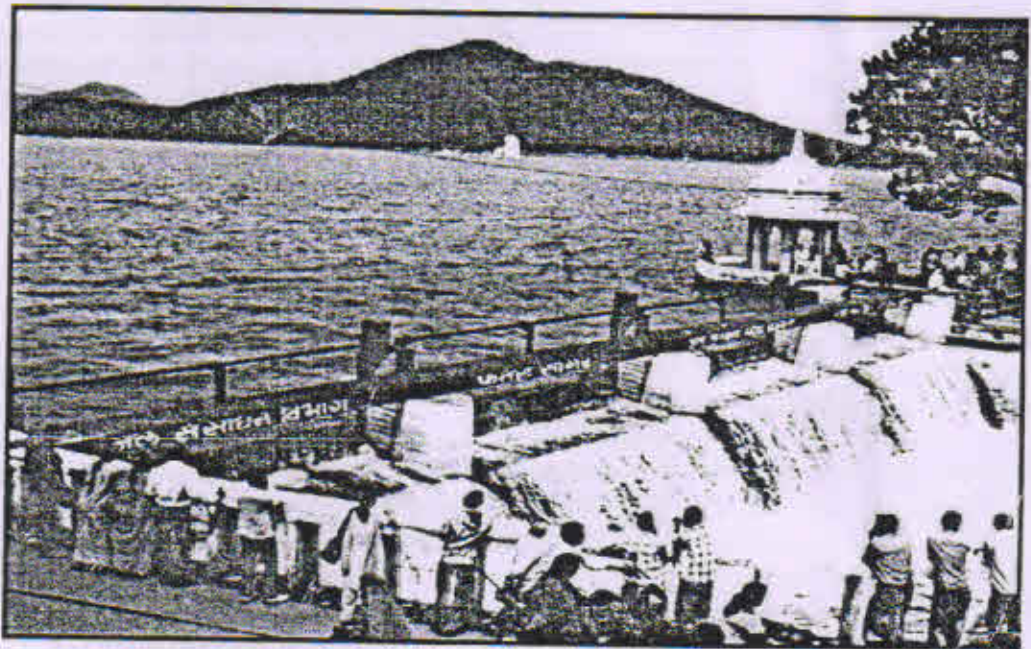




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Information and communication technologies have revolutionized our society. In last two decades, entered into every area of society and, every aspect of social and cultural lives. Computers made it possible to access information instantly just at a keystroke. Our children have been raised in a world of instant access to knowledge used to create an environment where they control information flow and access with the press of a button, in which geographic mobility, intellectual flexibility, and the synthesis of work and learning are the norms in the work place. Although schools are part of our society embedded in our culture and reflect its values, the technological changes that have swept through society have left the educational system largely unchanged.

In last two decades a dramatic rift has opened between the process of teaching and learning in the school and the process of obtaining knowledge in society at large. There have not been substantial revisions in the curriculum and in the process of teaching. The result is an estrangement of the schools from society, and from the children who live in it. This estrangement has a result that there is an urgent need to restructure our teaching learning process by incorporating new trends and technologies. This will help learners to participate in learning communities through out the world and will help Teachers to facilitate the learners in their study playing the role of a mentor. Restructuring teaching learning process incorporating information technology will help in meeting the changing needs of present educational system.

## ICT Integrated Constructive Learning For Teacher Education

### Introduction

Information and communication technologies have revolutionized our society. In last two decades, entered into every area of society and, every aspect of social and cultural lives. Computers made it possible to access information instantly just at a keystroke. The nature of work has changed. Formerly to conduct a business workers familiar with new technologies are needed have been raised in a world of instant access to knowledge. They are used to create an environment where information flow and access with the press of a button, in which geographic mobility, intellectual flexibility, and in which work and learning are the norms in the work place. Although schools are part of our society embedded in our culture and reflect its values, the technological changes that have swept through society at large have left the educational system largely unchanged. In last two decades a dramatic rift has opened between the process of teaching and learning in the school and the process of obtaining knowledge in society at large. There have not been substantial revisions in the curriculum and in the process of teaching. The result is an estrangement of the schools from society, and from the children who live in it. This estrangement has a result that the institutions responsible for educating our children are locked in the past. In the classroom knowledge is presented in a linear, didactic manner that differs dramatically from the children's previous experience outside the school. To bridge this gap a drastic educational reform so that it will bring the classroom and the society into one line. The National Curriculum Framework for School Education 2005 is an attempt to minimize the estrangement between the school and community. The challenge towards educational systems is how to transform the curriculum and teaching-learning process to provide students with the skills to function in this dynamic, information-rich, and continuously changing environment.

