time and teacher avoid using it.

Possible Solution:

Government should spread awareness among the local people regarding the importance of e-learning for progress of students and thereby it should try to attract Local donors to fund the modernising the e-learning tools. Parent Teacher Associated can employ different strategies to attract and appeal the local donors.

➤ **Lack of requisite Infrastructure:**

Some primary schools lack the sufficient infrastructure. E-learning tools are expensive and hence they require dedicated space to accommodate them. Some Primary schools lack sufficient space for accommodating E-learning tools which later leads to no utility of the tools.

Possible Solution:

The issue of lack of sufficient infrastructure can be resolved by distributing handy and mobile e-tools among the primary teachers and schools. The government's step of distributing Akash tablet to teachers and students can be taken as a solution to the infrastructure issue.

➤ **Stronghold of Traditional Teaching:**

Having years of experience of teaching with traditional method, teachers find it difficult to learn and adjust with novel approach of e-learning. Majority of teachers fail to understand the importance of e-learning as an effective mode of teaching and learning and they become static enough to avoid e-learning. Their orthodox mentality impedes the acceptance of e-learning as an effective approach.

Possible Solution:

To promote usage of e-learning among students is very essential to help the teachers to get rid of their apprehension and pessimism pertaining e-learning. The sound knowledge of e-learning through Pre-service Training, Refreshers' Training and Routine Online Training can help teacher develop familiarity and expertise of using e-learning tools in an effective way. Teacher should be made aware of how smart teaching learning can make their duties more interesting and alleviate the burden of monotonous tasks.

➤ **English as an Instruction Medium becomes Barrier:**

Majority of e-learning materials use English as an instruction medium. Primary teachers teaching in vernacular medium lacks requisite knowledge of English to successfully interact with the e-learning tools. Besides, students also fail to understand the instructions and find it challenging to comprehend the tasks despite their enthusiasm. Thus, poor English competence hinders the successful e-learning implementation.

Possible Solution:

Observing the present scenario it's as sure as an egg is egg that English is oxygen to the modern life. Considering the importance of English language basic knowledge of English should be made compulsory to improve the standard of teachers. Government should have entry gate English proficiency tests for teachers to ensure the quality teaching. On the flip side, English as a subject should be taught to students right from the 1st standard so that they can also find ease in interacting with e-learning tools.

➤ **Poor Ratio of E-Learning Tools against students:**

As per the Government funding, primary schools are facilitated with e-learning laboratory equipped with eleven computers with UBUNTU operating system, one

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LCD TV and one printer. Current ratio of learners to computers is 11:60. Due to limited access of computers, printers and internet there are practices of time limit in accessing computers, language and computer laboratory operating hours. Considering the average number of students in primary schools of Gujarat, eleven computers are not sufficient enough to meet the need of high number of students. Such poor ratio is an alarming concern in making e-learning a success in Government primary schools. Owing to cost and availability of IT infrastructure, learners of Government primary schools from weaker sections of society do not have access to personal computers and internet. Learners' lack of exposure to computers develops fear for lack of computer skills, inadequate performance and lack of self confidence. And access to computers is one of the basic requirements of e-learning. Hence, teachers face difficulty in delivering e-learning successfully.

Possible Solution:

Considering the total strength of the students in a primary school and their curriculum, it is important to provide them with the adequate resources they required to fulfil their needs, to provide them enough time to access the resources at their feasible time and to make sure that they are using them effectively.

➤ **Poor Internet Connectivity:**

Internet connection is mandatory for accessing online e-learning tools. It is the poor quality of the connection and the frequent breakdown of bandwidth that obstructs the learners in accessing the full content of the activities or materials available online. Such situation can create negative impact on the learning process of the learners. Hence, poor internet connection impedes the online e-learning process live telecast, online tasks etc. Primary schools located in rural area of Gujarat suffer from poor internet supply.

Possible Solution:

Learning programs should be in online as well as offline modes in order to control the adversity of poor internet connection in rural area. For online mode of teaching learning program, the bandwidth connection should be increased. The e-learning developer should design a smaller e-learning content. Moreover according to the

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existing bandwidth connection, the computer graphics and multimedia should be adjusted.

➤ **Electricity Cut off:**

Electricity is a prerequisite for usage of any e-learning tool. In absence of electric supply, no e-learning tools can work and this attribute of e-learning tools becomes major roadblock during monsoon season when there is frequent electricity cut off.

Possible Solution:

Solar energy can prove itself the best where there are frequent electricity cut off. Fixing the solar panels as source of energy, the Government can not only generate sufficient low cost electricity but it can also reach the increasing need of energy by supplying the energy to the power stations. Moreover, it can help school to gain capital for the maintenance of the e- learning tools.

1.6 Conclusion

Even though the Government has been taking up many projects, policies and schemes to promote extensive use of ICT in teaching learning process in primary schools keeping in mind the Digital India Mission, the outcomes have not been encouraging so far. Analysing the nature of the above intricacies confronted by the Gujarat Government in developing e-learning environment in Government Primary Schools in Gujarat, both school management and Government should join hands to find the remedy to the existing issues.

It a high time for Gujarat Government to recognise the importance of e-learning and to implement it successfully by overcoming these challenges mentioned above.

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