

# **A Critical Systemic Analysis of an On-line Teacher Education Program of I-CONSENT, India – An Experiment of e-Learning in Teacher Education**

**Formal Education and sub theme is :Revamping Teacher Education**

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## **Introduction:**

Rapid advances in information communication technology (ICT) and their applications in education have greatly influenced and changed the learning environment. The content development and the processes of learning today show a growing orientation to ICT. E-Learning is gaining prominence in satisfying the demands of emerging sophisticated global knowledge society, and also in satisfying the need for accessible, affordable quality education for all. Especially, in a country like India, where “access to quality education for all” is an issue that is being addressed to on priority, e-learning shows great promise. An alternative innovative schooling has become a need of the times and for facilitation of the new processes of learning, suitable for new generation of learners, there arises a need to have teachers who are well versed with the dynamics of facilitating learning in an online environment.

It was realized at the very beginning that educational transformation is not possible unless teacher education programs are transformed to prepare the teachers to play their pivotal role in this process of change. Indian Consortium for Educational Transformation (I-CONSENT), a voluntary organization, established by educationists and educators, not happy with the present qualitative and quantitative condition of education in India, particularly in the context of globalization and mass personalization of education, possible due to advent and applications of ICT in the field of education, has undertaken the programs and activities to form, reform and transform educational objectives and practices in this country. I-CONSENT began with the Teacher Education Program.

## **B.Ed. (e-Education):**

A new teacher education program-Bachelor of Education-e-Education (B.Ed. (e-Education)) is conceived, designed developed and deployed by a group of eight I-CONSENT partner universities and institutions, with the help of about 35 educators, who worked together for more than three years to develop and deliver this program on e-Platform created by MKCL, with the sponsorship and support of Commonwealth of Learning (COL).

B.Ed. (e-Education) is a role based program wherein six courses, based on the roles of a teacher that are identified to start with, viz. Teacher as a- Nurturer of e-Culture, Change Agent and Networker, e-Learning Specialist, e-Learning Resources Developer, Techno-Pedagogue and e-Researcher and Evaluator. The competencies required for each role are identified, specified in terms of learning outcomes, realistic learning situation related to the role is created, focused role is assigned, learning activities prescribed, learning resources indicated, and performance based assessment is stipulated.

This innovative futuristic program aims at orienting the teachers in the latest pedagogies, learning theories and relevant ICTs so as to enable them to develop competencies and capabilities in the learners through e-learning, desirable for the emerging connected knowledge society of “Next Now”. The program uses situated learning design, based on constructivist pedagogy and role based courses

that are delivered in a distributed e-education system, creating and using Open Educational Resources (OERs), for sustainable development of learners and situations, such as, classroom, school and local community in the global context.

It is believed that learning is a process of developing, understanding through problem solving and critical reflection, and is rooted in authentic situations. Learning is supported with scaffolds that promote cognitive apprenticeship. Assessment of learning outcomes is closely aligned with the learning context and the learning activities (Naidu, 2005). Throughout the program, cooperative and collaborative working and learning is promoted.

### **Pilot run of the program:**

This is a Degree level online teacher training program of two years duration, being piloted by Yashwantrao Chavan Maharashtra Open University (YCMOU), as a flagship program of I-CONSENT, for last 14 months with a small group of about 47 students registered at three study centers at Mumbai, Pune and Nashik.

The first two courses are delivered online during the first term (June-November 2009) and Courses III and IV in the second term (January-July 2010). The Third term will cover courses V and VI (August-December 2010). The students will complete their project work, Comprehensive Viva and finish the complete program in the fourth term (January-June 2011).

The program details are given in the brochure available on the website [www.mkcl.org/ebed](http://www.mkcl.org/ebed).

### **Process Review:**

In the light of the personal experiences of the faculty and the learners during the piloting of this program, it is attempted here to critically examine the development, delivery and deployment processes and support systems involved. These include cooperative and collaborative working, learning and developing; mentoring and on-line tutoring using ICT tools and techniques and open learning resources for the facilitation of new learning processes in different settings and situations; evaluation system involving Portfolio assessment; infrastructural facilities, its model of management for developing together on an e-platform etc. This examination is in terms of both personal development and situated development, and also effectiveness of the systems, sub-systems and structures. Pertinent pedagogic and organizational issues involved are also raised.

### **SYSTEMS and PROCESSES:**

#### **Developmental Processes:**

Six course teams were formed, with a leader and five-six experienced educators and entrusted with the responsibility of development, monitoring and updating of the courses. The teams worked together under the guidance of international experts. In the process of development many teams got disintegrated and reformed, new teams had to be formed, oriented in the strategies adopted and then pressed for the developmental activities.

It was a challenge for the team members to develop appropriate scenarios that reflected reality, and showed the requisite variety and richness. Their unfamiliarity with the online mode of delivery and the characteristics of the e-learners in the beginning made the task more complicated and difficult.

#### **Up-gradation of courses:**

Continuous updating of the contents and the OERs for the program is an ongoing activity. In the Tech-MODE, a networked system can provide continuous feedback from all the players in the System. This is an enormous information resource of raw data, which could be periodically analyzed

for actionable knowledge, for learning lessons and for integrating lessons into the system for improving it.

