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QUALITY IMPROVEMENT THROUGH ICT IN TEACHER EDUCATION

Dr. Prashant K. Chauhan
Assistant Professor
Darbar Gopaldas Shikshan Mahavidyalay
Aliyabada, Jamnagar
Saurashtra University- Rajkot
Dr. Vipula V. Vaghela
Assistant Professor
Shree Shardapeeth Arts, Commerce & Education
Dwarka
Bhakt Kavi Narsinhmehta University, Junagadh

ABSTRACT

The development of teacher education in India during the last five decades presents a picture of light and shad. After the independence the priority in education was its quantitative expansion. There was an urgency to increase the literacy rate of the world's largest democracy. we have achieved much in expanding education over the years.

"Vision worth working towards". There are at least four levels of vision for using technology to improve access and quality of education. The first vision almost like mirage, imagining that technology is magic. The second level of vision is to use technology in activities that only increases access (or) to use technology to improve the quality of learning. The third level of vision suggests using technology in activities that simultaneously increases both access and qualities by linking larger numbers of learners, scholars and resource together in a richer more effectively distributed learning environment. The fourth level of vision is similar to the third but with an added touch.

Quality Improvement through ICT in Teacher Education

The quality of education is an important measure of productivity and prosperity of a nation. Quality is a dynamic phenomenon, which is being improved every moment with the new developments in technology and management techniques. As the lending organizations of the

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world improve the quality standards of their products on services, the quality expectations of the customers from other organizations also go up.

At the teacher education level, explosion of knowledge is great challenging needs of employment at the industrial sector and wide use of technology are posing threat to teacher. The following variables are of paramount importance in teacher education.

Since time immemorial when India was an agrarian society, the guru Kula system was the main stay of education. With the arrival of the British a system of education was grafted to generate the kind of clerical skills and sub-ordinate level English speaking human resources needed by the British to run the country. The educational policy of the government in the the post-independence era was incorporated in the directive principles of the constitution and aimed at providing universal education for all upto the elementary school stage.

It is naive to believe and more naïve to expect that the government is going to play a more dominant role in the founding of teacher education in the near future.

Processing knowledge for quality education

- Human resource development
- Information system design
- Physical resource development
- Financial management and
- Project management

Super Specialized approach to quality education programme

- Theories of human learning
- System thinking and
- Theories of knowledge formation.

Theories of human learning for quality education, Major role in quality improvement, Developments in new forms of education, growth of academic institutions, Role of effective teacher system thinking for quality education, Knowledge theories for quality education, management of knowledge for quality education, Life long learning culture for quality education.

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Goals of Quality Education

- Development of the human beings in intellectual affective and skills areas for total development of personality through curricular and co-curricular programmes.
- Preparation of the world of work and the world of leisure.
- Fostering the spirit of free and scientific enquiry as well as promoting independent critical thinking.

❖ **Categories of ICT for the Teacher Education:**

- e-Learning
- u-Learning
- Blended Learning
- Distance Learning

Service to society anticipating its needs and assisting in the fulfillment of social and economic objectives. The National Assessment and Accreditation Council (NAAC) and distance Education Council (DEC) have entered into an agreement for collaborative assessment of the 10 open universities.

Knowledge management will be the focus for harnessing individual talent and building competence. The best quality education will dominate regardless of its national origins, ushering a globally competitive regime, making the globalization of education inevitable.

To enlighten quality in education the system of education need to recognize strategic resources and ensure their long-term supply.

Introduction

The development of teacher education in India during the last five decades presents a picture of light and shad. After the independence the priority in education was its quantitative expansion. There was an urgency to increase the literacy rate of the world's largest democracy. we have achieved much in expanding education over the years.

"Vision worth working towards". There are at least four levels of vision for using technology to improve access and quality of education. The first vision almost like mirage, imagining that technology is magic. The second level of vision is to use technology in activities that only increases access (or) to use technology to improve the quality of learning. The third level of vision suggests using technology in activities that simultaneously increases both

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access and qualities by linking larger numbers of learners, scholars and resource together in a richer more effectively distributed learning environment. The fourth level of vision is similar to the third but with an added touch.

What is Quality?