Adapting new trends of information & communication technologies will help to enhance teaching learning process. This will definitely benefit teachers and students to be familiar with the changing scenario of society.

### Role Of Information Technologies In Teaching Learning Process:

#### Making Students Independent in their Studies

Using information technologies students can decide about their studies, learning time, place and resources in their own way. Students can work in more supportive environments, seek help from teachers and fellows, and share their learning and ideas in collaborative and productive fashion. Information & Communication technology has introduced the concept of Virtual Reality. Interactions in immersive synthetic environments lead to the formation of virtual communities. New kinds of pedagogy introduced by emerging medias promoted the opportunities of distance education and at the same time eliminated the barriers of distance and time. New and innovative learning experiences would be encouraged by these technologies, as by virtual communities, which exist by interactions across the globe through the use of computers round the clock. The global sharing of experiences would make possible the group presentation form of distance education. Distance education encompasses and relies on the use of information technologies to make it

productive and more individualized, to give instruction a more scientific base and make it appropriate & more effective, learning more immediate and access to resources more equal. These remarkable aspects can expand the quality and quantity of instructional resources. They can serve learners at their ease in terms of time and place in following ways.

- Both teachers and learners can work with others at remote sites.
- The community of learners can expand to include virtually anyone who wishes to obtain information and who is not excluded by policy or cost.
- They can provide real access to experts in universities, research laboratories, the business community, government agencies and political offices.

#### **Restructuring Teaching Learning Process**

Information technologies can promote the opportunities of restructuring the teaching learning process. These can transform teaching and learning by offering alternatives to the teacher provided information, access to virtually unlimited resources and opportunities for real world communication, collaboration and competition. The phases of this process is as follows

- "developing awareness – recognizing that something is wrong or different;
- exploring alternative—researching for new ideas from other institutions and acknowledging that change is needed;
- making a transition—leaving the old approaches behind (or dramatically changed);
- achieving integration—putting the pieces from the transition phase back together; and
- taking action—putting new ideas into operation".

The process can work at instructional programme or institutional level. Traditional lectures and demonstrations can become web based multimedia learning experiences for distance learners. Web can enrich the learning resources and institutions refocus from teaching to learning, from teacher to learner. It can create learning environment throughout the world by networked learning communities.

#### **Creating Democratic Philosophy of Instruction**

Networks may create educative environments embedded in democratic philosophy of instruction and helping learners learn. The characteristics of which are:

- "respect for personality;
- participation in decision-making;
- freedom of expression and availability of information; and
- mutuality of responsibility in defining goals, planning and conducting activities and evaluating [the process]."

Learning may take place more effectively and dynamically in educative environments where teacher and learners are open to each other to interact and exchange information and experiences in a friendly way. It is concluded in a study "Openness on the part of instructor increased their [learner's] desire to discuss problems or topics of interest... these discussions expanded their [learner's] understanding of the content and assisted them in planning the information within a relevant context in their own lives". Educative environments can enhance and shape the teaching learning process to achieve the desired goals. There is a natural tendency for students to learn and learning can accelerate, in interactive and encouraging environments. Accelerating the encouraging environments may be psychological climates and students' interactions can create them. Interactions of students can make learning environment more effective and meaningful and 'much of learning takes place in a meaningful environment'. Learners may get immediate feedback and reinforcement through web-based learning. The psychological fashion of such reinforcement and expectancy also influences the potential for any given behaviour and/or learning to occur. Desired learning always requires access to qualitative and latest information resources and web confirms the increased access to such resources at students' pace. Moreover, "there is no denying that web-based courses open new educational access to then on-traditional and geographically dispersed students. The on-line setting provides a level of flexibility and convenience not provided by traditional classroom courses". Internet and WWW provide learners latest relevant information at their own pace and they can form a virtual community of learners at global level.

Teaching organizations are adopting information and communication technologies specially the computers, World Wide Web, teleconferencing and educational television because of their cost effectiveness, access and flexibilities of choices.

#### **Students Use Information Technologies to:**

1. Participate in a media revolution, profoundly affecting the way they think about and use information technologies.
2. Improve the ways of learning in new learning fashions
3. Extend the ability and skills of applying their learning in real situation.
4. Working in groups for cooperative and collaborative learning
5. Developing self-learning habits at their own pace and time.

6. Learn with the teacher rather by the teacher.
7. Develop inquiry-learning habits.
8. Use right information at right time to achieve right objective.
9. Review and explore qualitative data.
10. Exchange learning experiences and information with others students and teachers living anywhere in the world.