However it did not work like that. Online feedback, particularly from the students, was not as forthcoming and frequent as it was during the term end review meetings which were f2f. The delivered courses are reviewed twice, jointly by students, tutors, mentors and other functionaries, at each term end review meeting and suitably modified to overcome the problems faced by them. At the end of the pilot, the entire program will be finally reviewed, modified and will be ready. This approach helped in maintaining flexibility, constant improvement and openness to add subsequently, any new course if a new role is identified distinctly.

These review meetings examined the processes involved in development and deployment of courses and considered the problems and difficulties. This examination is a process evaluation, in terms of the developmental objectives, both personal development and situated development, and also effectiveness and impact of the systems and sub-systems used and structures created. As was expressed in the two term end reviews, it was evident that during this time of pedagogy transition to constructivism, much de-learning and relearning occurred, insights developed and thinking processes improved.

### **Delivery and Deployment Processes and Mechanisms:**

The same six Course Teams, involved in development of courses, were entrusted with the responsibility of deployment and delivery of the courses, working as tutors and mentors.

The program is deployed and delivered online, using a network of study centers and appropriate ICT tools and techniques, providing the best possible interactivity, core to any teacher education program, through minimum five distributed learning sessions for each course involving audio-graphic and video inputs, self study and group discussions and cooperative and collaborative learning activities and discussion sessions. Study Groups are formed by the students-they are encouraged to do so-maintained, supported with enrichment activities at different places-situates like class, school, community, home involving support and networked interactivities.

The expert inputs and resources are provided using e-platform created and supported by MKCL, through power point and multi-media presentations and through supplementary learning material in multiple formats, print-non-print, including lectures, audio-video cassettes, CDs, journals and textbooks, e-books, readings on net/websites and discussion etc. with a continuous, virtual, as well as, real time student support system.

These Distributed Class sessions are archived and learning resources like Learner's Handbook, Study Material (Scenarios), Texts and References etc are made available on Website of the program with a free access to the learners, mentors, tutors and other functionaries involved in the program. Study Center Library also is made accessible to the students.

"The well planned Pre-DC, Post-DC activities and the scenarios with the provided reading material has well prepared me for the actual DC sessions, because of which understanding of the subject has increased to a large extent" observed one of the students while reacting to the DC for course III.

After participating in an international webinar as a learning activity, arranged by one of the mentors at Mumbai center, another student was expressing herself in one of the review meetings in the following words, "I want to emphasize that participating in webinars, e-seminars, synchronous discussions during DCs and asynchronous discussions on 'ERA' and 'Multiply' boosted my confidence. Earlier, I used to feel shy to participate in f2f situations. Somehow in the virtual situation since I could not see the others, I got the courage to ask questions. While participating in the webinars on BBL by Dr. Susan Kovalik I asked many questions, they were well received and appreciated, I got the satisfactory answers and from that I got a confidence that I can not only communicate locally but globally also."

“The rationale provided for each course made the learning activities purposeful. Clearly defined roles and problems, sequential learning activities and expected learning outputs through a collaborative process decreased conflict and increased participation. This systematic approach has removed anxiety amongst us” says another student.

### **Learning Processes**

Even in the learning processes, cooperative and collaborative working, learning and developing together is the basic strategy adopted and nurtured in all the learning activities, assignments and field work.

This collaborative learning process helped in reducing stress and increased positive relationships. The Camaraderie among students was clearly visible in their forum and chat sessions. “While communicating for completion of these activities I made many new & good virtual friends. That is the most important gain I feel.” This is how one expressed her feeling.

The students are encouraged to form the groups for studying and working on learning activities and in completing assignments-helping and supporting each other to overcome difficulties in their development. “The group activities effectively reduced our feelings of isolation, increased active learning, and increased synergistic relationships in the classroom,” they observed.

New learning processes are emerging due to ICT applications and the teacher is expected to facilitate these processes to promote:

1. Learning to learn-self study
2. Learning by doing-performance
3. Learning through distributed classroom
4. Personalized learning supported by OERs
5. Group learning and developing-L3 groups
6. Learning by leading student activity groups - Swadhyay Parivar
7. Learning through experimenting - Prayog Parivar.

The courses provide the learning activities for such an integration process of learning- self-study, according to individual needs and choices, group-learning in the context through interaction with media, people, tools and techniques and other L3 groups and resources available on the internet resulting in a better skilled teacher. The students did like to perform those activities in groups, even when working online. They found others responsive to their needs.

A student seeking help from colleagues to overcome some problem states, “In response to my query on ERA forum I received 9 responses the next day, two wanted to know the same thing, five the solutions from other students and two from the tutors.”

“The assignments were very different than what we were used to. Initially we couldn’t understand them easily. But working in groups we could develop the capacity to see the problem through each & every angle as well as to think about each & every possible solution. This enhanced my critical thinking skills and I am very satisfied that my thinking was on right track because in about 70% of assignments I got good marks and good remarks.” One student observed.

