

Computer Supported Collaborative Learning: An Approach to Quality Learning

Mohini Agrawal*

In the Modern information revolutionary age the use of information and communication technology is becoming undeniable. Proponents of computers in education have presented a picture of an educational system in which instruction is tailored to meet each student's unique needs and learning style. NCTE's Curriculum Framework for quality teacher education (1998) objectives includes utilization of information and communication technology for the improvement of teaching learning process as an objective. According to discussion document of NCTE (2004) teachers should be trained to promote among them the interest in life-long self directed learning and develop innovative ideas and practices to improve the condition of teacher education. Integrating computers into teacher education would certainly result in a revolutionary new system where every student teacher will achieve his or her full potential. Each student will have the opportunity to learn at his own pace anywhere.

For this, our teacher education institutes should integrate computer supported collaborative learning (CSCL) in teacher education curriculum. This would make active participation on the part of learner possible. The vast interference of computer in approximately each and every aspect of teaching learning proves it to be beneficial and perhaps unavoidable. The networking facilities provided by computers can be used to communicate to desired person, to acquire desired information, to customize content area of learning, to enrich learning experiences with communication links to others beyond the school or university walls, to offer new learning opportunities, to help learners see the value of learning by applying knowledge and skills to real world tasks, to get frequent feedback opportunities from experts or instructors and to be aware of latest innovations in interested field.

Collaborative learning techniques also produce a very flexible class environment with students actively engaged in their own education. The student can also use simulators with audio input and output. This gives students an active learning experience during class, makes learning more interactive, enhances the enjoyment of learning, individualizes and customizes the curriculum to match learners developmental needs as well as personal interests, capture and store data for

* Research Scholar, Department of Education, M.G. Kashi Vidyapith, Varanasi.

informing data driven decision making, to improve methods of accountability and reporting as well as evaluating.

Kenneth Bruffe defines collaborative learning "A reculturative process that helps students become members of knowledge communities whose common property is different from the properties of knowledge communities they already belong to". Server software for CSCL provides tools such as "Problem", "My Explanation", "Scientific explanation", "Comment", "Evaluation of the process" and "Summary" etc.

Two models can be taken into consideration for CSCL:

- (A) "Mass market"- emulates the previous distance learning delivery modes in which the instructor and learner are far apart and they approach each other through networking channels.
- (B) "Learning community within"-A very different model is to use the computer to try to create the type of learning community that can arise in a good inductive environment where the student teacher can learn with and from one another collaboratively. The faculty member structures the topics, provides expertise and works closely with students. In this model the faculty member himself or herself is directly and actively involved in facilitating collaboration and group interaction among the learners on a daily basis.

Hiltz and Wellman (1997) reported that computer mediated communication can be the basis for people with shared interest to form and sustain relationships. The learner actively constructs knowledge by formulating ideas into words and these ideas are built upon through reactions and responses of others (Bouton and Garth, 1983 Alavi, 1994). In other words learning will not be only active but also interactive. Several studies including Hiltz (1994) have shown that CSCL results in more student involvement with the course and more engagement in learning process as referred by Harasim (1990).

CSCL methods are found to be more effective then traditional methods in promoting student learning and achievement (Johnson, 1981) and enhance student satisfaction with the learning and classroom experience. Student teachers can earn quality learning by using this as an aid to the current educational setting. It can be used for –

- (A) Receiving help from experts by e mail: - Electronic mail (email) permits the sending and receiving of messages by other users connected to the internet. Teacher and student can get the help of experts in their relevant area by asking question through email. The expert provides the needed guidance or answers to questions by email. So individual problem of a person can be solved irrespective of distance and geographic barrier.

- (B) Receiving help from other classmates or person working in the same area: - Students can get help from their own classmates or person who is working in the same area or others living anywhere in the world.
- (C) Receiving help from other student through the chat room: - By internet relay chat (IRC) teachers and students can meet on line with people of similar interests.
- (D) Transferring files to each other (or third parties):- By this the files could be sent to the experts for their personal comment or evaluation.
- (E) Browsing the discussion forums or starting a new one: - It provides the facility of easy linking of documents to other documents accessible to anyone connected to the internet with an appropriate browser USE NET NEWS provides a number of discussion groups that allow users to post questions and replies sorted by topic.
- (F) Web managed learning: - To update teachers and student with current information World Wide Web and search engines can be approached. The person has to simply specify what he is looking for. The results are returned to the user. He can sort out the information relevant to his own interest.

To have easy facility to these applications an integrated CSCW (Computer Supported Collaborative Work) system can be used for communication, collaboration, coordination and control. Some of the CSCW applications are:-

- (1) Lotus Notes: - provide messaging tools like email, calendar, group schedule, to-do list, newsgroups. It has two other software products learning space, a powerful Dormino application that integrates collaborative technology with the internet to create a flexible distributed learning environment and quick place, another Dormino application, is a web based tool kit that facilitates the sharing and posts announcements. The replication technology in Lotus Notes enables users to automatically receive updates to documents thus keeping information current.
- (2) Xerox Docu Share: - By this the users are able to share the documents via the web, to collaborate on projects and to communicate in a secure environment. Users can exchange anything in digital format over the web text images, video, office documents, sound files without FTP software. Docu Share is on platform and program independent which means that users only need a connection to the internet to share files created in the familiar software application program.
- (3) Seven mountains integrate: - It is a java based enterprise level knowledge management software system that provides support for

creating and managing documents that are to be shared among a variety of persons.

Thus CSCL is helpful in quality learning and emphasizes collaborative learning and knowledge construction by active participation of learner. They provide support for communication, collaboration, coordination and control among group members. Its integration to highly sophisticated application into one simple and easy to use environment shortens the learning time and improves productivity. Thus it may affect learning and teaching practices positively.

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