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A study of the use of ICT in the Teaching-Learning Process in Secondary Schools of Dhule District

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Abstract
Today's era has witnessed many changes such as rapid scientific and technological advancement, information revolution caused by the technology, knowledge explosion, population explosion, globalization, rapid urbanization, emergence of multiculturalism etc. All these changes and development have given education a new role and shape and thus, the role of teacher is also in transform. The current paper examines that whether the present system of school education in one of the economically prosperous state of India i.e. Maharashtra one of the educationally backward district Dhule supports and provides assistance to the teachers in taking up their new roles, and if not, how the vision of teacher education and its procedure should be refined to prepare teachers to take up the challenges of the emerging educational scenario. Hence, in order to find out the Use of ICT in the Teaching-Learning Process in Secondary Schools of Dhule District of Maharashtra this study was carried out in 10 practice teaching schools of a teacher training college. The data was collected through self made check list and questionnaire from computer teacher and teacher's of the concerned school to ascertain the present status of use of ICT in the schools and How does the impact of use of ICT in teaching learning process.

Keywords: rapid scientific, technological advancement, information revolution

Introduction

The present age is characterized by an unprecedented explosion in the major areas of knowledge and aspirations along with rapidly increasing population. As a result of rapid technological growth, scientific advancement and development of communication and transportation network, the world is shrinking into a global village with blurred geographical, social, economic and political boundaries. Technological and scientific advancement has resulted in wide-spread use of electronic communication and information media (both in day-to-day life at home and academic life at schools) making access easy and quick to the body of knowledge available anywhere any time, and thus struggle among people to know more by exploring different sources of knowledge can be seen to score the lead in this era of competition. People are having different ways and means at their discretion for this purpose, such as-internet which connects the whole world through a mouse click, electronic media like Television and Radio etc. and also mobile phones which are offering themselves as upcoming media for sharing information and knowledge as they are portable, cost-effective and easy to use and thus having wide-spread reach.

As far as the role of ICT in the field of education in India is concerned, despite of a lot of advancement still it was limited only to the textual mode of transmission of information with ease and speed. But the information not only in textual form but in audio, video or any other media is also to be transmitted to the users. Thus, the ICT = IT + Multimedia. It has opened new avenues like e-learning, Virtual University, e-coaching, e-education, e-journal, etc. Third generation mobiles are also part of ICT. Mobile is being used in imparting information fast and at low cost. ICT brings richer material in the classrooms and libraries for the teachers and students. It has provided opportunity for the learner to use maximum senses to get information. It has broken the monotony and provided variety in the teaching-learning situation.

With the present infrastructure, class size, availability and quality of teachers, training of teachers, etc., it is difficult to achieve all the objectives. Further, most of the teachers use Lecture Method which does not have potentiality of achieving majority of above mentioned objectives. The objectives are multidimensional in nature, so for their achievement multiple methods should be used in an integrated fashion. At present ICT may be of some use. It is a well known fact that not a single teacher is capable of giving up to date and complete information in his/her own subject. The ICT can fill this gap because it can provide access to different sources of information. It will provide correct information as comprehensive as possible in different formats with different examples. ICT provides online interaction facility. Students and teachers can exchange their ideas and views and get clarification on any topic from different experts, practitioners, etc. It helps learners to broaden the information base. ICT provides variety in the presentation of content which helps learners in concentration, better understanding, and long retention of information which is not possible otherwise. The learners can get opportunity to work on any live project with learners and experts from other countries. The super highway and cyber space also help in qualitative improvement of Teaching-Learning Process. ICT provides flexibility to learners which are denied by the traditional process and method. Flexibility is a must for mastery learning and quality learning. On INTERNET many websites are available freely which may be utilized by teachers and students for

understanding different concepts, improving vocabulary, developing Reasoning & Thinking, etc.

Rationale of the study

- R.C. Patel College of Education has been offering Computer literacy programme as a compulsory components since the time of its inception.
- We train our pupil- teachers to integrate ICT in teaching learning process through practical sessions and assignment of preparing digital lessons and making presentations.
- During the practice teaching as well as practical examination phase the pupil- teachers implement their digital lessons and presentations in the schools.
- It has been observed during the practice teaching that most of the schools have minimum required facilities vis-a-vis ICT.
- Notwithstanding such inadequacies, the Government of Punjab has made the computer education compulsory in teaching learning process at school stage.
- This prompted us to study the extent of actual use of technology in the teaching learning process by the in-service teachers at schools with the requisite facilities.

Research questions

- What is the present status of use of ICT in the practice teaching schools of R.C. Patel College of Education?
- How does the use of ICT affect the teaching learning process?

Objectives of the Study

1) To study the resources with respect to ICT in the practice teaching schools of R.C. Patel College of Education.
2) To study the extent to which infrastructural facilities are used for the teaching learning process in the practice teaching schools of R.C. Patel College of Education.
3) To study the impact of the use of ICT in the teaching learning process of the practice teaching schools of R.C. Patel College of Education.

Population and Sample

- The Population of the present study is the group of all the practice teaching schools of R.C. Patel College of Education in Dhule District.
- The Sample of the present study included 10 practice teaching schools of R.C. Patel College of Education in Dhule District. The schools were selected based on the availability of ICT facilities for integrating technology in the teaching-learning process, and the readiness to participate in the study.