The quality of education is an important measure of productivity and prosperity of a nation. Quality is a dynamic phenomenon, which is being improved every moment with the new developments in technology and management techniques. As the lending organizations of the world improve the quality standards of their products on services, the quality expectations of the customers from other organizations also go up. In response, the numbers of originations worldwide are adopting new quality management techniques to keep pace with the international quality standards.

The teacher is not merely a source and purveyor of knowledge. He is an organizer and mediator of the learning encounter. In this capacity the teacher firstly diagnoses the educational needs of the individuals. He

Should also know the obstacles that hinder the teaching learning process. This is followed by effective responses requiring special skills of teaching and use of methods (or) techniques to enhance the quality.

❖ Variables for Quality Education

At the teacher education level, explosion of knowledge is great challenging needs of employment at the industrial sector and wide use of technology are posing threat to teacher. The following variables are of paramount importance in teacher education. The variables of quality education are:

- Processing knowledge for quality education.
- Super specialized knowledge for quality education.
- Theories of human learning for quality education.
- System thinking for quality education.
- Knowledge theories for quality education.
- Management of knowledge for quality education.
- Lifelong learning cultural for quality education.

❖ Education in Ancient Days

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Since time immemorial when India was an agrarian society, the guru Kula system was the main stay of education. Education was totally a private effort in imparting knowledge to all classes whether belonging to royal race or the common man.

❖ Education in Colonial Era

With the arrival of the British a system of education was grafted to generate the kind of clerical skills and sub-ordinate level English speaking human resources needed by the British to run the country. the colonial form of education was intended to reflect the English culture and even the courses of study that were instituted at the time were oriented towards the taste of English aristocratic rulers.

❖ Education in the Post-Independence Era

The educational policy of the government in the the post-independence era was incorporated in the directive principles of the constitution and aimed at providing universal education for all upto the elementary school stage.

❖ Education in the Knowledge Era

It is naive to believe and more naïve to expect that the government is going to play a more dominant role in the founding of teacher education in the near future. the challenges facing teacher education in the knowledge era primarily revolve around.

- Providing wider accessibility.
- Insuring continuing relevant courses.
- Quality assurance by education providers.

❖ Processing Knowledge for Quality Education

Processing educational courses is a sort of challenge to move from information to insight. The purpose of the future winners will be those nations that will escape from the gravitational pull of the part and will work on the fuel of innovation both in the conventional and open\distance system of education.

The following programmes to encourage:

- Human resource development
- Information system design
- Physical resource development
- Financial management and

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- Project management

❖ Super Specialized Knowledge For Quality Education

Super Specialized approach to quality education programme embraces theory and practice by working on principal of predictability-sustainability-profitability-de-risking in developing PSPD model of education we need to innovate new knowledge practice in three paradigms.

- Theories of human learning
- System thinking and
- Theories of knowledge formation.

❖ Quality Education Through ICT

The use of information and communication technologies in education makes teaching-learning process effective and interesting. To know the impact of ICT in education, we need to know two basic things; ICT, and education. The Information and Communication Technologies includes any communication device or application, encompassing; radio, television, cellular phones, computer and network hardware and software, satellite systems and so on, as well as the various services and applications associated with them, such as videoconferencing and distance learning. When such technologies are used for educational purposes, namely to support and improve the learning of students and to develop learning environments, ICT can be considered as a sub field of educational technology.

❖ Categories of ICT For Qualitative Teacher Education

Education means 'to draw out' facilitating realization of self potential and latent talents of an individual. It is an application on many disciplines. In view of ICT, education can be classified in four main categories for quality in teacher education,

- e-Learning,
- u-Learning,
- Blended Learning and
- Distance Learning

• e-Learning

Electro learning is a general terms used to refer to computer enhanced learning. It is commonly associated with the field of Advanced Learning Technology (ALT), which deals

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with both the technologies in learning using networked and/or multimedia technologies. It is also known as online learning. Distance education provided the base for e-learning's development. e-learning can be on demand. It overcomes timing, attendance and travel difficulties.

- **u-Learning**

u-Learning means "everywhere learning" (the internet or learning content follows people around). Work-related content, personal knowledge, internet hold content and information. Various devices plug in and retrieve the information in the appropriate format (PDA, cell phone, laptop, or any other technology gadgets). It fulfills e-learning's promise of "anytime, anywhere, and any context". Ubiquitous Learning (u-Learning) emerging through the concept of ubiquitous computing. After the initial impact and applications of computers in education, the introduction of e-learning and mobile learning epitomized the constant transformation that were occurring in education.