Many found they could easily apply the skills and competencies they developed during this program to their field of work. For example, one student, after enjoying Wiki educator’s experience when exposed to it, prepared spoken tutorial on Wiki Educator for new users. Another student working in a company, designed, developed, deployed and evaluated a Training Program following most of the concepts, strategies and processes learnt during the first year of e-bed course. Many a students who are working as teachers have planned their classroom activities catering to multiple intelligences and learning styles, employed cooperative learning strategies like brain storming; think, pair, share; jigsaw etc at appropriate situations. One of such teacher student shared, “instead of concentrating

only on content delivery I'm focusing more on activities that cater to development of social and moral values such as Talking in softer voice, Politeness, Truthfulness, Seeing good things of others."

The non working students also applied their competencies and the new concepts to help their children in studies. Many of them joined networked virtual communities working for social cause. They also created their own blogs. Many of them created a network of parents using SMS service of mobile phones.

They also created and use the open learning resources relevant to course ware. Learners are motivated to go beyond OE Resources provided in the courses and to find newer resources, read, search, and use them for course activities and assignments

At each study center Mentors are identified to support and help the learners if need be. Mentoring is both, online as well as f2f to provide immediate help, support and hand holding to learners for facilitating their learning, as well as, in organizing and maintaining groups and coordinating course work. During Distributed class also, the mentor is available in immediate proximity with help. However, mentors for some of the assignments were not able to create that kind of confidence amongst students

Online tutoring is provided through Distributed Class. Minimum five DCs for each course are provided. Tutors make presentation and conduct sessions from their respective convenient places and learners react to tutor performing learning activities/ interacting with each other at study center.

### **Student Support system and mechanisms:**

Following support services for students are created and used in the program:

- i. Support services at Study Centers: A mechanism of student services, to facilitate learning, is established in the form of Study Center, equipped with necessary infrastructural facilities like rooms for group discussion and group work, hall for DC, library, as well as, technological support like internet facilities, computers, VCL sessions, Credit bank, Development and maintenance of learner portfolio etc. Adequate human resources are also provided for administrative support and for online tutoring, mentoring (10:1), hand holding and resourcing at each study center
- ii. Central services at YCMOU- Nodal Agency: General Information Center managed by the Program Executive Officer (PEO) who also coordinates between the three study Centers, as well as, Tutors, Learning resources, experts, course developers, Academic coordination, monitoring and updating facility, term end and program end comprehensive Viva , Final Assessment and Evaluation, Awarding Degree/Diploma-Certification etc.
- iii. Central services at MKCL- another partner organization: e-platform and support services (ePASS), network of access centers, creation and maintenance of network of learners, teachers, parents, experts, and special interest groups, all soft ware systems like LMS ERA, CONFLUENCE, SABA ETC and accounting and all technical support.

However all the technical support systems, though operational, were infested with several teething problems like difficulties in connectivity, power cuts, problems of handling the systems due to unfamiliarity and lack of confidence and skills, occasional unavailability of hand holding and frustration thereby etc. Such difficulties were prominent amongst teachers coming from primary schools or those who were not exposed to e-culture much. Mentor and peer support was very valuable in such instances.

### **Evaluation Process:**

There is no formal year end or course end examination in this course. A comprehensive continuous evaluation system is being used in the program. Both formative and summative assessment techniques are used. Formative assessment of events and assessable learning activities is conducted using pre-determined evaluation rubric and, of non-assessable activities through rating

scales at the term end Viva. Continuous assessment of the learning is done through self evaluation using evaluation rubrics and reflections of the learner along with peer and tutor evaluation.

“First time used the provided rubrics for self evaluation which was a big help in improving the assignments before submission”. “I used the rubric as a guideline for completing the assignment,” observed one of the students.

Summative evaluation at the end of the program will be done by the Quality Assurance Team of five, comprising an internal and three external experts appointed by the university and a concerned mentor in a comprehensive Viva-Voce and final grade is assigned on the basis of the learner’s performance in the term end and program end comprehensive viva which includes the assessment of the learning activities undertaken, assignments completed, portfolio assessment, access and use of ICT and success stories of learners. This term end evaluation is a process evaluation, in terms of the developmental objectives, both personal development and situated development, and also effectiveness and impact of the systems. For such an evaluation, proper criteria are being evolved and suitable tools are being prepared. This system of evaluation is being perfected by constant modifications on the basis of live feed back received from the field in these review meetings, from time to time.

After successful completion of the program and acquiring required number of CPs, YCMOU will confer a Degree of B. Ed. (e-Education).

### **Some basic issues**

Pertinent pedagogic and organizational issues involved include:

1. Motivational factors to hold the groups together
2. Networking-primary and secondary-creation and maintenance
3. Leadership at different levels
4. ICT preparedness for online program
5. Pedagogic transition

### **Conclusion**

After the pilot run is over and the complete program along with the systems and sub-systems reviewed, updated and validated; the field tested Tech-MODE Teacher education program, best suited for the needs of the emerging knowledge society, will be available for wider use. This may prove to be a better alternative to the conventional main stream teacher education program.

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