Information technologies facilitate students in their learning process through their active participation on one hand and help teachers on the other hand.

**Teachers Use The Information Technologies to:**

1. Present the material in more interesting and attractive way.
2. Guide and help students in searching the qualitative material.
3. Make best use of time.
4. Coach the students.
5. Provide individualized instruction.
6. Direct the students toward cooperative as well as collaborative learning activities.
7. Prepare learning material for students, rather teaching in conventional situations.
8. Diagnose the learning problem of students and help them to overcome.
9. Solve the study problems of students.

Information technologies affect the teaching learning process in different ways. These help the teachers in preparing lecture notes for interesting presentation, on the one hand and facilitates the students on the other hand. Different technologies help the teachers and students according to their respective nature and capabilities of storage and presentation. For example, computers are used in education for various purposes as they can store and retrieve a huge amount of information. All the volumes of the Oxford English Dictionary are contained on one compact disc. The disc provides instant access to 616,500 words and terms, 137,000 pronunciations, 2.4 million illustrative quotations, 577,000 cross references, and 249,000 etymologies. Similarly, American Memory includes Library of Congress collections of primary materials from American history. Available on a combination computer audio and videodiscs, American Memory contains 25,500 photographs (dated from 1800 to 1920); 500 prints and cartoons about Congress; 60 sound recordings (pre-radio) of early 20th century leaders; 1,610 color photographs taken during World War 2nd, 28 motion pictures of President William McKinley and 350 pamphlets by various authors from Reconstruction to the First World War. Information technology can help the teacher on the one hand and facilitates the learners on the other hand. Both teachers and students get rid of their routine work, and have to play their new roles in new situations respectively. Teachers spend much of their time in assisting the students rather lecturing; and students access the information of their need.

**Conclusion**

Use of Information Technologies has helped learners to participate in learning communities through out the world. They can now independently and freely choose their programmes of study and have access to the resources. They may learn collaboratively, share information, exchange their learning experiences and work through cooperative activities in virtual learning communities. Information technologies facilitate teaching learning process in more productive fashion. Similarly, the role of teacher is also different in new scenario than in the traditional system. Teacher facilitates and guides the learners in their study, playing the role of a mentor. Now teacher is not at the center of the instruction and sole source of information as in conventional classrooms. He/she decides contents/experiences and/or activities, locates the resources and guides learners how to have access and utilize the information for required outcomes. In nutshell, information technologies are restructuring teaching and learning process to meet the changing needs of present era.



northwesterly/northerly cutting across the Aravalli mountain range, enters the acolionplains and gets lost in the dunal sands near Rajgarh in Churu district. The river flows in three district as Sikar, Jhunjhunu and Churu. It's flow from south to north. Other smaller rivers falling within this basin area the Dohan, Dongar, Chandrawati, Udaipur, Lohargal Ki Nadi, BudhiNala, SukhNadi/ Singhana Nadi, Mendtha and Sabi.

### **Drainage Pattern**

The Kantli is a northerly flowing ephemeral river originating from the hills near Gidhalya village in Sikar district, few small tubutaries join the Kantli mainly in the upper reaches. The river finally gets dried up and disappears in the dunal tracts near Rajgarh in Churu district. Draining a total length of about 135 km. Kantli flows through the hilly terrain in upper reaches, cutting across the Aravalli ranges for about 52 km. upto Mainpura in Jhunjhunu district and them flows through the vast acolian dune field in the north.

The total catchment area of the Kantli is about 746 km<sup>2</sup>.

Minor shifts in the flow of the Kantli channel are observed along her course. The outline of the longitudinal profile of the Kantli River shows the marked breaks in its gradient.

- (i) Between the source at Gidhalya and Guhala the gradient is about 1:250 the Aravalli uplift may have played a major role in this steep gradient.
- (ii) Between Guhala and Pachlagi, the gradient decreases to about 1:500.
- (iii) Between Pachlagi and Salana the gradient further decreases to about 1:980.
- (iv) Between Salana and Khudana, the gradient shows marked increase to 1:433.
- (v) Between Khudana and Navarangpura, the gradient once again decreases considerably to 966.

The overall drainage pattern in the study area is dendritic to sub trellis type. The central parts of the study area characterised by internal drainage pattern.

### **History of the River**

We do not have any proof or document why Kantli river is called Kantli but there are some stories which tell us, if any person stands in the Kantli river, the flow of water cut clay from his bottom. So that is why she is named as Kantli.