- **Blended Learning**

Hybrid is a name commonly used to describe a class that combines face-to-face classroom instruction with online learning. A major part of the activities take place online, while traditional classroom time is reduced but not eliminated. This type of class allows you, student, to have a more flexible schedule. It still allows for face to face contact with your instructor and other classmates just like in a traditional class. Hybrid learning, sometimes called "Blended Learning," provides the best opportunities for learning transition from classroom to e-Learning. It provides students with an option of taking some learning materials fully online and some in class, or hybrid. These method may include a mixture of face-to-face classrooms, self paced learning and online classrooms.

- **Distance Learning**

It is a type of education, where students work on their own at home or at office and communicate with the faculty and other students via e-mail, electronic forums, videoconferencing, chat rooms, instant messaging and other forms of computer based communication. It is also known as open learning. Most learning programmes include a Computer Based Training (CBT) systems and communication tools to produce a virtual

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classroom. Because the Internet and World Wide Web are accessible from virtually all computer platforms, they serve as the foundation for many distance learning systems.

❖ Opportunities of Integrating ICTs in Teacher Education

Modern universities and institutes have a mission to make teaching learning process effective and interesting. Study of use of ICTs in education, reveals the following opportunities:

- Enhanced Teaching Learning Process: The traditional way of teaching learning process can be made more effective and interesting by using information and communication technologies. When a teacher uses audio, video, or power point presentations in his/her lecture, the whole class becomes more attentive about the lecture. Such activities also help students to understand the things easily.
- Improved Availability of Study Material: In traditional learning system, students and teachers are limited to get knowledge on a particular topic through printed materials only. But use of ICT facilitated them to get variety of study materials on a particular topic using internet from any where and any time.
- Support for Teacher/ Distance Education and e-Learning: The use of ICT supports distance education and e-Learning. Each of the different ICTs- prints. Audio/video cassettes, radio and TV broadcasts, computers or the Internet may be used for this purpose.
- Enhanced Enrolment and Examination Process: Using ICTs universities and institutes can improve the admission process by putting admission forms online and receiving the same from online. They can conduct entrance examination online. This will speed up admission and examination process. It also helps in faster result declaration.
- Assist in Research Activities: Application of ICT in education enriches the research activities. Researchers can get information about recent developments in different segments, collect variety of information on a particular topic and can generate innovative ideas and new findings.

❖ Challenges in Integrating ICTs in Education

- The main Challenge for ICT enhanced education is the availability of information and communication technologies infrastructure.
- For developing countries in the Asia Pacific where English language proficiency is not high, and 80% of online content and software are found in English.

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- Lack of teacher equipped with ICT skills is another problem for the use of ICT in education.
- As teachers don't want to accept change easily, managing the change is one of the biggest problem.

The technological developments have resulted in the emergence of creative forms of education.

- Virtual universities that offer programmes through internet and other means.
- Distance education programs that are delivered through satellites, computers, correspondence or other technological means across national boundaries.
- Study abroad semester or credit earning arrangements similar to the twinning arrangement, the above mentioned forms are not exhaustive but they give a flavor of some variants.

❖ Growth of Academic Institutions

- Limited resources that would be spread thin over a wide area of education.
- Students who are hardly involved in the teaching learning process.
- Low caliber of student who are deficient in the generic skills of decision-making, problem solving, creativity, independence, adaptability, learning to etc.

System thinking encourage the use of knowledge to improve quality of education in terms of multiple interactions between phenomena and link between problems. It helps to approach to solve problems of quality education at two levels.

- Structural level
- Functional level

❖ Conclusion:

ICT has the potential to "bridge the knowledge gap" in terms of improving quality of education, increasing the quantity of quality educational opportunities, making knowledge building possible through borderless and boundless accessibility to resources and people. The use of ICT in education not only improves classroom teaching learning process, but also provides the facility of e-learning, ICT has enhanced distance learning. The teachers are able to access remote areas and learners are able to reach qualitative learning environment. It is

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important that teachers or trainers should be made to adopt technology in their teaching styles to provide educational gains to the learners.

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