Tools and Techniques of Data collection

Self made check list and questionnaires were administered and data was collected from computer instructors and teachers of the concerned schools of the study and data was analysed with the help of content analysis.

Findings of the Study

Objective – I: To study the resources with respect to the practice teaching schools of R.C. Patel College of Education

- All the schools have the basic infrastructure facility required for the use of ICT in the teaching-learning process.
- In 36% of the schools, less than five teachers have undergone the formal/nonformal computer training programme.

Objective - II: To study the extent to which the infrastructure facilities are used for teaching-learning process in the practice teaching schools of R.C. Patel College of Education

- All the schools have a computer instructor.
- All the schools have two to three practical sessions allotted for computer work per week.
- In eight schools, More than 67% of teachers use ICT in teaching learning process; while in two school, only 21% of teachers use ICT in the teaching learning process.
- The teachers use computer for the following purposes:
- In 77 % schools, the teachers use ICT for maintaining records and for preparing question papers
- In 62% schools the teachers use ICT for downloading information from the Internet
- In 50% schools the teachers use ICT for making presentations and preparing teaching learning materials
- 10% of schools use language laboratory
- 35% of schools use ICT for academic planning, content transaction and project work.
- In 61% of schools over 60% teachers have attended seminars and workshops on integration of ICT in teaching learning process where as in 39% of schools 100% teachers have not attended seminars and workshops on integration of ICT in teaching learning process.
- In 39 % of schools all the teachers are motivated to use ICT in teaching learning process. In 39 % of schools less than 40% the teachers are motivated to use ICT in teaching learning process. In 24% of the schools none of the teachers were motivated to use ICT in teaching learning process.
- In 75% of schools, more than 50% teachers said that students have an access to the computer lab for preparing projects and presentations. In 25% of schools, 100% teachers said that students have no access to the computer laboratory for preparing projects and presentations.
- In 100% of schools, more than 50% of the teachers do not face problems in integration of ICT in teaching learning process.

Objective - III: To study the impact of ICT on the teaching-learning process in the practice teaching schools of R.C. Patel College of Education.

- In 88% of the schools, more than 80% of the teachers think that ICT has a positive Impact on the Teaching Learning Process in the following ways:
  1. Clear understanding
  2. creating interest among the students
  3. increasing the involvement of students
  4. providing varied learning experiences
- In 62% of the schools, over 90% of the teachers agreed that the use of ICT helped to enhance the understanding and achievement of the students.
- In 12% of the schools 62% of the teachers said that the use

of ICT affects the understanding and achievement of the students.

- In 20% of the schools 25% of the teachers said that the use of ICT affects the understanding and achievement of the students.
- In 50% of the schools, 100% of the teachers agreed that use of ICT helped in their professional growth and development by developing insights for the content transaction and getting new ideas.
- In 10 % of the schools 50% of the teachers agreed that use of ICT helps in their professional growth and development by developing insights for the content transaction and getting new ideas.
- 100% of the teachers **did not agree** that use of ICT helps in their professional growth and development by developing insights for the content transaction and getting new ideas.
- In 25% of the schools, 100% teachers said that the use of ICT contributed to the growth and development of the institution.
- In 12 % of the schools, 60% teachers said that the use of ICT contributes to the growth and development of the institution.
- In 12% of the schools, 20% teachers said that the use of ICT contributes to the growth and development of the institution whereas, in 50% of the schools, 100% teachers said that the use of ICT does not contribute to the growth and development of the institution.

Suggestions

1. The teachers should increase the use of ICT for content transaction, preparation of the teaching-learning materials, academic planning, project work and making presentations as these are the components directly related to the teaching-learning process, rather than using it for maintaining records, examination purpose and downloading information. For the fulfillment of this objective, training programmes need to be conducted on a large scale and at regular intervals.
2. The management and the higher authority should encourage and support the schools to develop language laboratory and use it for the teaching of languages.
3. The management should motivate teachers to use ICT for the teaching-learning process by providing the incentives and framing the policies at the institute.
4. INTEL should collaborate with Teacher Education colleges to provide training to in-service teachers for using ICT in teaching-learning process.
5. The self-financed colleges of education should organize training programmes for the teachers of practice-teaching schools.
6. Number of teachers attending workshops and seminars on "the Use of ICT in the teaching-learning process" should increase. Individual and institutions should utilize such opportunities to the maximum.
7. Schools should prepare a schedule for a regular access to computers by students for preparing projects and assignments.
8. Teachers should not restrict their knowledge and expertise of using computers for their own professional growth and development but should plan out activities for contributing to the growth and development of the institution.

The teacher should be in a position to couple the technology with new teaching learning approaches so as to improve the learning of students. ICT can improve the standard of education and learning of students. The challenge confronting our education system is how to transform the curriculum and teaching processes so that students can perform effectively in a dynamic, information-rich and continuously changing environment. ICT can change the traditional concept of learning process and develop new processes based on digital technology. It can definitely create information-rich society. It is essential to redefine the role and responsibility of teachers to meet the challenges of ICT in 21st century. Successful integration of ICT into teacher education is the extent to which teacher educators have the knowledge and skill for modeling the use of ICT in their own practices. In developing countries like India, there are many untrained teachers in remote areas. The new ICT will be able to reach these untrained teachers and can provide quality teacher education all around the globe.

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